

Body Symptom - White Message or Red Warning Message "Convertible Top Not Fully Locked" in the Instrument Cluster (SY 83/25)



Information

Before starting troubleshooting, use the customer statement and the fault memory entries in the instrument cluster to ensure that the fault was not caused by exceeding the permitted top speed with the convertible top closed (do not drive faster than 200 km/h if the convertible top is installed).

For further information, see: ⇒ Betriebsanleitung Section "Convertible top"

Vehicle Type: **718 Spyder RS**

Model Year: **As of 2024**

Equipment: **RS version (M-No. E1T)**

Concerns:

- **Front latch**
- **Rear latch**
- **Roof microswitches**

Cause: **The customer complains about a white message or red warning message "Convertible top not fully locked" in the instrument cluster, even though the convertible top is closed or open.**

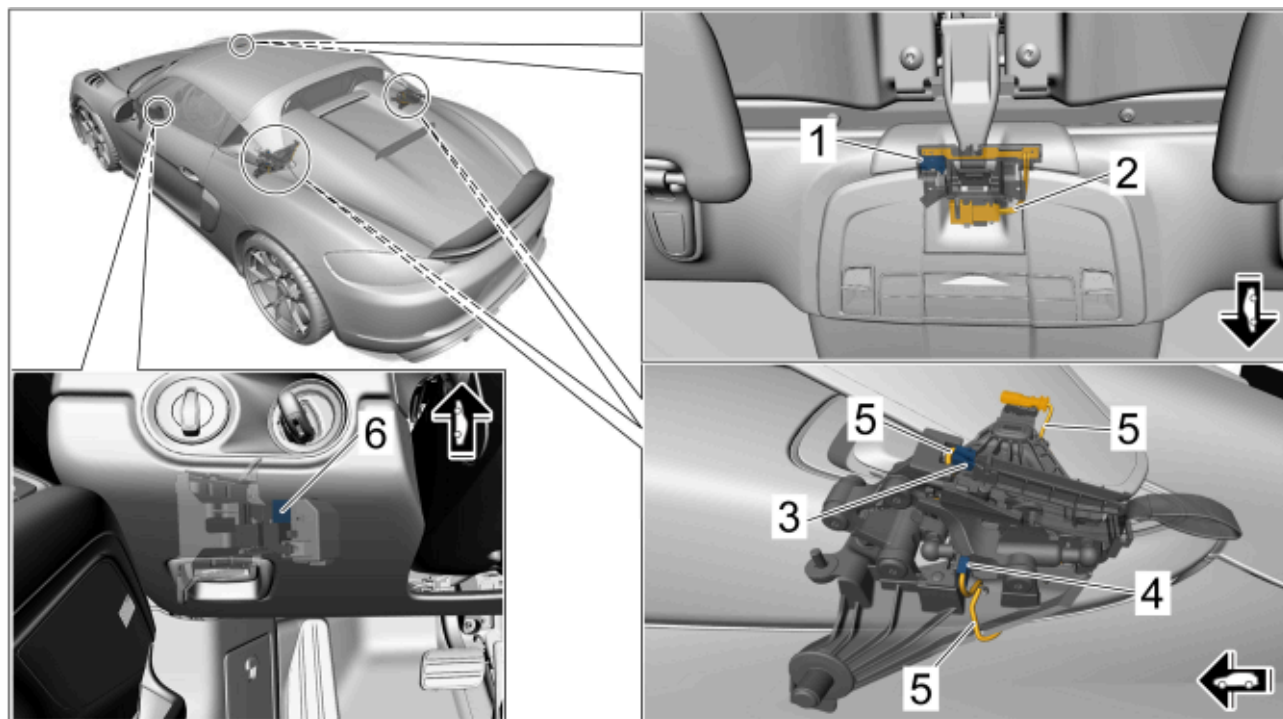
Cause: Possible causes:

- Locking hook for convertible top incorrectly locked in latches
- Microswitch electric plug connections not correctly connected and locked
- Microswitch incorrectly positioned or defective (switching point cannot be reached)
- Damaged insulation of the microswitch electrical lines
- Damaged locking lugs of the microswitch electric plug connections
- Convertible top relay defective
- Fault in the circuit of the convertible top relay

Action: Check and repair the convertible top using Porsche Tester 4 and a measurement table.

