

**WKL7 - Updating Software for Various Control Units (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

Model Year: **2020**

Vehicle type: **911 (992)**

- Subject:
- **Battery sensor (lithium starter battery I-no. J2A)**
  - **Selector lever control unit**
  - **Instrument cluster**
  - **Brake electronics (PSM incl. parking brake) control unit**
  - **Front axle lift system control unit**
  - **Control unit for chassis control (PASM)**
  - **Control unit for Tire Pressure Monitoring (TPM)**
  - **Rear-end electronics control unit (BCM2)**

Information: **Software optimizations for various control units are available for the 911 (992).** With these software optimizations, various improvements are implemented in the vehicle. These include correction of the unjustified error message "P not available", as well as optimised displays and fonts in the instrument cluster.



**Information**

The following control units are re-programmed and then re-coded **automatically** during the campaign using **three separate programming codes**.

Control unit	Programming time	Affected vehicles
<ul style="list-style-type: none"> <li>• Battery sensor for lithium starter battery (I-no. J2A)*</li> <li>• Selector lever control unit</li> <li>• Instrument cluster</li> <li>• Brake electronics (PSM incl. parking brake) control unit</li> <li>• Front axle lift system control unit*</li> <li>• Control unit for chassis control (PASM)</li> </ul>	up to 70 minutes*  * The time required for the update depends on the respective vehicle equipment.	All vehicles assigned to the campaign

• Control unit for Tire Pressure Monitoring (TPM)	approx. 2 minutes	All vehicles assigned to the campaign
• Rear-end electronics control unit (BCM2)	approx. 8 minutes	Vehicles with rear-end electronics (BCM2) control unit software version <b>less than 530</b>

\* Depending on equipment

The time required for **programming and coding** the listed control units can be up to **approx. 80 minutes**, depending on equipment.

Remedial action:

Update software for the following control units using the PIWIS Tester with test software version **39.050.012** (or higher) installed:

- Battery sensor for lithium starter battery (I-no. J2A) (if installed)
- Selector lever control unit
- Instrument cluster
- Front axle lift system control unit (if installed)
- Brake electronics (PSM incl. parking brake) control unit
- Control unit for chassis control (PASM)

**Additionally:**

- Re-programming control unit for Tire Pressure Monitoring (TPM)
- Rear-end electronics control unit (BCM2)

Affected Vehicles:

Only vehicles assigned to the campaign (see also PCSS Vehicle Information). This campaign affects 5,258 vehicles in North America.

**Required tools**



**Information**

The new 911 (992) comes with either a **lithium starter battery** (I-no. J2A) or an **AGM starter battery** (I-no. JOV, 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'*.

- Tools:
- 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. **Battery Charger, 90 A**
  - **9900 - PIWIS Tester 3** with PIWIS Tester software version **39.050.012** (or higher) installed

### Preparatory work

#### 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 suitable battery charger with a current rating of at least 90 A to the vehicle.

#### NOTICE

Control unit programming will be aborted if the WLAN 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 programming may be aborted.
- ⇒ During control unit programming, always connect the PIWIS Tester to the vehicle communication module (VCI) via the USB cable.

#### NOTICE

Control unit programming will be aborted if the driver's key is not recognised

- If the driver's key is not recognised in the vehicle, programming 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.

#### NOTICE

Programming interrupted

- Malfunctions in control unit
  - Risk of damage to control unit
- ⇒ Route the line between the vehicle communication module (VCI) and diagnostic socket on the vehicle without tension and make sure that the connector is inserted fully into the diagnostic socket.

⇒ Check that the rechargeable battery for the PIWIS Tester is charged sufficiently. Connect the PIWIS Tester to the power supply unit if necessary.

**Information**

To carry out the campaign, the PIWIS Tester must be online and logged into the Porsche Partner Network (PPN).

**Information**

The procedure described here is based on the PIWIS Tester 3 software version **39.050.012**.

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, e.g. **Battery Charger, 90 A**, to the jump-start terminals in the luggage compartment 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 the **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.

Due to the long programming time, connect the **PIWIS Tester** to the power supply during the **operation**.



*Emergency start tray*

**Information**

Use the **new** PIWIS Tester data cable for carrying out the campaign. The difference between the old ⇒ *PIWIS Tester data cable -1-* and new ⇒ *PIWIS Tester data cable -2-* data cable is shown in the illustration.

If the connection between the vehicle and PIWIS Tester is interrupted, check the data cable for the PIWIS Tester for signs of damage. If the data cable is damaged, it **must be replaced**. To do this, follow the instructions in the PPN for "Returning faulty USB cable caps" (PPN portal > Dr Ing. h.c. F. Porsche AG > Aftersales > Workshop > PIWIS > Documents).

- 4 Switch on the ignition.
- 5 On the PIWIS Tester start screen, call up the '**Diag-nostics**' application.

The vehicle type is then read out, the diagnostic application is started and the control unit selection screen is populated.

- 6 Log the PIWIS Tester into the PPN.



