

PORSCHE Front Camera (Dashcam)

Revision: This bulletin replaces bulletin Group 9 1/21, dated July 15, 2021.

Model Year: **As of 2019 up to 2021**

Restrictions: Approved for the following markets/countries:

- USA (C02) and Canada (C36)

Information: **Retrofitting**



Information



Figure 1

Note: The Porsche front camera (dashcam ⇒ *Figure 1*) is affixed to the **LEFT** of the interior mirror (viewed in direction of travel) on the windshield and is connected to the vehicle electrical system.

It is ideal for making video recordings of driving situations and while parking. It can be configured and operated using a related app on your smartphone.

Recorded videos are stored on the supplied SD card and previous recordings are overwritten.

If the dashcam detects a shake/vibration or if the radar sensor is triggered, the recorded video is stored separately and not overwritten. Recordings can be downloaded directly from the SD card or via the app.



Information

Important information for customers/customer service advisors:

- Ask customers to download and install the "Porsche Dashcam App" from the App Store (Apple or Google Play) on their device (smartphone/tablet) in advance.

For vehicle handover:

- Together with the customer, check whether a firmware update via "Porsche Dashcam App" is necessary. Perform the firmware update together if necessary.
- Together with the customer, choose the "Region/State/Country" by selecting the relevant flag and format the SD card.

Further information for customers:

- The customer is responsible for choosing the right "Region/State/Country"!
- After crossing a national border: Update the "Region/State/Country" (see also conditions of use for this topic)!

Parts Info:

9Y0.044.930

⇒ PORSCHE front camera (dashcam), set

Parts list:



Figure 2

----	1 x	3M privacy film (front & rear camera) ⇒ <i>Figure 2-1-</i>
----	1 x	Front camera ⇒ <i>Figure 2-2-</i>
----	1 x	Micro SD memory card (32 GB, plugged into front camera) ⇒ <i>Figure 2-3-</i>
----	1 x	Front camera retainer plate assembly with wire harness ⇒ <i>Figure 2-4-</i>
----	1 x	Wire harness assembly with connector (3-pin, wire approx. 4 m long) ⇒ <i>Figure 2-5-</i>
----	3 x	Protective foam (Ø approx. 29 x 74) ⇒ <i>Figure 2-6-</i>
----	7 x	Tie-wrap, 145 x 3.6 x 1.1 1,1 ⇒ <i>Figure 2-7-</i>
N.907.326.01	4 x	Socket contact, 4.8 x Ø 1.0 mm ² ⇒ <i>Figure 2-8-</i>
N.907.327.01	2 x	Socket contact, 4.8 x Ø 2.5 mm ² (standard power timer) ⇒ <i>Figure 2-9-</i>
N.906.844.01	3 x	Socket contact, 2.8 x Ø 1.0 mm ² (junior power timer) ⇒ <i>Figure 2-10-</i>
999.650.136.22	4 x	Socket contact, 5.0 x Ø 1.0 mm ² ⇒ <i>Figure 2-11-</i>
N.017.506.5	2 x	Cable ring eyelet, A6 ⇒ <i>Figure 2-12-</i>
992.971.859.B	2 x	Cable ring eyelet, M8 ⇒ <i>Figure 2-13-</i>
N.102.615.01	2 x	Blade-type fuse, 5 amp (mini) ⇒ <i>Figure 2-14-</i>
N.017.131.16	2 x	Blade-type fuse, 5 amp ⇒ <i>Figure 2-15-</i>
----	1 x	PORSCHE dashcam operating instructions ⇒ <i>Figure 2-16-</i>

Repair Kits: **ONLY** order when replacing the windshield/rear window:

9Y0.044.931	1 x	"Adhesive pad" repair kit, includes:
----	1 x	Adhesive pad for front camera retainer plate (grey) on backing sheet
----	1 x	Adhesive pad for rear camera (grey)
----	1 x	3M privacy film (front & rear camera) ⇒ <i>Figure 2-1-</i>

ONLY order if front camera "wiring harness" is damaged:

9Y0.044.931	1 x	"Adhesive pad" repair kit
9Y0.044.932	1 x	Wiring harness repair kit, includes:
----	1 x	Front camera retainer plate assembly with wire harness (WITHOUT adhesive pads, similar to ⇒ <i>Figure 2-4-</i>)
----	1 x	Wire harness assembly with connector (3-pin, wire approx. 4 m long) ⇒ <i>Figure 2-5-</i>
----	3 x	Protective foam (Ø approx. 29 x 74) ⇒ <i>Figure 2-6-</i>
----	7 x	Tie-wrap, 145 x 3.6 x 1.1 1,1 ⇒ <i>Figure 2-7-</i>
----	1 x	Bag with socket contacts, cable ring eyelets and fuses ⇒ <i>Figure 2-8-15-</i>

Technical

Details:

- Video recording in Quad High Definition (QHD)
- Lens with polarization filter to reduce reflections and improve colors and contrasts
- Audio recording (can be deactivated)
- Global positioning system (GPS) sensor
- Vibration sensor
- Radar sensor for video recording when an object is approaching the vehicle
- Bracket for the windshield for fixed mounting on the vehicle

Materials:

— — —	1 x	Auxiliary line (Tekalan or Teflon hose) approx. 1,500 mm/ 59 in long
— — — —	1 x	Wrapping/insulating tape (commercially available)
— — —	1 x	Cleaning cloth (commercially available)
— — — —	1 x	- Isopropanol (commercially available)