Installation

Position:



Installation positions for electric components on RS Spyder convertible top

- 1 – Microswitch front latch (S011)
- 2 – Electrical line and plug connection for microswitch front latch (S011)
- 3 – Microswitch latch at rear 1 left (S20) / Microswitch latch at rear 1 right (S21) (shown at rear left latch)
- 4 – Microswitch latch at rear 2 left (S22) / Microswitch latch at rear 2 right (S23) (shown at rear left latch)
- 5 – Electric line and plug connection for microswitch S20 and S21 / Electric line and plug connection for microswitch S22 and S23 (shown at rear left latch)
- 6 – Convertible top relay (K004)

Required tools

Tools:

- **P90999 - PIWIS Tester 4**
- Battery charger with a current rating of **at least 90 A** and a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 - battery charger 90 A**. For further information about the battery chargers to be used, see the corresponding Workshop Manual. ⇒ *Workshop Manual '270689 Charge the battery and vehicle electrical system'*
- Torque wrench, 2-10 Nm (2-8 ftlb.), e.g., **V.A.G 1783 - Torque wrench, 2-10 Nm (2-8 ftlb.)**

Additional required tools for uncovering the rear left and right microswitch latches:

- Commercial hot air gun, e.g. **VAS 1978/14A - hot air gun**

Preparatory work

- Work Procedure: 1 Connect and switch on the battery charger.
⇒ *Workshop Manual '270689 Charging the vehicle electrical system battery'*
- 2 Switch on the ignition.
- 3 Connect **Porsche Tester 4** to the vehicle communication module (VCI) via the **USB cable**, connect the communication module to the vehicle and switch on.
- 4 Call up measured values for "convertible top".
- 4.1 In the control unit selection (Menu ⇒ **"Overview"**), select the control unit for **rear-end electronics (BCM2)**.
- 4.2 Select the **Gear shift actual values** tab.
- 4.3 Select the **Convertible top (Boxster)** group and confirm by pressing **>>** .

Checking the microswitch for the front latch and the latch at the rear left and right

- Work Procedure: 1 Compare the displayed measured values with the table of measured values in the following states.

Table of measured values:

Pin on BCM2	Actual values / input signals	Target measured values for convertible top		Function / component
		Closed	Opened	
A12	Microswitch for shelf fixing locked (right fin)	Yes	No	B637 - Right fin sensor
B39	Microswitch for convertible top 1 (microswitch for latching hook not in fixture)	No	Yes	S011 - Switch for latching hook on convertible top - microswitch
A19	Microswitch for convertible top unlocked (microswitch for latching hook not in fixture)	No	Yes	S011 - Switch for latching hook on convertible top - microswitch
B29	Microswitch for convertible top lock locked (left fin)	Yes	No	K004 - Open convertible top relay Relay carrier 1 Slot 5 B636 - Left fin sensor

A20	Microswitch for latching hook locked in fixture (right fin)	Yes	No	B637 - Right fin sensor
A11	Reed contact for convertible top raised (microswitch for latching hook not in fixture)	No	Yes	S011 - Switch for latching hook on convertible top - microswitch

- 1.1 Latching hook and all fins closed and locked correctly (ensure that the convertible top is correctly inserted into the fins) ⇒ *Correct fit of latching hooks in the latch.*
- 1.2 Open the left fin (1 measured value must change).
- 1.3 Open the right fin (2 measured values must change).
- 1.4 Open the latching hook (3 measured values must change).



Correct fit of latching hooks in the latch

Assessment		Action
(✓)	Measured values have changed or correspond to the respective state.	Check the convertible top relay. Continue with ⇒ Technical Information '270689 Checking the Spyder RS (K004) convertible top relay'.
(✗)	Measured values have not changed or do not correspond to the respective state.	Uncover affected microswitches. Uncover the microswitch for the front latch (S011). For work procedure, see: ⇒ <i>Workshop Manual '610519A2 Removing and installing the front latch'</i> Uncover the rear left latch of microswitch 1 (S20) and microswitch 2 (S22). For work procedure, see: ⇒ <i>Workshop Manual '61071941 Removing and installing the rear latch'</i>

Uncover the **rear right latch** of microswitch 1 (S21) and microswitch 2 (S23).