*PIWIS Tester data cable*

### Updating software for various control units



**WARNING**

#### Electrically moved side windows and rear spoiler

- Danger of limbs being trapped or severed
  - Risk of damage to components
- ⇒ Do not reach into the danger area.
- ⇒ Keep third parties away from the danger area.
- ⇒ Do not move components or tools into the danger area.



#### Information

The fan runs several times for a few seconds during the programming sequence.

**Information**

The PIWIS Tester **automatically** performs the programming sequence described below. This does not require any interaction with the PIWIS Tester.

Control units that are not installed are skipped automatically.

The time required for the update depends on the respective vehicle equipment and can be up to **70 minutes**.

The following control units are **re-programmed** and then **re-coded** in the specified sequence:

- **Battery sensor for lithium starter battery (I-no. J2A) (if installed)**
- **Selector lever control unit**
- **Instrument cluster**

The following control units are **re-coded automatically**:

- **Front axle lift system control unit (if installed)**
- **Brake electronics (PSM incl. parking brake) control unit**
- **Control unit for chassis control (PASM)**

Work Procedure: 1 The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

**For specific information on control unit programming during this campaign, see the table below:**

Required PIWIS Tester software version:	<b>39.050.012</b> (or higher)
Type of control unit programming:	Control unit programming using the " <b>Campaign</b> " <b>function in the Additional menu</b> on the PIWIS Tester by entering a programming code.
Programming code:	<b>V9Q8Z</b>
Programming sequence:	Read and follow the <b>information and instructions on the PIWIS Tester</b> during the guided programming sequence.  <b>Do not interrupt programming and coding.</b>  A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx):	<b>up to 70 minutes*</b>  * The time required for the update depends on the respective vehicle equipment.

Software versions programmed during this campaign:	• Battery sensor (lithium starter battery) 0152
	• Selector lever control unit 0240
	• Instrument cluster 0206
	Following control unit programming, the software version can be read out of the relevant control unit in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	<ul style="list-style-type: none"> <li>• Switch ignition off and then on again.</li> <li>• Read out and erase fault memories ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>.</li> <li>• Repeat control unit programming by entering the programming code again.</li> </ul>
Procedure in the event of error messages appearing during the programming sequence:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

- 2 Continue with Re-programming control unit for Tire Pressure Monitoring (TPM) ⇒ *Technical Information '9X00IN Re-programming control unit for Tyre Pressure Monitoring (TPM)'*.

### Re-programming control unit for Tire Pressure Monitoring (TPM)



**WARNING**

#### Electrically moved side windows and rear spoiler

- Danger of limbs being trapped or severed
  - Risk of damage to components
- ⇒ Do not reach into the danger area.
- ⇒ Keep third parties away from the danger area.
- ⇒ Do not move components or tools into the danger area.

Work Procedure: 1 The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

**For specific information on control unit programming during this campaign, see the table below:**

Required PIWIS Tester software version:	<b>39.050.012</b> (or higher)
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Type of control unit programming:	Control unit programming using the <b>"Campaign" function in the Additional menu</b> on the PIWIS Tester by entering a programming code.
Programming code:	<b>T7G1A</b>
Programming sequence:	Read and follow the <b>information and instructions on the PIWIS Tester</b> during the guided programming sequence.  <b>Do not interrupt programming and coding.</b>  A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx):	<b>2 minutes</b>
Software version programmed during this campaign:	0220  Following control unit programming, the software version can be read out from the control unit for Tire Pressure Monitoring (TPM) in the ⇒ 'Extended identification' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	<ul style="list-style-type: none"> <li>• Switch ignition off and then on again.</li> <li>• Read out and erase fault memories ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>.</li> <li>• Repeat control unit programming by entering the programming code again.</li> </ul>
Procedure in the event of error messages appearing during the programming sequence:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

- 2 Re-teach wheel electronics ⇒ *Workshop Manual '443225 Teaching wheel electronics'*.



#### Information

Once the Tire Pressure Monitoring (TPM) control unit has been re-programmed and the wheel electronics has been re-taught, **check the software version of the rear-end electronics (BCM2) control unit** using the PIWIS Tester.

- 3 Check the software version of the rear-end electronics (BCM2) control unit.  
To do this, call up 'Extended identifications' in the menu using the PIWIS Tester and select the rear-end electronics (BCM2) control unit.



Result of check	Action required
Software of the rear-end electronics (BCM2) control unit is <b>530 or higher</b> .	<b>– End of action required –</b> Continue with ⇒ <i>Technical Information '443225 Concluding work'</i> .
Software version is <b>less than 530</b> .	Continue with ⇒ <i>Technical Information '443225 Re-programming rear-end electronics control unit'</i> .

### Re-programming rear-end electronics control unit

Work Procedure: 1 The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.



#### Information

When programming the rear-end electronics, the interior antennas for key detection are deactivated. As a result, programming will be aborted if the key is not in the emergency start tray.