Tools:

9900 - PIWIS Tester 3

Tablet, smartphone or PC with Internet access

Marking pencil/chalk

Flashlight

Plastic squeegee

Installing:

- 1 Preparatory work
 - 1.1 Clean inside and outside of the windshield.
 - 1.2 Connect a battery charger. ⇒ *Workshop Manual '2X00IN Work instructions after disconnecting the battery'*.
 - 1.3 Expose front roof/(interior) rear-view mirror area
 - 1.3.1 Remove front roof console. ⇒ *Workshop Manual '708319 Removing and installing front roof console'*
 - 1.3.2 Remove (left) sun visor. ⇒ *Workshop Manual '682319 Removing and installing sun visor'*
 - 1.3.3 Remove front (left) grab handle. ⇒ *Workshop Manual '683519 Removing and installing front handle'*

1.4 Expose (left) A-pillar area

- 1 – Dashboard trim panel
- 2 – Air vent (instrument cluster)
- 3 – Trim panel under dashboard

1.4.1 Remove dashboard trim panel (at the left). ⇒ *Figure 3*, ⇒ *Workshop Manual '701619 Removing and installing dashboard trim panel'*

1.4.2 Remove front side-section trim panel (at the left). ⇒ *Workshop Manual '702419 Removing and installing front side-section trim panel'*

1.4.3 Remove A-pillar trim panel (at the left). ⇒ *Workshop Manual '705719 Removing and installing A-pillar trim panel'*

1.4.4 Remove front inner door sill trim. ⇒ *Figure 4*, ⇒ *Workshop Manual '680519 Removing and installing (front) inner door sill trim'*

- 1 – Front lid release
- 2 – Front inner door sill trim (on driver's side)

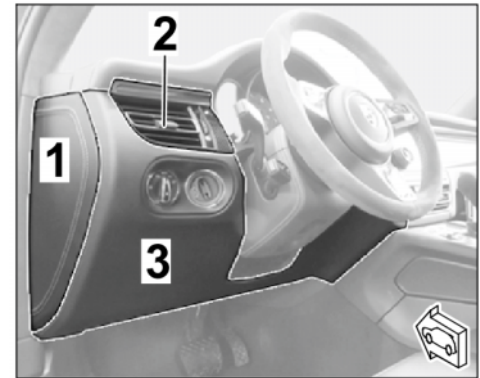


Figure 3



Figure 4

1.5 Expose fuse box on dashboard (at the left)

- 1 – Air vent (instrument cluster)
- 2 – Dashboard moulding (right)
- 3 – Air vent unit (PCM)
- 4 – Trim panel under dashboard

1.5.1 Removing trim panel under dashboard (left side.):. ⇒ *Figure 5 (LHD vehicle) -4-*

LHD vehicles: ⇒ *Workshop Manual '701919 Removing and installing trim panel under dashboard on driver's side'*

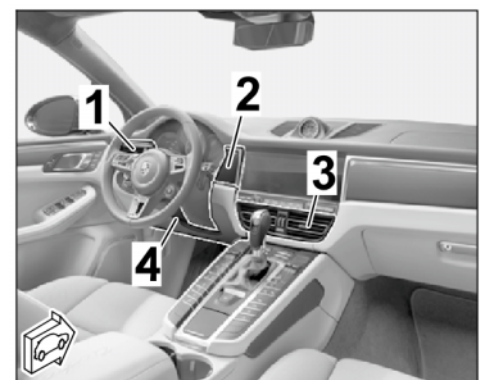


Figure 5 (LHD vehicle)

- 1.5.2 Loosen fuse box on dashboard (at the left). ⇒ *Workshop Manual '978409 Loosening and securing fuse box'*
- 1.6 Loosening front roof trim panel. ⇒ *Workshop Manual '708419 Removing and installing roof trim panel'*
- 2 Install PORSCHE front camera (dashcam) in the vehicle

Overview of installation position ⇒ *Figure 6*

- 1 – Interior mirror
2 – Installation position of PORSCHE front camera (dashcam)
3 – Electric wire harness
4 – Fuse box on dashboard (at the left)
5 – Ground pin

- 2.1 Position front camera (dashcam) to the **LEFT** of the interior mirror on the windshield

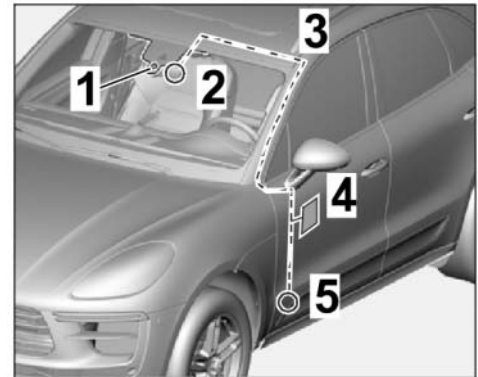


Figure 6

- 2.1.1 Install retainer plate with wire harness on the base of the front camera until the locking mechanism engages. ⇒ *Figure 7*