For work procedure, see:

⇒ *Workshop Manual '61071941 Removing and installing the rear latch'*

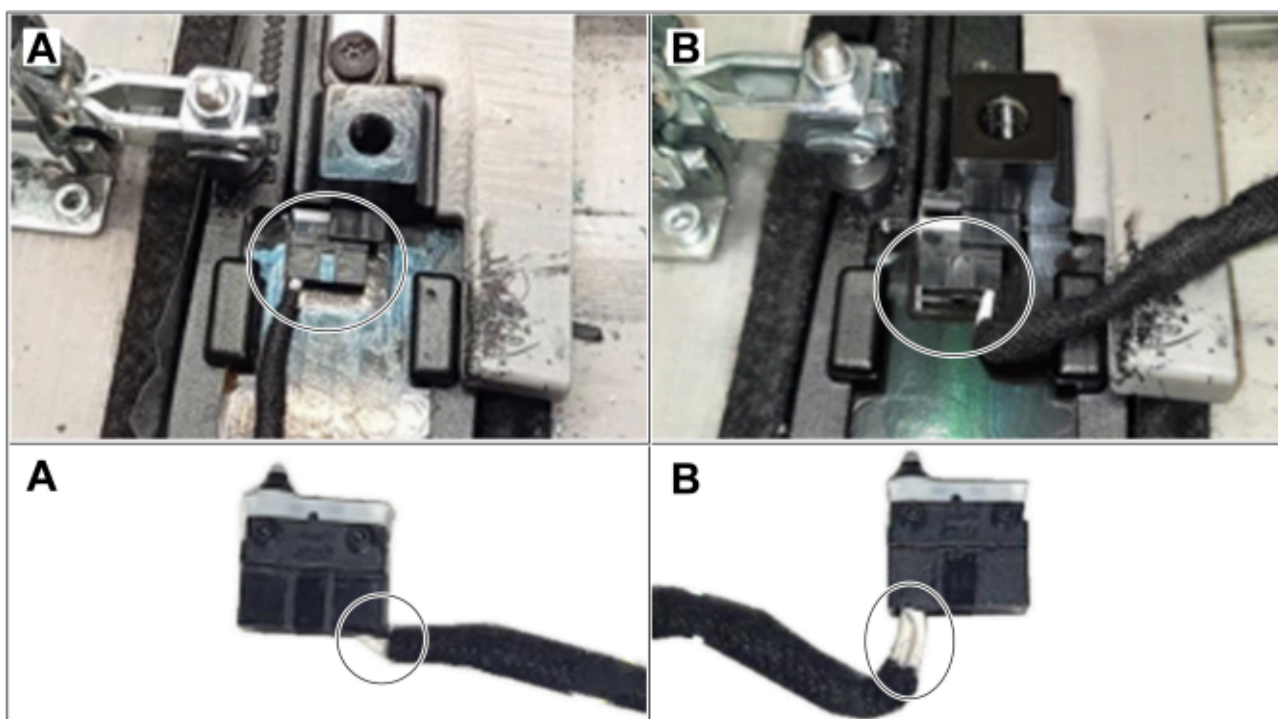
Then continue with Step ⇒ 7.

- 2 Switch off the ignition.
- 3 Check the affected microswitches, electrical lines and plug connection for the following points:
 - Microswitch switching point is reached
 - Electrical lines correctly inserted into microswitch
 - Electric plug connections of the microswitches correctly connected and locked
 - Damage to electrical lines
 - Damage to locking lugs on plug housing for microswitch electrical line



Information

During production, the component status of the microswitch for the rear latch has changed. **Both** component statuses are valid and do not constitute a reason for a direct replacement of the wire harness.



