

AE02 - Checking Brake Booster (Recall Campaign)

Important: **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 AND ALSO DOCUMENT THE ACTUAL VOLTAGE ON THE REPAIR ORDER. 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.

Model Year: **As of 2014 up to 2015**

Model Line: **Macan**

Concerns: **Brake booster**

Information: This is to inform you of a Recall Campaign on the above-mentioned vehicles. **Internal tests have shown that some brake boosters may have been damaged during installation in the vehicles.**

If the brake booster is damaged, the vacuum in the brake booster can drop when the brakes are actuated. This results in reduced brake force boosting and a reduced braking effect when high pressure is applied to the brake pedal.

The deceleration achieved meets the legally required minimum requirements, but not the high Porsche quality standards. The brake assist function remains fully available.

Action Required: Check the brake booster using the PIWIS Tester with test software version 13.800 (or higher) installed and replace it if necessary.

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 only four vehicles in North America at the present time:

- WP1AB2A57FLB50603
- WP1AF2A51FLB90115
- WP1AB2A52FLB50282
- WP1AF2A51FLB90079

- Tools:**
- **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.
 - **9818 - PIWIS Tester II** with software version **13.800** (or higher) installed.

Parts Info: **NOTE:** PARTS WILL NOT BE AUTOMATICALLY ALLOCATED TO YOUR DEALERSHIP. IN THE EVENT PARTS ARE REQUIRED, THEY SHOULD BE ORDERED THROUGH THE POLARIS SYSTEM.

Work Procedure: See Attachment "A":

Claim Submission: See Attachment "B".

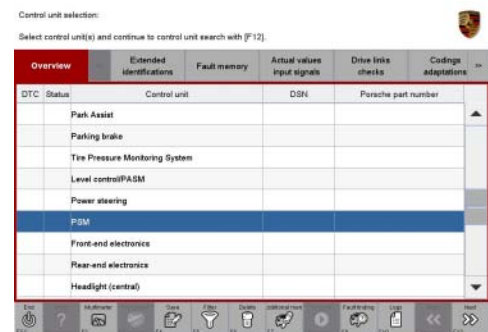
Attachment "A": **Work Procedure**

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 to the jump-start terminals in the engine compartment.
- 2 Switch on ignition.
- 3 **9818 - PIWIS Tester II** with software version **13.800** (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 On the PIWIS Tester start screen, call up the ⇒ **'Diagnostics'** menu and select the vehicle type ⇒ **'Macan'**.

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

- 1 Select the control unit ⇒ **'PSM'** in the control unit selection screen (⇒ **"Overview"** menu) and press **•>>** to confirm your selection ⇒ *Control unit selection*.
- 2 Press **•F11** to skip the question as to whether you want to create a vehicle analysis log (VAL).
- 3 Press **•>>** to acknowledge the message that may appear informing you that campaigns for the vehicle are stored in the PIWIS information system.



Control unit selection

Selecting Actual values/input signals

- 4 Once the PSM control unit has been found and is displayed in the overview, select the ⇒ **'Actual values/input signals'** menu .

- 5 In the 'Actual values/input signals' menu, highlight the sensors to be checked ⇒ **'Brake pressure (hydraulic unit sensor)'** and ⇒ **'Brake booster vacuum (vacuum sensor)'** and press **•F12** to confirm.
- 6 Start the engine in selector-lever position "P" and leave it running for approx. 30 seconds at idle speed until the **'Vacuum'** is not longer increasing and remains constant.



Information

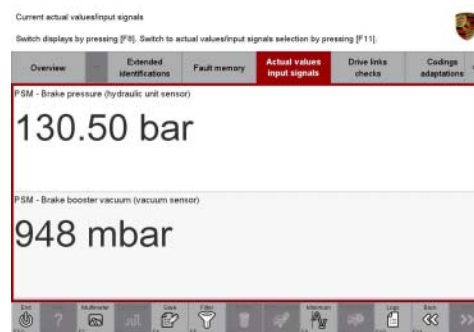
At sea level, a **vacuum of at least 900 mbar** must be reached at idle speed in the brake booster. The **higher the position** above sea level, the **lower** the ambient pressure, and thus the **lower the vacuum to be reached** in the brake booster.

The vacuum in the brake booster drops by approx. 10 mbar for every 100 m increase in height.

This means, for example, that a vehicle **at 1,000 m** above sea level **still only reaches a vacuum of at least 800 mbar** in the brake booster.

- 7 Set the measured value for **'Brake pressure'** to approx. **130 bar** by pressing the brake pedal, keep the brake pressure at approx. 130 bar for **5 seconds** and check the displayed measured values ⇒ *Measured values*.

- If the vacuum **drops by less than approx. 100 mbar** from the starting value **after setting the brake pressure** and then **increases again or remains constant**, the **brake booster is OK**. Continue with **Step 8**.



Measured values

- If the vacuum **drops quickly by more than approx. 100 mbar from the starting value** when checking the **brake booster**, the brake booster must be **replaced** as described in the Workshop Manual ⇒ *Workshop Manual '470055 Replacing brake booster'*.

The working time and spare parts needed must be invoiced using a **separate warranty claim**.

- The additional warranty claim must be processed by specifying ⇒ **damage code 4770 97 000, repair code 2**.
- Document the work in the PQIS job by entering **4770** (brake booster) under "Location" and **9735** (Repair in accordance with PAG instructions) as the "Symptom".
- Specify that the repairs were carried out due to campaign AE02 under "Further Information" on the PQIS job.

- 8 Stop the engine and switch off the ignition.
- 9 Disconnect the PIWIS Tester from the vehicle.

- 10 Switch off and disconnect the battery charger.
- 11 Enter the recall campaign in the Warranty and Maintenance booklet.

Attachment "B"

Claim Submission - Recall Campaign AE02

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:

Checking brake booster

Labor time: **34 TU**

Includes: Connecting and disconnecting battery charger
Connecting and disconnecting PIWIS Tester
Checking brake booster using the PIWIS Tester

⇒ **Damage code AE02 099 000 1**

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