- 1 – Retainer plate with wire harness
2 – Front camera base

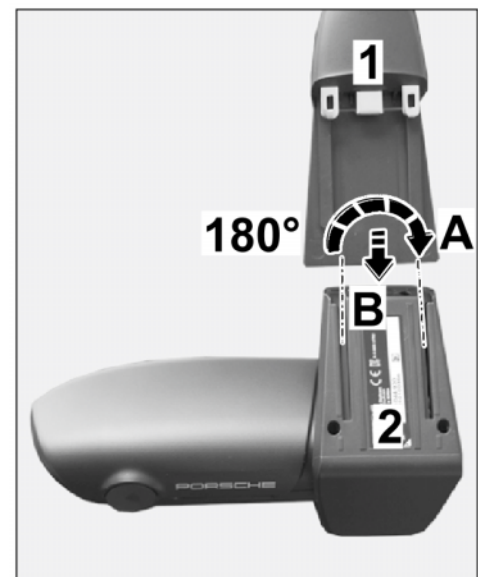


Figure 7

2.1.2 Trace the outline of the foot of the interior mirror () on the outside of the windshield using a marking pencil/chalk. ⇒ *Figure 8-1-*

- 1 – Outline of foot of interior mirror
- 2 – Outline of front camera base
- 3 – Interior mirror
- 4 – Front camera
- X – 216 mm/ 8.5 in
- Z – 108 mm/ 4.25 in

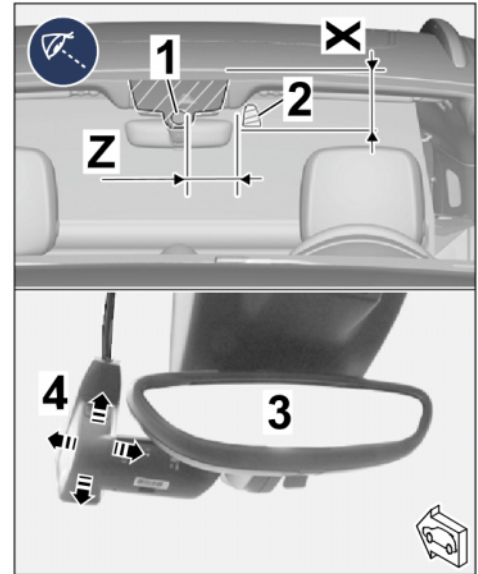


Figure 8

2.1.3 Copy dimensions X and Z on the windshield. ⇒ *Figure 8-top-*

Dimension X = distance from lower edge of outline of front camera base to edge of roof: **Length 216 mm/ 8.5 in**

Dimension Z = distance from inner edge of outline of front camera base to inner edge of outline of foot of interior mirror: **Length 108 mm/ 4.25 in**



Information

Observe the following points during positioning/alignment:

- Sufficient distance between front camera and interior mirror base: at least 5 mm/ 0.2 in!
- Get another person standing in front of the vehicle to check and confirm the horizontal alignment of the camera with the PORSCHE logo!

2.1.4 Position front camera with retainer plate in the vehicle at the marking on the windshield. ⇒ *Figure 8-Arrows-*

2.1.5 Get another person to trace and shade in the outline of the retainer plate on the outside of the windshield using a marking pencil/chalk.

2.1.6 Clean the inside of the windshield in the bonding area for the retainer plate (shaded area) to remove any dust and grease.

2.2 Install front camera (dashcam) on the windshield

NOTICE

Adhesive films not prepared/installed correctly

- **Damage to adhesive films**
- **Inadequate adhesion of adhesive films**

- ⇒ Carefully clean the areas on which you intend to stick the film to ensure that all traces of oil, grease and silicone are completely removed.
- ⇒ Do not touch the bonding surfaces.
- ⇒ Object (adhesive film, vehicle, etc.) and ambient temperature: Minimum temperature 15°C / 59°F.

2.2.1 Pull 3M privacy film off the backing sheet. ⇒ *Figure 9-A-*

- 1 – 3M privacy film
- 2 – Marked bonding surface
- 3 – Interior mirror base

2.2.2 Position 3M privacy film on the marked bonding surface on the windshield. ⇒ *Figure 9-B-*

2.2.3 Carefully affix 3M privacy film using a plastic squeegee, starting from the center and moving towards the edge.

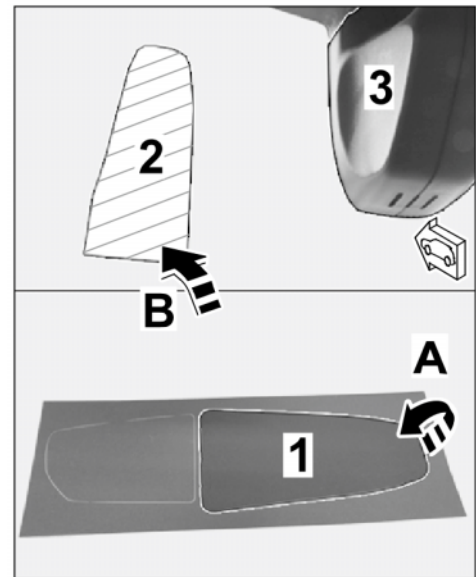


Figure 9

2.2.4 Pull protective film off the front camera retainer plate. ⇒ *Figure 10-top-*

- 1 – Protective film
- 2 – Front camera
- 3 – 3M privacy film
- 4 – Interior mirror



Information

Observe the following points during positioning/alignment:

- Sufficient distance between front camera and interior mirror base: at least 5 mm/ 0.2 in!
- Get another person standing in front of the vehicle to check and confirm the horizontal alignment of the camera with the PORSCHE logo!

