

Navigation System for Central Computer

Concern: Retrofitting



Model Year: **As of 2017**

Note: The subsequent installation of the optional equipment Navigation (7UG) including Voice control (QH1) has the following features:

- Voice control
- Perspective map display and 3D navigation map including city and all-terrain models with satellite map overlay
- Dynamic route guidance with TMC/TMC Pro
- Navigation by compass and GPS in non-digitalized regions
- Map updates for the next 3 years

Important: Limitations of the subsequent installation of the Navigation system including voice control:

- No navigation maps displayed in the multi-function display (instrument cluster)
- No Real-time Traffic Information (RTTI) as traffic information is received through the LTE Data module which is only included in vehicles with the Connect Plus option (IV1)

Parts Info: **982.044.902.02** ⇒ Navigation incl. Voice control, NAR

Parts List:

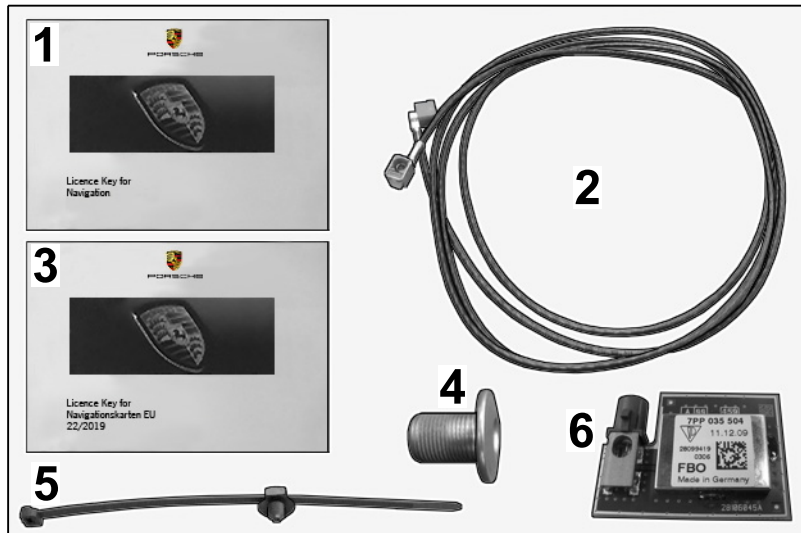


Figure 2

---	1 x	License key for Navigation/Voice control ⇒ Figure 2 -1-
9P4.979.005	1 x	GPS antenna line ⇒ Figure 2 -2-
---	1 x	License key for NAR incl. update in week xx/xxxx ⇒ Figure 2 -3-
N .910.207.01	1 x	Internal serration screw, M18 x 1.5 x 26 ⇒ Figure 2 -4-
955.606.838.00	5 x	Tie-wrap incl. fixing clip ⇒ Figure 2 -5-
7PP.035.504.A	1 x	GPS antenna ⇒ Figure 2 -6-
999.513.076.40	10 x	Tie-wrap (not shown)
999.507.195.40	1 x	Expanding spring 10.7 x 26.4, tie-wrap (not shown)

Information on ordering: For vehicles **with** the optional equipment 9WC (Without Rear Seat Entertainment and without Mirrorlink), the steering-column switch must also be ordered.

Installed steering-column switch	Required steering-column switch
Part No.	Part No.
991.613.043.50	991.613.051.50
970.613.043.50	970.613.051.50
991.613.045.50	991.613.053.50
970.613.045.50	970.613.053.50
970.613.047.50	970.613.055.50
970.613.049.50	970.613.057.50
991.613.011.50	991.613.019.50
970.613.011.50	970.613.019.50

991.613.013.50	991.613.021.50
970.613.013.50	970.613.021.50
970.613.015.50	970.613.023.50
970.613.017.50	970.613.025.50

Alternatively, the following instructions will help you to identify the required steering-column switch.

- 1 Look for the standard steering-column switch in the Porsche Electronic Parts Catalog (PET). To do this, activate the VIN filter in the PET¹.
- 2 Take note of the I-nos.
- 3 Replace the I-no. 9WC (Without Rear Seat Entertainment and without Mirrorlink) with the I-no. 9WT Mirrorlink/GAL).

¹ If the VIN filter in the PET does not work, the standard steering-column switch must be identified based on the I-no. in the vehicle information (PIWIS information system).