Component status of microswitch for rear latch, previous and new

- A** – Previous component status
B – New component status

4 Depending on the result, carry out the following repair:

Assessment	Action
Microswitch switching point is not reached.	Microswitch defective. Microswitch for front latch (S011) defective: Replace the front latch. ⇒ Workshop Manual '610519A2 Removing and installing the front latch' Microswitch for rear latch (S20 / S21 / S22 / S23) defective: Replace the affected rear latch wire harness. ⇒ Technical Information '610519A2 Replace the rear latch wire harness'.
Electrical lines inserted incorrectly into microswitch.	If possible, plug in the affected electrical line correctly. If not, please proceed as follows: Microswitch for front latch line (S011): Replace the front latch. ⇒ Workshop Manual '610519A2 Removing and installing the front latch' After repair, continue with ⇒ Technical Information '610519A2 Follow-up actions'. Microswitch for rear latch line (S20 / S21 / S22 / S23): Replace the affected rear latch wire harness. ⇒ Technical Information '610519A2 Replace the rear latch wire harness'.
Electric plug connections of the microswitches incorrectly connected and locked.	Connect and lock the affected electric plug connection. After repair, continue with ⇒ Technical Information '610519A2 Follow-up actions'.

Damage to electrical lines present.	If possible, repair the affected electrical line. If not, please proceed as follows: Microswitch for front latch line: Replace the front latch. ⇒ Workshop Manual '610519A2 Removing and installing the front latch' After repair, continue with ⇒ Technical Information '610519A2 Follow-up actions'. Microswitch for rear latch line (S20 / S21 / S22 / S23): Replace the affected rear latch wire harness. ⇒ Technical Information '610519A2 Replace the rear latch wire harness'.
Damage to locking lugs of plug housing for microswitch electrical line.	Plug housing defective. Plug housing for microswitch for front latch (S011) defective: Replace the front latch. ⇒ Workshop Manual '610519A2 Removing and installing the front latch' After repair, continue with Plug housing for microswitch for rear latch (S20 / S21 / S22 / S23) defective: Replace the affected rear latch wire harness. ⇒ Technical Information '610519A2 Replace the rear latch wire harness'.

Required parts if the front latch must be replaced:

Parts Info:

Part no.	Designation – Location	Quantity
9P1871544 5Q0	⇒ Convertible top latch fixture – Front latch	1 piece

Replacing the rear latch wire harness

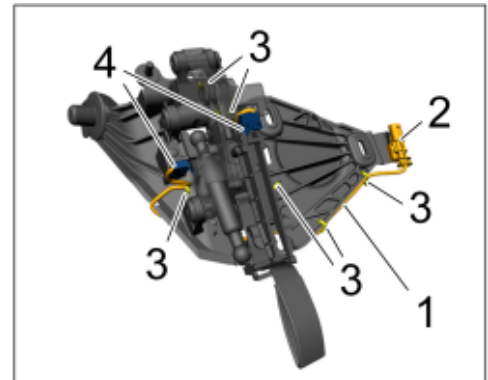
Required Parts:	Part no.	Designation – Location	Number
	98156794700	⇒ Repair kit for fin wire harness – Rear left latch	1 piece
	or		
	98156794800	⇒ Repair kit for fin wire harness – Rear right latch	1 piece



Information

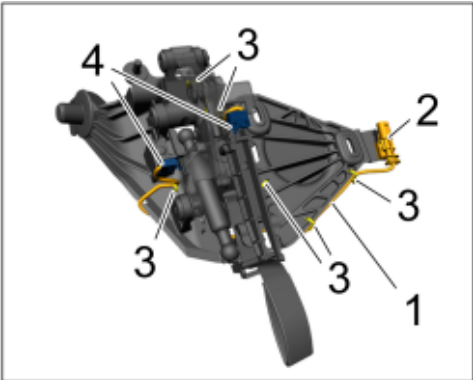
The replacement of the rear latch wire harness is described on one side as an example. Replacing the other side is practically identical.