Align front camera with retainer plate symmetrically with respect to the 3M privacy film. ⇒ *Figure 10-bottom-*

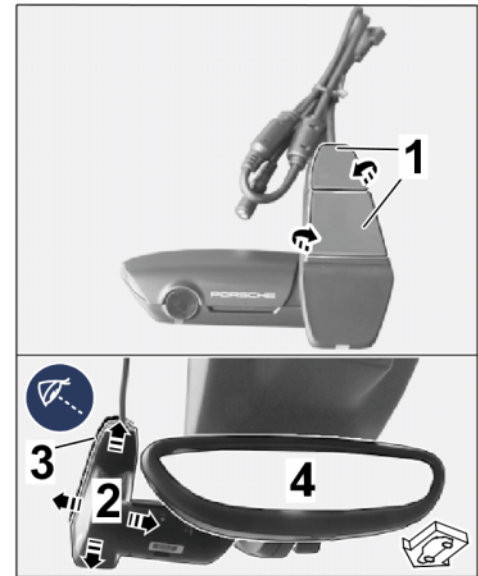


Figure 10

2.2.5 Press front camera with retainer plate firmly onto the 3M privacy film on the windshield.

3 Route and connect electric wire harness

- 1 – Interior mirror
- 2 – Installation position of PORSCHE front camera (dashcam)
- 3 – Electric wire harness
- 4 – Fuse box on dashboard (at the left)
- 5 – Ground pin

Line routing (⇒ *Figure 11*):

- Front camera → headliner/roof console → along windshield frame → left A-pillar (top) → along A-pillar → fuse carrier on dashboard, left → ground pin (LHD: MB21)

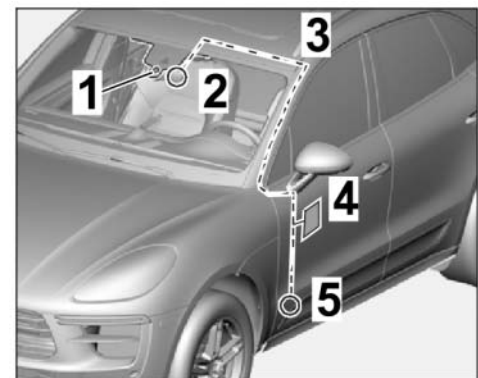


Figure 11



Information

Route electric wire harness along existing wiring, if installed.

Make sure that safety components (airbags, etc.) are still working correctly!

3.1 Routing wire harness

- 3.1.1 On the connector side, push one protective foam roll onto the wire harness for the front camera retainer plate and the (3-wire) wire harness.

- 1 – Protective foam roll
- 2 – Wire harness on front camera retainer plate
- 3 – Wire harness (3-wire)
- 4 – Branch for 2nd camera

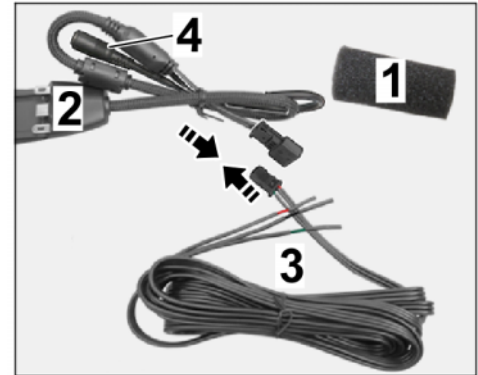


Figure 12

- 3.1.2 Connect plug connection (3-pin). ⇒

Figure 12 -Arrows-

- 3.1.3 Guide wire harness for front camera (dashcam) vertically with respect to the headliner/roof console.

- 3.1.4 Push protective foam roll over the (3-pin) plug connection.

- 1 – Wire harness for front camera (dashcam)
- 2 – Protective foam roll
- 3 – Tie-wrap

Secure (3-pin) plug connection to existing components/lines under the headliner in the roof console area using tie-wraps. ⇒ Figure 13

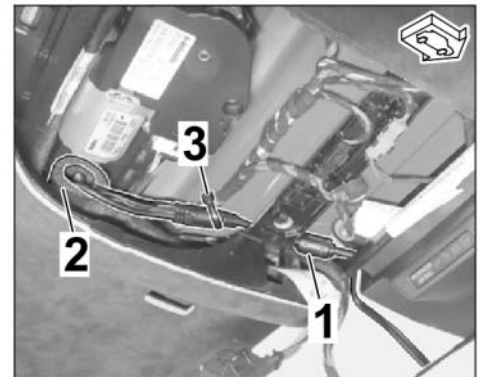


Figure 13

- 3.1.5 Branch for 2nd camera and secure it to existing components/lines in the roof console area using another protective foam roll. ⇒ Figure 12-4-

3.1.6 Route the rest of the wire harness as follows:

- 1 – Wire harness for front camera (dashcam)
 - 2 – Fuse carrier on dashboard (left)
- Roof console → under headliner along windshield frame → left A-pillar (top) → along A-pillar → fuse carrier on dashboard (left ⇒ *Figure 14 (LHD vehicle)*) → BK 0.5² line → ground pin (LHD: MB21 /)

