

Complaint – Warning Message "PowerAssist Failure – Greater Force Needed" / Fault Memory Entry "B200046 – Function Restriction" in Power Steering Control Unit (65/21)

Model Line: **911 (992)**

Model Year: **As of 2020 up to 2021**

Concerns: **Power-steering gear**

Information: The yellow warning message "PowerAssist failure - Greater force, Driving permitted" will be displayed in the multi-function display in the instrument cluster. The entry '**B200046 – function restriction (000700)**' is stored in the fault memory of the power-steering control unit.

This can be caused by the behavior of the power-steering control unit software which under certain conditions, after switching off the ignition or switching off the power supply, can cause a fault to occur while writing the adaptation values to the power-steering control unit, resulting in the fault described here.

Action required: Reset adaptation values and re-code power-steering control unit.



Information

The measure described here must only be used for the fault memory entry 'B200046 - Function restriction (000700)'.

For the fault memory entries 'B200046 - Function restriction (000800)' and 'B200046 - Function restriction (000900)', the steering gear must be replaced.

Required tools

Tools:



Information

The 911 (992) comes either with a **lithium starter battery** (M-no. J2A) or an **AGM starter battery** (M-no. J0V, J4K) as standard.

This depends on the following:

- Country version
- Model type
- Vehicle equipment

Lithium starter batteries must only be charged using a **suitable battery charger** that has a current and voltage-controlled charge map.

For further information about the battery chargers to be used:

See:

⇒ *Workshop Manual '270689 Charging battery/vehicle electrical system'*

- Battery charger with a current rating of **at least 90 A** and, if required, **also with a current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 battery charger 90A**
- **9900 - PIWIS Tester 3** with PIWIS Tester software version **40.475.060** (or higher) installed

Preparatory work

NOTICE

Fault entry in the fault memory and/or control unit coding aborted due to undervoltage.

- Increased power consumption during diagnosis can cause a drop in voltage, which can result in one or more fault entries and cancel the diagnostic process.
- ⇒ Before starting control unit diagnosis, connect a suitable battery charger with a current rating of at least 90 A to the vehicle.

NOTICE

Control unit coding will be aborted if the WiFi connection is unstable.

- An unstable WiFi connection can interrupt communication between the PIWIS Tester and the vehicle communication module (VCI). As a result, control unit diagnosis may be aborted.
- ⇒ During control unit diagnosis, always connect the PIWIS Tester to the vehicle communication module (VCI) via the USB cable.

NOTICE

Control unit coding will be aborted if the driver's key is not recognized

- If the driver's key is not recognized in the vehicle, coding cannot be started or will be interrupted.
- ⇒ Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.



Information

The procedure described here is based on the PIWIS Tester 3 software version **40.475.060**.

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 Connect a suitable battery charger, such as **Battery charger 90A**, to the jump-start terminals in the boot and switch it on.

- 2 Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key ⇒ *Emergency start tray*.
- 3 Connect **9900 - PIWIS Tester 3** 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.
- 5 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.



Emergency start tray

Resetting power-steering adaptation values and re-coding power steering control unit

NOTICE

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

- Measure is ineffective
- ⇒ Always use the specified version or a higher version of the PIWIS Tester software for control unit coding.

- 1 Reset power-steering adaptation values.
 - 1.1 Select the '**Power steering**' control unit in the control unit overview.
 - 1.2 Select the '**Drive links/check**' tab.
 - 1.3 Select '**All**' in the menu and confirm with **•F12"** to continue.
 - 1.4 Select '**Reset all learning values**' in the menu and confirm with **•F12"** to continue.
 - 1.5 Press **•F8"** to start.
- 2 Re-teach the power-steering limit stops.
 - 2.1 Select the '**Maintenance/repairs**' tab.
 - 2.2 Select the '**Commissioning**' menu item and press **•F12"** to continue.

Information

This procedure is used both to code automatically and to delete the limit stops.
 - 2.3 Follow the instructions on the Tester.

Concluding work

Work Procedure: 1 Read out the fault memory and check any existing fault memory entries.

**Information**

If control units are found to have faults that are not caused by the fault described here, these must be **found** and **corrected**.

- 2 Delete the fault memory.
- 3 Switch off ignition.
- 4 Remove the driver's key from the emergency start tray.
- 5 Disconnect the PIWIS Tester from the vehicle.
- 6 Turn off the connected battery charger, such as **Battery charger 90A**, on the jump-start terminals in the boot and disconnect it.

Invoicing

Invoicing: For documentation and warranty invoicing, enter the labor operations and PQIS coding specified below in the warranty claim:

APOS	Labor operation	I No.
48902500	Programming power-steering gear	

PQIS coding:

Location (FES5)	48900	Power-steering gear
Damage type (SA4)	4048	Yellow warning message activated

References: ⇒ *Workshop Manual '270689 Charging battery/vehicle electrical system'*

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