Tools:

9900 - PIWIS Tester III

Nr.32 - Multiple-tooth socket-wrench insert

Work Procedure: 1 Connect a battery charger. ⇒ *Workshop Manual '2X00IN Battery trickle charging'*

2 **Only** for vehicles **without** the Porsche Car Connect option (IU1):

2.1 Preparatory work:

- 2.1.1 Remove PCM. ⇒ *Workshop Manual '911019 Removing and installing PCM display and operator control unit'*
- 2.1.2 Remove glove compartment. ⇒ *Workshop Manual '681519 Removing and installing glove compartment'*
- 2.1.3 Remove right sun visors. ⇒ *Workshop Manual '682319 Removing and installing sun visor'*
- 2.1.4 Remove holder for sun visor at the left and right.

Open cover for sun visor holder ⇒
Figure 3 **-arrow-**.

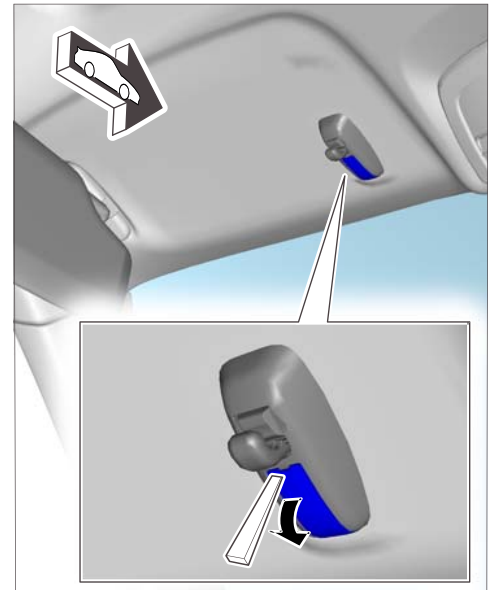


Figure 3

Unscrew fastening screw securing
sun visor holder ⇒ Figure 4
-arrow-.

- 2.1.5 Remove front roof trim panel.
⇒ Workshop Manual '708319
Removing and installing front roof
trim panel'
- 2.1.6 Remove A-pillar trim panel at
the right. ⇒ Workshop Manual
'705719 Removing and installing
A-pillar trim panel'

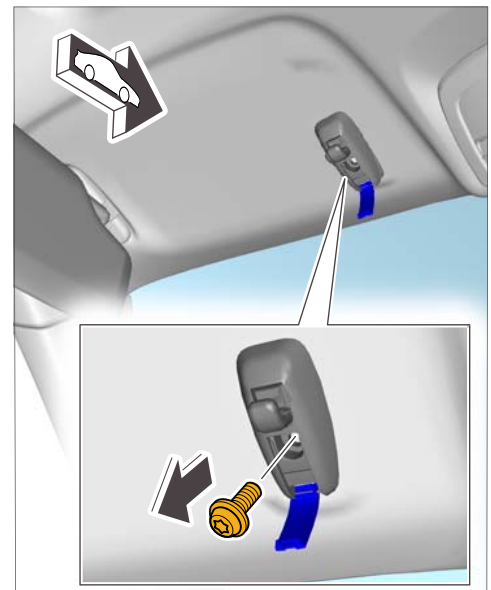


Figure 4

2.1.7 Unscrew and remove fastening screws in the roof console area ⇒ *Figure 5 -arrows-*.



Figure 5

2.1.8 Carefully pull the headliner ⇒ *Figure 6 -1-* down ⇒ *Figure 6 -arrow-*.

2.2 Install GPS antenna.

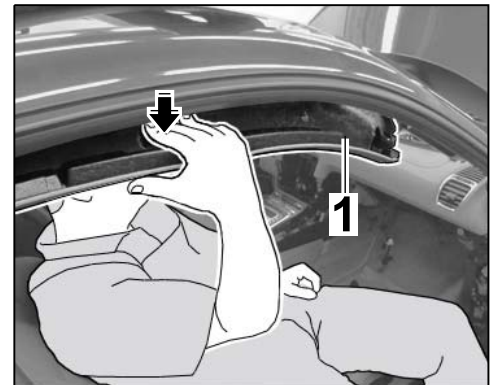


Figure 6

2.2.1 Attach angled antenna connector ⇒ *Figure 7 -1-* to the GPS antenna ⇒ *Figure 7 -2-* until the antenna connector engages securely.