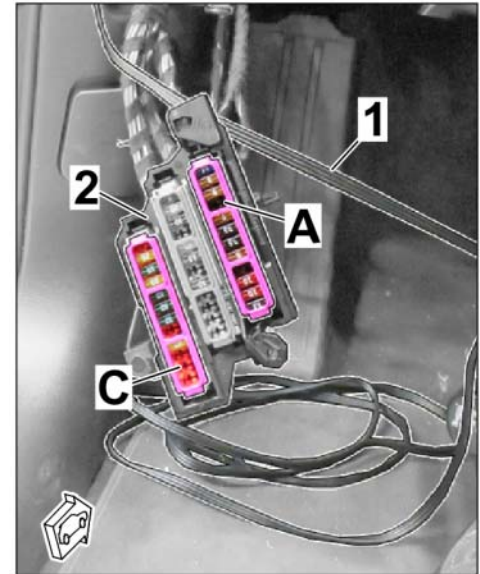


Figure 14 (LHD vehicle)

3.2 Connect electric wire harness

Function/line:	Connection point on left-hand drive (LHD) vehicle
Weight Terminal 31 = BK; 0.5 ²	Cable ring eyelet A6 (N.017.506.5) on ground pin MB21 (left A-pillar)
Ignition positive Terminal 15 = GN; 0,5 ²	Socket contact, 4.8 x Ø 1.0 mm ² (N.907.326.01) in slot 9, fuses in row A (A9) If used for ERA Glonass: Double connector on line RD/WH 0.5 ²
Permanent positive Terminal 30 = RD; 0.5 ²	Socket contact, 4.8 x Ø 1.0 mm ² (N.907.326.01) in slot 2, fuses in row C (C2)

3.2.1 Open fuse holder as shown in the table.

3.2.2 Shorten lines GN; 0.5² and RD; 0.5² to the relevant fuse holders and crimp the relevant contacts.

3.2.3 Connect power supply as shown in the table (⇒ *Figure 15 (LHD vehicle)*).

- | | |
|----------|---|
| 1 | - Fuse carrier on dashboard (left) |
| 2 | - Line GN; 0.5 ² (terminal 15) |
| 3 | - Line RD; 0.5 ² (terminal 30) |
| 4 | - BK; 0.5 ² line (terminal 31) |

3.2.4 Close fuse holders and install with the fuse carrier into the dashboard.
⇒ *Workshop Manual '978409 Loosening and securing fuse box'*

3.2.5 Protect the front camera power supply with new fuse(s).

Fuse: **Setpoint value 5 A**

3.2.6 Route BK; 0.5² line (terminal 31) to ground pin MB21 or MB22, shorten it and install it on ground pin using cable ring eyelet A6. ⇒ *Figure 16*

- | | |
|----------|---|
| 1 | - BK; 0.5 ² line (terminal 31) |
| 2 | - Ground pin MB21 (left-hand drive) |

Tightening torque 9 Nm (6.6 ftlb.)

3.3 Secure routed wire harness to existing lines/components in the vehicle with tie-wraps without tensile stress and so that no chafing occurs.

4 Concluding work in vehicle interior

- | | |
|-----|---|
| 4.1 | Secure the front headliner. ⇒ <i>Workshop Manual '708419 Removing and installing roof trim panel'</i> |
| 4.2 | Assemble fuse box area on the dashboard (left). |
| 4.3 | Assemble inner door sill trim and (left) A-pillar area. |
| 4.4 | Assemble (internal) rear-view mirror and front roof area. |

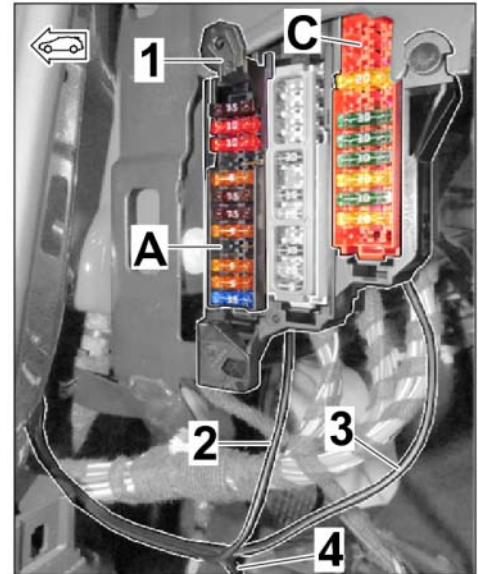


Figure 15 (LHD vehicle)

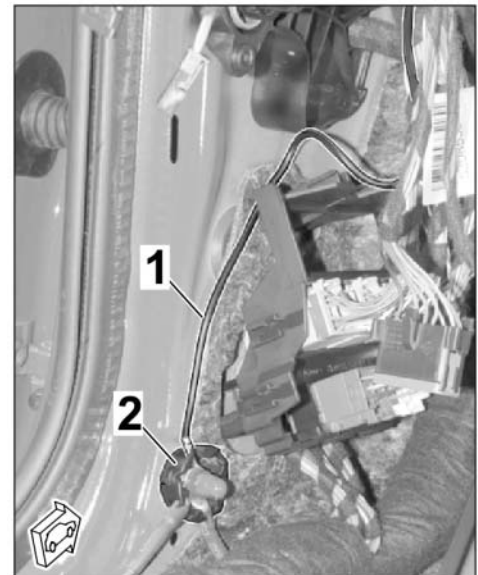


Figure 16

Coding: 5 Code the PORSCHE front camera (dashcam) in Dealer mode

5.1 Preparatory work

- 1 – PORSCHE front camera
- 2 – Micro SD memory card (32 GB)
- 3 – Retainer plate
- 4 – Power button
- 5 – WiFi status LED display
- 6 – PRESS (release button)



