

WF51 - Re-coding Instrument Cluster (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. Please refer to Equipment Information EQ1401 for a list of suitable battery chargers/power supplies which should be used to maintain vehicle voltage.

Model Year: 2015

Vehicle Type: Cayenne S E-Hybrid (92A)

Concerns: Instrument cluster

Information: The instrument cluster on the affected vehicles may have been coded using an incorrect coding rule.

As a result, there is a possibility that the range on remaining fuel will be calculated incorrectly and an incorrect range will be shown on the display when driving extensively at full load. The fuel-level indicator always shows the correct level.

Action Required: Re-code instrument cluster.

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 160 vehicles in North America.

- Tools:**
- **9818 - PIWIS Tester II** with PIWIS Tester test software version **15.700** (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.

Claim Submission: See Attachment "A".

Preliminary work

NOTICE

Coding will be aborted in the event of low voltage.

- Increased current draw during diagnosis can cause a drop in voltage, which can result in one or more fault entries and the abnormal termination of the coding process.
- ⇒ Before getting started, connect a suitable battery charger with a current rating of at least 70 A to the jump-start terminals in the engine compartment.

NOTICE

Coding 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, coding may be aborted.
- ⇒ During control unit programming, always connect PIWIS Tester II to the vehicle communication module (VCI) via the USB cable.

- 1 Connect 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.
- 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 On the PIWIS Tester start screen, call up the ⇒ **'Diagnostics'** menu and select the vehicle type ⇒ **'Cayenne'** ⇒ **'92A'**.

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

Re-coding instrument cluster



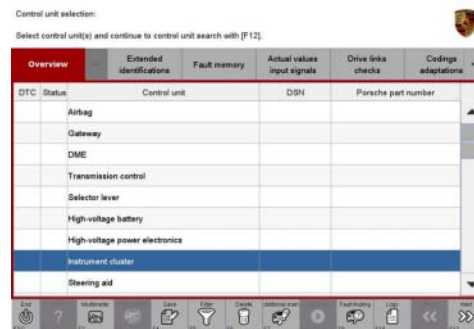
Information

The procedure described here is based on the PIWIS Tester II software version **15.700**.

The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed.

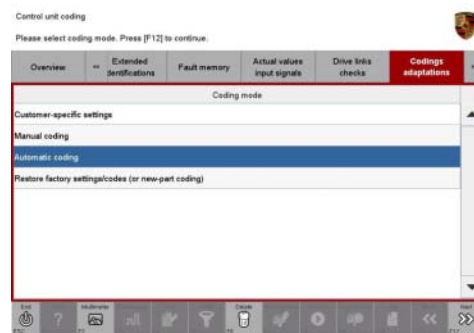
A discrepancy may arise with later software versions for example.

- Work Procedure: 1 Select ⇒ **'Instrument cluster'** in the control unit selection screen (⇒ **'Overview'** menu) and press •>>” to confirm your selection ⇒ *Control unit selection – Instrument cluster*.
- 2 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.
- 3 Press •>>” to acknowledge the message informing you that campaigns for the vehicle are stored in the PIWIS information system.
- 4 Once the instrument cluster has been found and is displayed in the overview, select the ⇒ **'Codings/adaptations'** menu.



Control unit selection – Instrument cluster

- 5 Select the ⇒ **'Automatic coding'** function and press •>>” to start coding ⇒ *Instrument cluster - Automatic coding*.

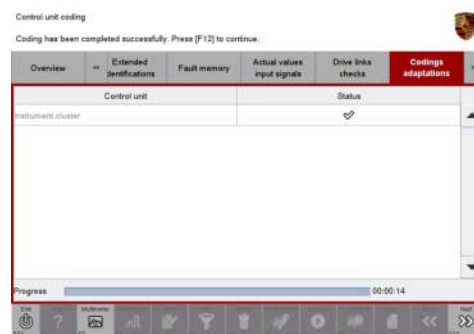


Instrument cluster - Automatic coding

- 6 When coding is complete, the message “Coding has been completed successfully” is displayed and a tick appears in the 'Status' box ⇒ *Coding successful*.

If coding is not completed successfully (error message "Coding was not completed successfully"), coding must be **repeated**.

- 7 Once coding has been completed successfully, press •>>” to return to the start page of the ⇒ **'Codings/adaptations'** menu.



Coding successful

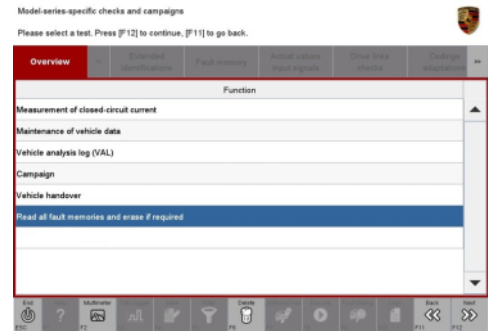
- 8 Select the ⇒ **'Overview'** menu and press •<<” to return to the control unit selection screen.

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.



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. fault memories of the control units DME, Adaptive Cruise Control (ACC), etc.) cannot be erased, 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 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.

If control units are found to have faults that 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 to return to the control unit selection screen ⇒ *Control unit selection*.



Control unit selection

Calibrating electric machine



Information

The electric machine 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.

The rotor position (phase angle) and rotor temperature are stored during calibration of the electric machine.

- Work Procedure: 1 Press and hold the brake pedal.
- 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 machine is clearly audible. Calibration is complete once the calibration noise can no longer be heard.
 - Release the ignition key and move it to position 1 (ignition on).

Subsequent work

- Work Procedure: 1 Switch off ignition.
- Disconnect the PIWIS Tester from the vehicle.
 - Switch off and disconnect the battery charger.
 - Enter the workshop campaign in the Warranty and Maintenance booklet.



Information

The specified working time was determined specifically for carrying out this campaign and may differ from the working times published in the Labor Operation List in PIWIS.

Attachment "A": **Claim Submission** - Workshop Campaign WF51

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.

Working time:

Re-coding instrument cluster

Labor time: **19 TU**

Includes: Connecting and disconnecting battery charger
 Connecting and disconnecting PIWIS Tester
 Reading out and erasing fault memories
 Calibrating electric machine

⇒ **Damage code WF51 066 000 1**

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