PORSCHE

Technical Information

Spare Part Requirements for 12-Volt Vehicle Electrical System Battery - Checking Software Version and Updating it if Necessary (32/21)

Vehicle Type:	**Taycan (Y1A)**
Model Year:	**As of 2020 up to 2021**
Concerns:	**Spare parts requirements for the 12-volt vehicle electrical system battery**
Information:	**If the 12-volt vehicle electrical system battery needs to be replaced, the software version of the battery sensor must be checked and, if necessary, updated following installation in the vehicle.**
Action required:	Check software version of the battery sensor and update it if necessary.

ℹ️ Information

If the vehicle is affected by workshop campaign **WMA5** or **WMA6** and this has not yet been carried out, the relevant workshop campaign must also be carried out during the workshop visit.
Otherwise, correct functioning cannot be guaranteed because of the different software versions in the vehicle.

ℹ️ Information

The total time required for control unit programming is **approx. 10 minutes**.

Software: **Overview of software version:**

Component	SW (new)
Battery sensor	4174

Parts Info: **Affected part numbers:**

Part No.	Designation
9J1915105EY	Lithium battery (40 AH)

Tools:

> ### ℹ️ Information
>
> The Taycan (Y1A) is equipped as standard with a **lithium starter battery**.
>
> **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 90 A battery charger**
- **9900 - PIWIS Tester 3** with PIWIS test software **version 40.000.040** (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 recognized

- **If the driver's key is not recognized 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.**

ℹ Information

The procedure described here is based on the PIWIS Tester 3 software version **40.000.040**.

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   Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming - section on "Preliminary work"'*.

2   Connect a suitable battery charger, e.g. **battery charger 90A**, to the jump-start terminals and switch it on.

3   Position the **driver's key** with the back facing forward upright between the holding struts in the rear cupholder (**emergency start tray**) to guarantee a permanent radio link between the vehicle and remote control ⇒ *Emergency start tray*.

4   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.

5   Establish operational readiness (switch on ignition).

Emergency start tray

6   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.

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7   Select **Gateway** control unit.

    7.1   Select the **'Extended identifications'** menu.

    7.2   Check the software version for the **battery sensor**.

- Software version is **4174**: The software is already up-to-date. No further action required.

- Software version is **not 4174**: Software update required. For this purpose, re-program the battery sensor, see ⇒ *Technical Information '9X00IN Re-programming battery sensor'*.

Re-programming battery sensor

⚠️ **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:

Re-program battery sensor.

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'*.

ℹ️ Information

An actual voltage of at least 14 volts is required from the 12-volt vehicle electrical system battery for programming the battery sensor. If this voltage is not achieved, programming cannot be performed.

For specific information on control unit programming as part of this programming process, see the table below:

Required PIWIS Tester software version:	**40.000.040** (or higher)
Type of control unit programming:	Control unit programming using the **'Campaign' function in the Additional menu** on the PIWIS Tester by entering a programming code.
Programming code:	**K4M2S**

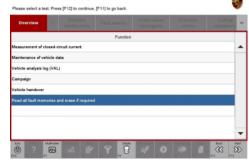| Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Software version for the battery sensor programmed as part of this programming process:	**4174**
	• Several control units can be updated with this programming process, depending on the relevant software integrated in the vehicle. • Following control unit programming, the software version can be read out of the gateway control unit in the 'Extended identifications' menu using the PIWIS Tester.
Programming time (approx.):	**approx. 10 minutes**
Procedure in the event of abnormal termination of control unit programming:	• End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*. • Repeat control unit programming by entering the programming code again.
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"'*.

Concluding work

Work 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 them if necessary" and press •F12" ('Next') to confirm ⇒ *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:

-    End operational readiness (switch off ignition).

-    Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.

-    Lock the vehicle using the driver's key and remove the **driver's key from the proximity of the vehicle** (approx. 10 meter/ 32.8 ft).

-    **Wait approx. 15 minutes** before unlocking the vehicle again.

-    Restore operational readiness (switch on ignition).

-    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 End operational readiness (switch off ignition).

3 Disconnect the PIWIS Tester from the vehicle.

Control unit selection

ℹ️ Information

Connect the PIWIS Tester to a network as soon as you can and log into the PPN in order to transfer the backup documentation created during this campaign to the PAG systems.

4 Switch off and disconnect the battery charger.

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.
27060150	Checking vehicle electrical system battery (checking software version)	
27060149	Reworking vehicle electrical system battery (programming battery sensor)	

PQIS coding:

Location (FES5)	27060	Vehicle electrical system battery
Damage type (SA4)	1611	does not function

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

⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"'.*

⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*