Figure 17

- 5.1.1 Remove micro SD memory card (32 GB, ⇒ *Figure 17-2-*) from card slot for front camera.
- 5.1.2 With the ignition switched on, push the front camera (dashcam ⇒ *Figure 17-1-*) into the retainer plate on the windshield (⇒ *Figure 17-3-*)
- 5.1.3 Press the power button (⇒ *Figure 17-4-*) for 10 seconds until you hear the second double beeping sound.
- 5.1.4 The front camera (dashcam) starts in Dealer mode: WiFi LED (⇒ *Figure 17-5-*) lights up "yellow".

5.2 Connect the front camera (dashcam) to the device (tablet, smartphone or PC)



Information

The "Dealer mode" network ID name ends with a "D". A password is **NOT** required!
The language setting can be changed by following the menu prompts after opening the first page.

- 5.2.1 Search available networks for Dealer mode WiFi.
- 5.2.2 Open Dealer mode on the device (tablet, smartphone or PC) using any browser.
To do this, enter "**192.168.1.1/diagnostics**" in the browser's address line.
- 5.2.3 Displays in "Dealer mode" main menu:

Options: (⇒ *Figure 18*)

- 1 – Browser's address line
- 2 – "Options" menu item

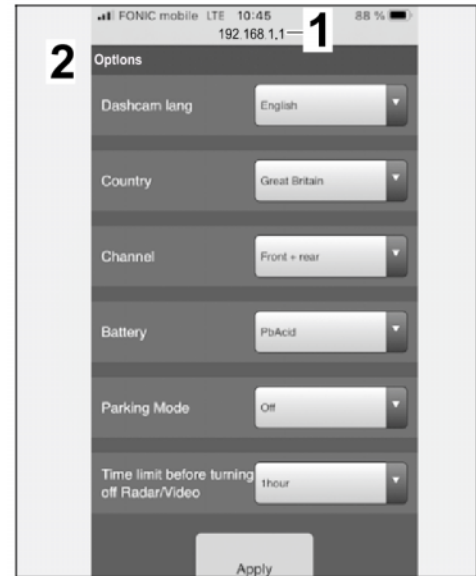


Figure 18

Diagnostics: (⇒ *Figure 19*)

- 1 – Browser's address line
- 2 – "Diagnostics" menu item

5.3 Basic settings for front camera (dashcam) in the "Options" menu item (⇒ *Figure 18*)

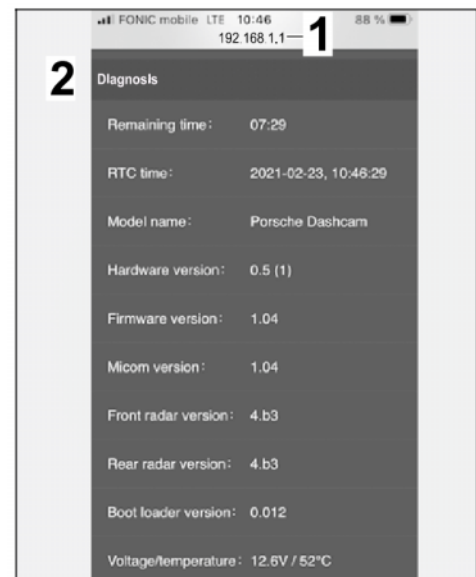


Figure 19

- 5.3.1 Change the default language "English" to the desired language:
 - 1 - Default language "English"
 - 2 - German

For example: German (⇒ Figure 20)

- Up to 19 different languages can be selected.

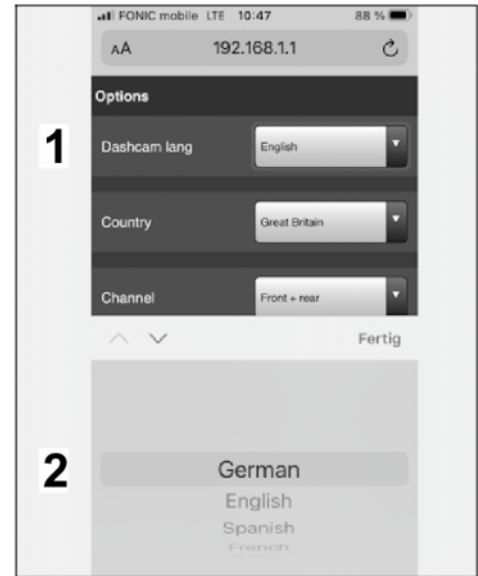


Figure 20



Information

ONLY for cameras with serial numbers "PDF2101*****", the country can be selected directly via the app on the customer's device (smartphone/tablet).

Country selection is possible for cameras, starting with the serial number "PDF2102*****"!

If the relevant country is **NOT** displayed in the drop-down menu: Please select "Global".

- 5.3.2 Select the country (⇒ Figure 21).
 - 1 - Serial number of front camera (dashcam)
 - 2 - Country
 - 3 - Great Britain

- Up to 48 countries are currently available for selection.
- The Country selection screen includes, for example: Units of measurement, frequencies and also legal regulations of the respective country.
- **Macan:** ⇒ Choose Region/State/Country by selecting the appropriate flag.