- Work Procedure:
- 1 Remove the **affected** rear latch.
⇒ *Workshop Manual '61071941 Removing and installing the rear latch'*
 - 2 Replace the rear latch wire harness ⇒ *Rear latch wire harness -1-*.
 - 2.1 Unclip the electric plug connection ⇒ *Rear latch wire harness -2-*.
 - 2.2 Cut cable ties ⇒ *Rear latch wire harness -3-* and dispose of them.
 - 2.3 Unclip the microswitch ⇒ *Rear latch wire harness -4-*.
 - 2.4 Remove the rear latch wire harness.



Rear latch wire harness

- 3 Install the **new** rear latch wire harness ⇒ *Rear latch wire harness -1-*.
- 3.1 Position the rear latch wire harness ⇒ *Rear latch wire harness -1-*.
- 3.2 Position and clip in the microswitch ⇒ *Rear latch wire harness -4-*.
- 3.3 Clip in electric plug connection ⇒ *Rear latch wire harness -2-*.
- 3.4 Position and tighten the **new** cable ties ⇒ *Rear latch wire harness -3-* from the repair kit.
- 4 Install the rear latch.
⇒ *Workshop Manual '61071941 Removing and installing the rear latch'*
- 5 Continue with ⇒ *Technical Information '61071941 Follow-up actions'*.



Rear latch wire harness

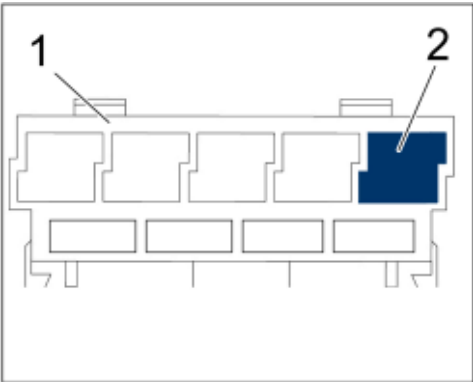
Checking the Spyder RS (K004) convertible top relay



Information

The relay for the convertible top (K004) is located **on relay carrier 1, position K5**.

- 1 – Relay carrier 1
2 – Position K5



Convertible top relay (K004)

Required Parts
If Necessary:

Part no.	Designation – Location	Number
Only if relay K004 is declared defective:		
...*	⇒ Relay – Convertible top (K004)	1 piece

Only if relay carrier 1 must be uncovered:

9A700740400

⇒ External hexalobular bolt M6 x 20

2 pieces

– Knee airbag

* Determine the required relay independently using the vehicle identification number in the spare parts catalogue PET2.

Work Procedure: 1 Switch on the ignition.

2 Compare the displayed measured values with the table of measured values in the states described below.

Table of measured values:

Pin on BCM2	Actual values / input signals	Target measured values for convertible top		Function / component
		Closed	Opened	
A12	Microswitch for shelf fixing locked (right fin)	Yes	No	B637 - Right fin sensor
B39	Microswitch for convertible top 1 (microswitch for latching hook not in fixture)	No	Yes	S011 - Switch for latching hook on convertible top - microswitch
A19	Microswitch for convertible top unlocked (microswitch for latching hook not in fixture)	No	Yes	S011 - Switch for latching hook on convertible top - microswitch
B29	Microswitch for convertible top lock locked (left fin)	Yes	No	K004 - Open convertible top relay Relay carrier 1 Slot 5 B636 - Left fin sensor
A20	Microswitch for latching hook locked in fixture (right fin)	Yes		B637 - Right fin sensor
A11	Reed contact for convertible top raised (microswitch for latching hook not in fixture)	No	Yes	S011 - Switch for latching hook on convertible top - microswitch

3 Open the convertible top fully.
Rear latches must be open and the latching hooks on the convertible top removed.

4 Switch off the ignition and confirm in **Porsche Tester 4** message "Continue without ignition?".
None of the selected measured values change in this action step.

