

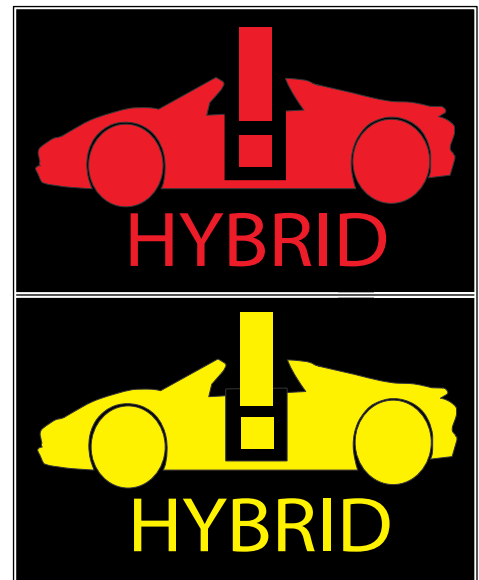
**Symptom in Vehicle Interior - Red or Yellow Hybrid Warning Message Appears in the Instrument Cluster: Re-programming control unit for high-voltage power electronics (SY 66/19)**

Vehicle Type: **918 Spyder**

Model Year: **As of 2012 up to 2018**

Subject: **High-voltage power electronics on front axle/High-voltage power electronics on rear axle**

- Symptom:
- The red warning message "**Hybrid system failure**" or the yellow warning message "**Hybrid system fault**" appears in the instrument cluster. ⇒ *Hybrid system warning messages*
  - The vehicle no longer starts the engine from Start Stop mode; it can only start driving after the ignition has been switched off and on again.



*Hybrid system warning messages*

- Cause:
- Due to a software error in the high-voltage power electronics, a fault memory entry (POA1B00 - High-voltage power electronics – function restriction) can be set at times in the control units for high-voltage power electronics on front axle or high-voltage power electronics on rear axle, resulting in the symptoms described here. The fault memory entry is deleted by switching the ignition off and on again.
  - A highly discharged high-voltage battery increases the probability that the fault memory entry will be set.

**Remedial Action:** In the event of a customer complaint and if a software version lower than "F640" is installed in the control unit for high-voltage power electronics on the front axle or lower than "R640" is installed in the control unit for high-voltage power electronics on the rear axle, re-program the control units for high-voltage power electronics on front axle and high-voltage power electronics on rear axle.



#### Information

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

**Tools:**

- **9900 - PIWIS Tester 3** with installed PIWIS Tester test software **version 38.600.000** (or higher)
- **Battery charger** with a current rating of **at least 90 A**.

### Preparatory work

#### NOTICE

**Caution! Battery will be permanently damaged if unapproved battery charging equipment is connected. Battery charger voltage must NOT exceed 13.8 Volts or battery damage will result!**

#### 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 commencing work, connect a suitable battery charger with a charging current of at least 90 A to the jump-start terminals in the front storage compartment.

#### 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 vehicles with Porsche Entry & Drive, programming cannot be started or will be interrupted.
- ⇒ Switch on the ignition using the original driver's key. To do this, replace the control unit in the ignition lock with the original driver's key if necessary.

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

**Carrying out control unit programming**

Work Procedure: 1 **Re-program control unit for high-voltage power electronics on the front axle using the PIWIS Tester.**

The basic procedure for programming a control unit is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Programming"*.

**Specific information on control unit programming in the context of this Technical Information:**

Required PIWIS Tester software version:	<b>38.600.000</b> (or higher)
Type of control unit programming:	Control unit programming using the <b>'Automatic programming'</b> function for the control unit for high-voltage power electronics on the front axle.
Programming sequence:	Read and follow the <b>information and instructions on the PIWIS Tester</b> during the guided programming sequence. The control unit for high-voltage power electronics on the front axle is <b>re-programmed</b> during the programming sequence. <b>Do not interrupt programming.</b>
Programming time (approx.):	<b>5 minutes</b>
Software version programmed during this campaign:	<b>F640</b> Following control unit programming, the software version can be read out of the control unit for high-voltage power electronics on the front axle in the ⇒ <b>'Extended identifications'</b> 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.

## 2 Re-program control unit for high-voltage power electronics on the rear axle using the PIWIS Tester.

The basic procedure for programming a control unit is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Programming"*.

### Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software version:	<b>38.600.000</b> (or higher)
Type of control unit programming:	Control unit programming using the ' <b>Automatic programming</b> ' function for the control unit for high-voltage power electronics on the rear axle.
Programming sequence:	Read and follow the <b>information and instructions on the PIWIS Tester</b> during the guided programming sequence. The control unit for high-voltage power electronics on the rear axle is <b>re-programmed</b> during the programming sequence. <b>Do not interrupt programming.</b>
Programming time (approx.):	<b>5 minutes</b>
Software version programmed during this campaign:	<b>F640</b> Following control unit programming, the software version can be read out of the control unit for high-voltage power electronics on the rear axle in the ⇒ ' <b>Extended identifications</b> ' 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**

Work Procedure: 1 Carry out general subsequent work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Subsequent work"*.

**Invoicing**

Invoicing: The work involved is invoiced under the labor operation:

APOS	Labor operation	I No.
27912530	Programming power electronics	

For invoicing and documentation using PQIS, enter the following coding:

Location (FES5)	27910	High-voltage power electronics
Damage type (SA4)	4022	No signal

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

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