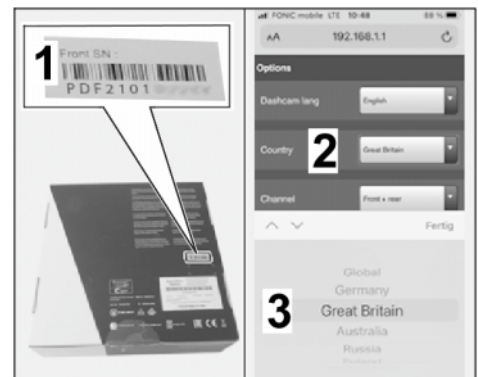


Figure 21

5.3.3 Select the required camera channel
(⇒ *Figure 22*).

- 1 - Channel
 - 2 - Front + Rear
- **TEQUIPMENT:** ⇒ "Front Only"
(front camera) is preset.

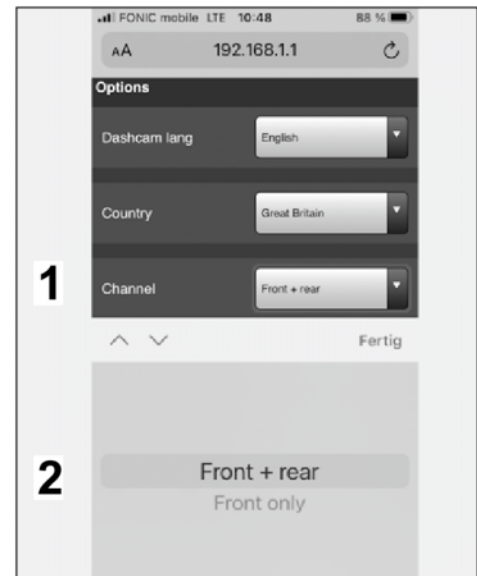


Figure 22



Information

Check which vehicle electrical system battery is installed in the vehicle if necessary by entering the vehicle identification number (VIN) in the Porsche Central Service System (PCSS).

Background: The front camera shuts down if the correct battery voltage (switch-off threshold) is not reached over a period of 5 minutes.

- Switch-off threshold for lead-acid battery (PbAcid) = 11 V

- Switch-off threshold for lithium-ion battery (LiFePO) = 13 V
- 5.3.4 Select the battery type (⇒ *Figure 23*)
- 1 – Battery
 - 2 – PbAcid
- Select the vehicle electrical system battery installed in the vehicle.
 - **Macan:** ⇒ Lead-acid battery (PbAcid)

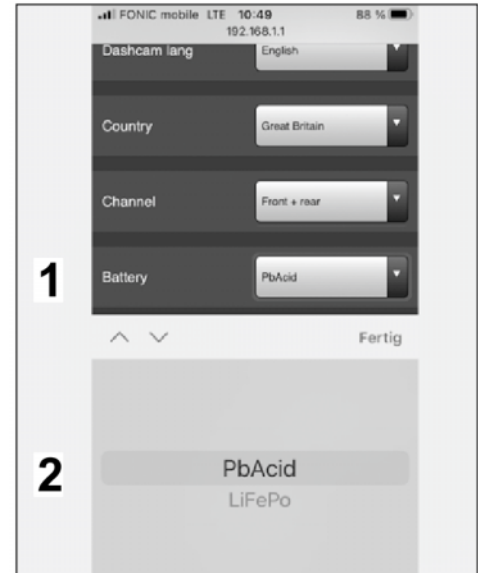


Figure 23

- 5.3.5 Select Park mode (⇒ *Figure 24*)
- 1 – Park mode
 - 2 – Off
- Depending on the approval for the respective vehicle.
 - **Macan:** ⇒ Select "On".

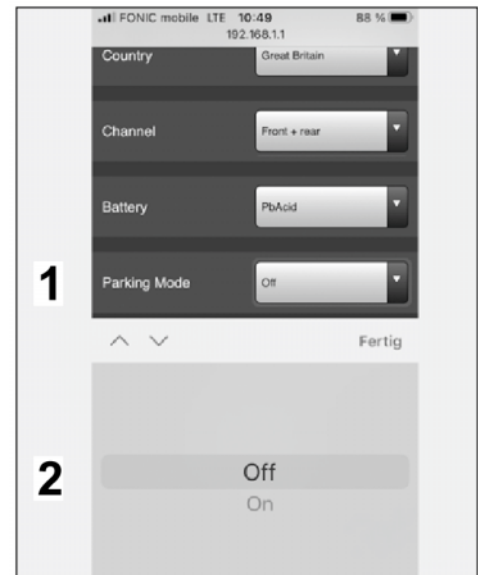
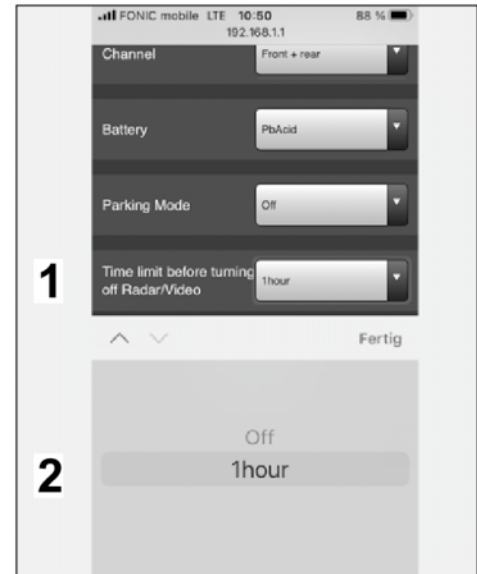


Figure 24

5.3.6 Select the time limit (⇒ *Figure 25*)

- 1 – Time limit until radar/video is switched off
 - 2 – 1 hour
- Turn off radar/video monitoring in Park mode (battery management). After the selected time limit, fast activation of the monitoring system ONLY occurs if the vehicle shakes/vibrates!
 - **Macan:** ⇒ Skip. Leave the default setting.