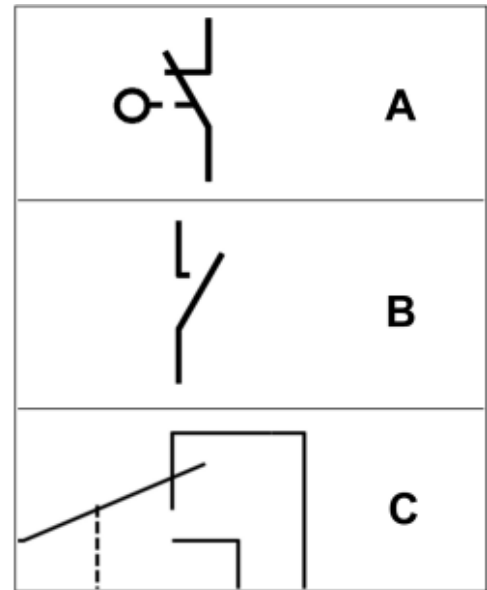
- 5 Close the driver's door or alternatively lock the driver's door lock.
None of the selected measured values change in this action step.
- 6 Lock the vehicle using a remote key, observing the measured values.
Measured value **"Microswitch for convertible top lock locked (left fin)"** must change **"Yes"** .
- 7 Unlock the vehicle again using a remote key, observing the measured values.
Measured value **"Microswitch for convertible top lock locked (left fin)"** must change to **"No"** .

Assessment		Action
(✓)	Measured values have changed as expected after action steps ⇒ 6 and ⇒ 7.	Convertible top relay (K004) OK. If necessary, coordinate further action with the technical support of your importer. End of action.
(✗)	Measured values have not changed as expected in action steps ⇒ 6 and / or ⇒ 7.	Continue troubleshooting on the convertible top relay (K004). Release relay carrier 1, perform electric troubleshooting of the relay and its activation independently using a detailed circuit diagram ⇒ <i>Detailed circuit diagram for convertible top relay (K004)</i> . For work procedure, see: ⇒ <i>Workshop Manual '978309A4 Loosening and securing relay carrier 1'</i> After repair, continue with ⇒ <i>Technical Information '978309A4 Follow-up actions'</i> .