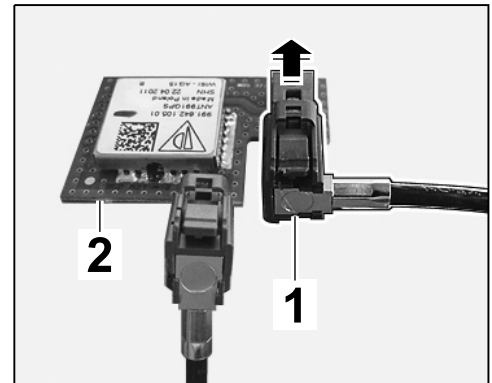


Figure 7

- 2.2.2 Insert GPS antenna ⇒ *Figure 8*
-1- into the mounting ⇒ *Figure 8*
-arrow a- and clip it in ⇒ *Figure 8*
-b-.

- 2.3 Route GPS antenna line as follows:
 Front roof trim panel → along wire harness
 for sun visor → A-pillar → along wire harness
 for dashboard (glove compartment) → PCM
 installation slot

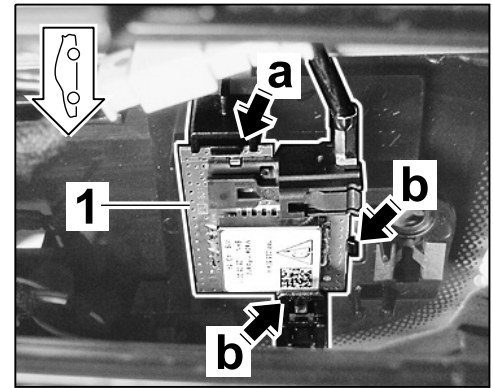


Figure 8

**Information**

Make sure that the roof cover does not buckle.

- 2.3.1 Carefully pull down the headliner and route antenna line ⇒ *Figure 9*
-1- along the standard wire harness
 for the sun visor and A-pillar.

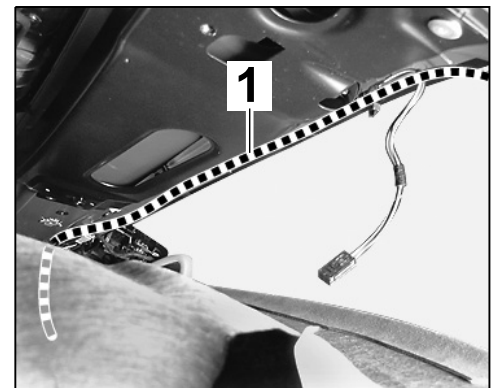


Figure 9

If there is no standard wire harness,
 secure the antenna line ⇒ *Figure 10*
-1- to the roof using a tie-wrap and
 punched-hole clip ⇒ *Figure 10-2-*.