**For specific information on control unit programming during this campaign, see the table below:**

Required PIWIS Tester software version:	<b>39.050.012</b> (or higher)
Type of control unit programming:	Control unit programming using the <b>"Campaign" function in the Additional menu</b> on the PIWIS Tester by entering a programming code.
Programming code:	<b>R1B6P</b>
Programming sequence:	Read and follow the <b>information and instructions on the PIWIS Tester</b> during the guided programming sequence. The rear-end electronics control unit is <b>re-programmed</b> during the programming sequence. <b>Do not interrupt programming.</b>
Programming time (approx):	<b>8 minutes</b>

Software version programmed during this campaign:	<b>0530</b> Following control unit programming, the software version can be read out of the rear-end electronics (BCM2) control unit in the ⇒ 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of error messages appearing during the programming sequence:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by restarting programming.

## Concluding work

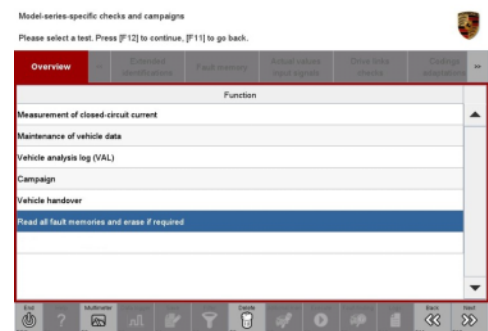


### WARNING

#### Electrically moved rear spoiler

- Danger of limbs being trapped or severed
  - Risk of damage to components
- ⇒ Do not reach into the danger area.
- ⇒ Keep third parties away from the danger area.
- ⇒ Do not move components or tools into the danger area.

- Procedure:
- 1 Read out and erase the fault memories of all control units.
    - 1.1 Press •F7" in the control unit selection screen ('Overview' menu) to call up the Additional menu.
    - 1.2 Select the function "Read all fault memories and erase if required" and press •F12" ('Next') to confirm your selection ⇒ *Erasing fault memories*.  
  
The fault memories of the control units are read out.
    - 1.3 Once you have read out the fault memories, check the fault memory entries.



*Erasing fault memories*



### Information

If control units are found to have faults that are **not** caused by control unit programming, these must first be **found** and **corrected**. This work **cannot** be invoiced under the workshop campaign number.

- 1.4 Press •F8“ to delete fault memory entries.
- 1.5 Press •F12“ ('Yes') in response to the question as to whether you really want to delete all fault memory entries.

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



**Information**

If fault memory entries for individual control units cannot be deleted, proceed as follows:

- Switch off the 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.
  - Start the engine, leave it running for a short time and then stop it again.
  - Switch off the ignition and wait approx. 10 seconds before switching it back on again.
  - Plug the PIWIS Tester diagnostic connector into the diagnostic socket again and restore communication with the vehicle.
  - Read out the fault memory again and delete any fault memory entries that are stored.
- 1.6 Once you have erased the fault memories, select the '**Overview**' menu to return to the control unit selection screen ⇒ *Control unit selection*.
- 2 Manually retract the rear spoiler that was extended automatically during programming.  
For this purpose, select the menu '**CAR**' – '**DRIVE**' in the PCM, then select the '**Spoiler**' function and **press and hold** the spoiler button until the rear spoiler is **fully retracted**.
  - 3 Switch off the ignition.
  - 4 Disconnect the PIWIS Tester from the vehicle.
  - 5 Switch off and disconnect the battery charger.
  - 6 Enter the campaign in the Warranty and Maintenance booklet.



*Control unit selection*

**Warranty processing**

Scope 1: **Updating software for various control units**

**Working time:**

Updating software for various control units

Labor time: **67 TU**

Includes:

- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Re-programming operator control unit in front center console
- Re-programming instrument cluster
- Re-programming selector lever control unit
- Re-programming battery sensor for lithium starter battery (I-no. J2A) if equipped
- Re-coding front axle lift system control unit
- Re-coding control unit for chassis control (PASM)
- Re-coding brake electronics (PSM incl. parking brake) control unit
- Re-programming control unit for Tire Pressure Monitoring (TPM)
- Teaching wheel electronics
- Checking software version of rear-end electronics (BCM2)
- Reading out and erasing fault memories

⇒ WKL7 066 000 1

Scope 2:

**Updating software for various control units and also re-programming rear-end electronics (BCM2) control unit****Working time:**

Updating software for various control units

Labor time: **72 TU**

Includes:

- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Re-programming operator control unit in front center console
- Re-programming instrument cluster
- Re-programming selector lever control unit
- Re-programming battery sensor for lithium starter battery (I-no. J2A) if equipped
- Re-coding front axle lift system control unit
- Re-coding control unit for chassis control (PASM)
- Re-coding brake electronics (PSM incl. parking brake) control unit
- Re-programming control unit for Tire Pressure Monitoring (TPM)
- Teaching wheel electronics

Checking software version of rear-end electronics (BCM2)  
and re-programming  
Reading out and erasing fault memories

⇒ WKL7 66 000 1

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