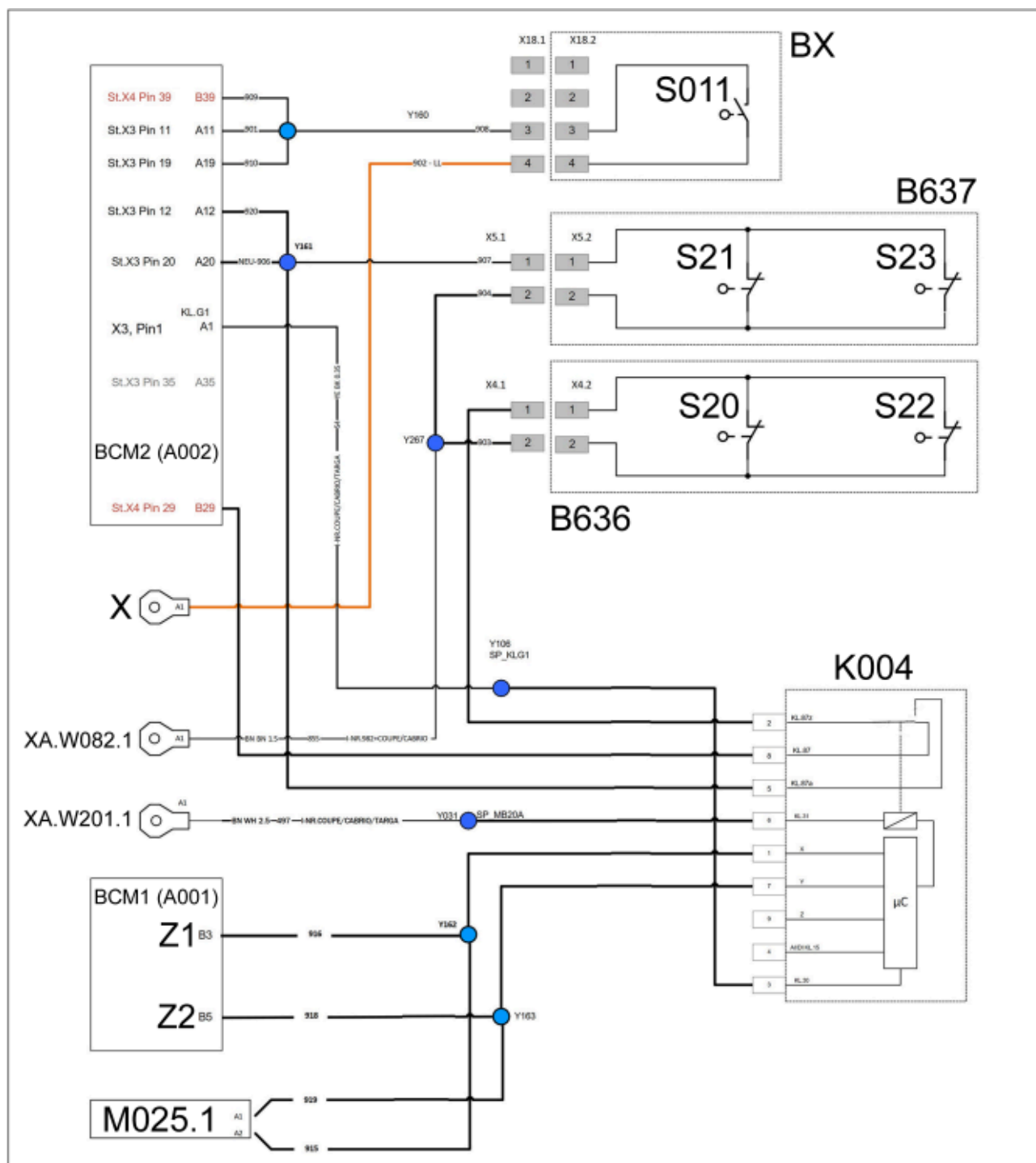
**Information**

Explanation of switching positions:

- A** – **S011**: Latching hook in holding fixture
- B** – **S20 to S23**: Latching hook locked or fin tensioner closed
- C** – **K004**: Vehicle locked



Switching positions



Detailed circuit diagram for convertible top relay (K004)

BCM1 (A001) – Body Control Module 1
BCM2 (A002) – Body Control Module 2
B636 – Left fin
B637 – Right fin
BX – Front latch
K004 – Convertible top relay (K004)
M025.1 – Actuator for fuel filler flap
S011 – Microswitch for front latch
S20 – Microswitch for rear latch 1 left
S21 – Microswitch for rear latch 1 right
S22 – Microswitch for rear latch 2 left
S23 – Microswitch for rear latch 2 right
XA.W201.1 – Ground pins 20A
XA.W082.1 – Ground pins 8B
X – Ground connection for center wind turbine
Z1 – Control element for pressure tank cap open
Z2 – Control element for pressure tank cap closed

Follow-up actions

- Work Procedure:
- 1 Read out and delete all control unit fault memories.
 - 2 Exit the diagnostic application and disconnect **Porsche Tester 4** from the vehicle.
 - 3 Switch off and disconnect the battery charger.
⇒ *Workshop Manual '270689 Charging the vehicle electrical system battery'*

Labor position and PCSS encryption



Information

Select PCSS encryption depending on the cause for the respective affected vehicle.

Labor position:

APOS	Labor operation	I No.
61010140	Check microswitch (S011, S20, S21, S22 and S23)	
61010141	Check microswitch (S011, S20, S21, S22 and S23) and relay for convertible top Spyder RS (K004)	
61014940	Check microswitch (S011, S20, S21, S22 and S23) and replace front latch	
61014941	Check microswitch (S011, S20, S21, S22 and S23) and replace rear left latch wire harness	
61014942	Check microswitch (S011, S20, S21, S22 and S23) and replace rear right latch wire harness	
61014943	Check microswitch (S011, S20, S21, S22 and S23) and connect and lock electric plug connection	

PCSS encryption:

Location (FES5)	61050	Front latch
Damage type (SA4)	4011	loose contact, contact error

PCSS encryption:

Location (FES5)	61070	Rear latch
Damage type (SA4)	1712	hooked/hanging

PCSS encryption:

Location (FES5)	61640	Roof microswitch
Damage type (SA4)	1611	not functioning

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