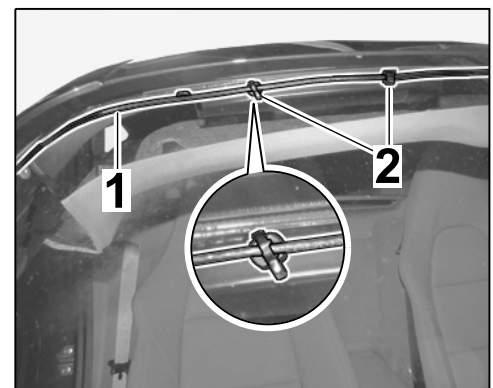


Figure 10

2.3.2 Route GPS antenna line ⇒ *Figure 11 -1-* along the wire harness for the dashboard (glove compartment).

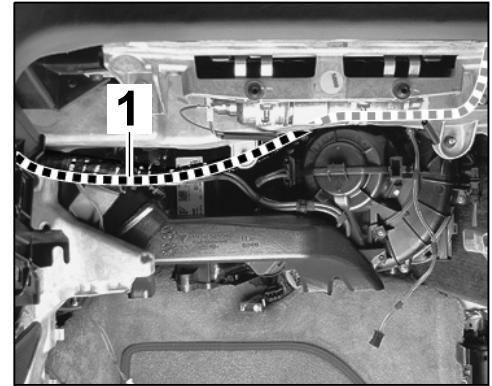


Figure 11

2.3.3 Route GPS antenna line ⇒ *Figure 12 -1-* to the PCM central connector.

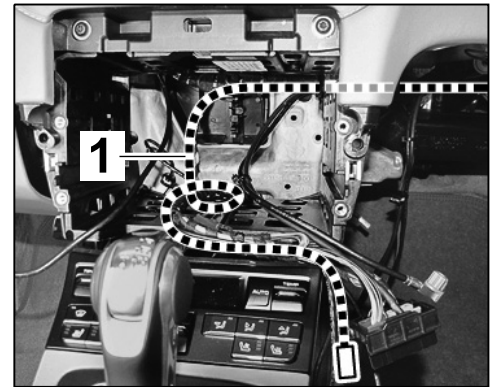


Figure 12

2.3.4 The GPS antenna line ⇒ *Figure 13 -1-* must protrude approx. 7 cm beyond the PCM central connector ⇒ *Figure 13 -2-*.

X – 7 cm

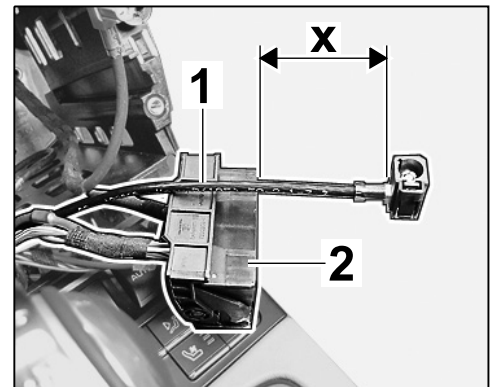


Figure 13

- 2.3.5 Clip three clip-on tie-wraps ⇒ *Figure 14-2* into the A-pillar.

Pull GPS antenna line ⇒ *Figure 14-1* back and fold it to form a loop close to the A-pillar. Secure GPS antenna line with the two upper tie-wraps.

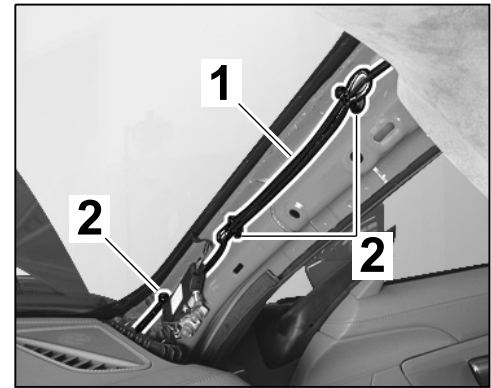


Figure 14

- 2.4 Concluding work

- 2.4.1 Screw in fastening screws in the roof console area.
- 2.4.2 Install A-pillar trim panel at the right. ⇒ *Workshop Manual '705719 Removing and installing A-pillar trim panel'*
- 2.4.3 Install front roof trim panel. ⇒ *Workshop Manual '708319 Removing and installing front roof trim panel'*
- 2.4.4 Install right sun visors. ⇒ *Workshop Manual '682319 Removing and installing sun visor'*
- 2.4.5 Install sun visor holder at the left and right.
- 2.4.6 Install glove compartment. ⇒ *Workshop Manual '681519 Removing and installing glove compartment'*
- 2.4.7 Install PCM. ⇒ *Workshop Manual '911019 Removing and installing PCM display and operator control unit'*

- 3 **Only** for vehicles **without** Voice control (I-no. OH1) or Mirrorlink/GAL (9WT):
Replace steering-column switch.

- 3.1 Remove steering wheel. ⇒ *Workshop Manual '481019 Removing and installing steering wheel'*
- 3.2 Loosen trim panel (on steering-column switch). ⇒ *Workshop Manual '481319 Removing and installing trim panel on steering-column switch'*
- 3.3 Convert steering-column switch.
- 3.3.1 Remove steering-column switch. ⇒ *Workshop Manual '945019 Removing and installing steering-column switch'*
- 3.3.2 Remove steering wheel electronics control unit from the steering-column switch and fit it on the new steering-column switch. ⇒ *Workshop Manual '916219 Removing and installing control unit for steering wheel electronics'*
- 3.3.3 Install steering-column switch. ⇒ *Workshop Manual '945019 Removing and installing steering-column switch'*
- 3.4 Secure trim panel (on steering-column switch). ⇒ *Workshop Manual '481319 Removing and installing trim panel on steering-column switch'*

3.5 Install steering wheel. ⇒ *Workshop Manual '481019 Removing and installing steering wheel'*

NOTICE**Voltage drop**

- **Risk of irreparable damage to control unit**
 - **Risk of damage to control unit**
 - **Fault entries in the control unit**
 - **Coding in the control unit is aborted**
 - **Malfunctions in control unit, even during programming**
- ⇒ **Prior to disconnecting the control unit, switch off the ignition and remove the ignition key.**
- ⇒ **Ensure that the power supply is not interrupted during programming.**
- ⇒ **Connect battery charger/power supply suitable for AGM Type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V.**

**Information**

The **9900 - PIWIS Tester III** instructions take precedence since the description may be different with later Tester releases.

The procedure described here has been structured in general terms; different text or additional information may be displayed.

4 Code Navigation system and voice control.

4.1 Enable Navigation system and voice control.

- 4.1.1 **9900 - PIWIS Tester III** must now be connected. Switch on ignition.
- 4.1.2 Select "Diagnostics". **9900 - PIWIS Tester III** detects the model line. Select **Next** to continue. PIWIS Tester III Diagnostics starts.
- 4.1.3 **Additional menu** must be selected by pressing •F7" . Press •F11" to confirm the question "Create vehicle analysis log (VAL)?".
- 4.1.4 Select the **Function enable** function. Press •F12" to continue.

**Information**

PIWIS Tester must be connected to the Porsche Partner Network (PPN) via WLAN or data cable!

- 4.1.5 **Enter PPN user**. Touch the PPN password input field and enter the **password**. **Login** must now be selected.
- 4.1.6 Select the **Enable** function. Press •F12" to continue.

- 4.1.7 Touch the license number input field and enter the **license number**.
Press •F12" to continue.
- 4.1.8 Confirm the functions **Navigation** and **Navigation voice control** by pressing •F12" .
Wait until the message **Functions have been enabled successfully.** appears.
Press •F12" to go to the **Overview** menu.
- 4.2 Enable Navigation database.
- 4.2.1 Select the **Function enable** function. Press •F12" to continue.
- 4.2.2 Select the **Enable** function. Press •F12" to continue.
- 4.2.3 Touch the license number input field and enter the **license number**.
Press •F12" to continue.
- 4.2.4 Confirm the functions **e.g. NAVDB MIB2 NAR Q1/2018** by pressing •F12" .



Information

The navigation data will be updated later.

Wait until the message **For the navigation update, please enter the storage medium with the following part number: e.g.: 9P1.909.xxx.x** appears.

- 4.2.5 Press •F12" to go to the **Overview** menu.
Select the function **Display enabled functions**. Press •F12" to continue.
Wait until a table containing the enabled functions appears, e.g.:

Control unit	Function	Status
PCM4 (001)	Apple CarPlay	✓
	Voice control	✓
	Sport Chrono	✓
	Bluetooth	✓
	Navigation	✓
	UAS (universal audio interface)	✓

- 4.3 Adapt coding.
- 4.3.1 Press •F11" to return to the list of control units.
Select all control units by pressing •Ctrl A" . Press •F12" to continue.
- 4.3.2 Switch to the **Codings/adaptations** menu. Press •F12" to continue.

Select **Automatic coding** mode. Press •F12“ to continue.

- 4.3.3 Wait until the message **Coding has been completed successfully** appears. Press •F12“ to continue.

Switch to the **Overview** menu.

- 4.4 Update the navigation data. ⇒ *Workshop Manual '915225 Programming navigation update on central computer'*
- 4.5 Read out the fault memories of all systems, work through any existing faults and erase the fault memories. ⇒ *Workshop Manual '033500 Fault memory for on-board diagnosis'*
- 4.6 Switch off ignition and disconnect **9900 - PIWIS Tester III**.
- 4.7 Disconnect the battery charger. ⇒ *Workshop Manual '2X00IN Battery trickle charging'*

91522344 Enabling Navigation system Labor time: **94 TU**
 Includes: Enabling Navigation system
 Without: Installing navigation data on central computer

91522345 Enabling Navigation system Labor time: **259 TU**
 Includes: Removing and installing PCM display and operator control unit, installing GPS antenna and GPS antenna line, enabling Navigation system
 Without: Installing navigation data on central computer

94501900: Removing and installing steering-column switch Labor time: **66 TU**

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