*Figure 25*

5.4 Cancel Dealer mode (WiFi LED is still yellow)

5.4.1 Close the browser and switch off ignition.

5.4.2 Pull the front camera (dashcam) off the retainer plate by pressing "PRESS" (release button).

5.4.3 Insert micro SD memory card (32 GB) in the front camera (dashcam).

5.4.4 Install the front camera (dashcam) in the retainer plate.

5.5 The settings configured under Step 5.3 are set when the ignition is switched on again.

5.6 Format the micro SD memory card (32 GB)

5.6.1 Switch on ignition.

5.6.2 Press the power button quickly 6 times in a row within 3 seconds.

Announcements via front camera speaker: "Formatting..." and "Formatting complete."

Diagnostics: 6 Perform diagnostics on front camera (dashcam) – **ONLY** if necessary!

Information can be displayed, function tests can be run and results can be stored in the "Diagnostics" menu item.

6.1 Information about the model name, hardware and software version, radar and more (⇒ *Figure 26*).

- 1 – Model name
- 2 – Hardware version
- 3 – Software version

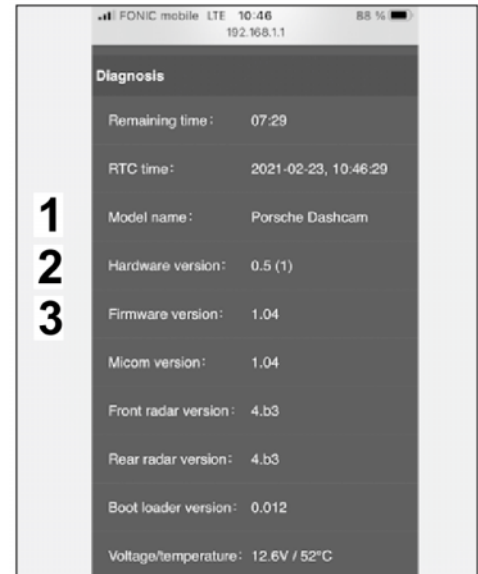


Figure 26

6.2 Display of live images from front camera, connection status, memory card status, GPS and radar status and more (⇒ *Figure 27*).

- 1 – Front camera live image
- 2 – Rear camera status (if installed)
- 3 – Micro SD memory card contents
- 4 – GPS status
- 5 – GPS coordinates

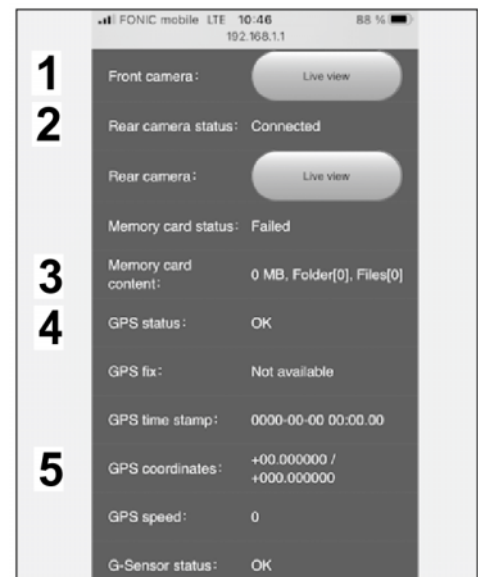


Figure 27

6.3 Display of radar status, possible tests for LED lights, loudspeaker and microphone (⇒ *Figure 28*)

- 1 – Radar status
- 2 – LED Lights test
- 3 – Loudspeaker test
- 4 – Microphone test

6.4 The fault report can be stored on the micro SD memory card (32 GB). To do this, use micro SD memory card in Dealer mode and select "Diagnostics" menu item in the front camera.

Installing:

7 Concluding work

7.1 Read out the fault memories of all systems, work through any existing faults and erase the fault memories. ⇒ *Workshop Manual '0X03IN Diagnostic maintenance: diagnostic system and maintenance inter...'*

7.2 Disconnect the battery charger. ⇒ *Workshop Manual '2X00IN Work instructions after disconnecting the battery'.*

7.3 Vehicle handover to customer



Information

Please pass all this information on to the customer.

Also give the customer the PORSCHE dashcam operating instructions.

Also give the first 3 pages of these Installation and Conversion Instructions to the customer.

7.3.1 Download the app from the App Store to the customer's device (smartphone/tablet).

7.3.2 Select and set Region/State/Country (flag) in the app on the customer's smartphone/tablet.

7.3.3 Get the customer to perform firmware update using the app.

7.3.4 Format micro SD memory card (32 GB).

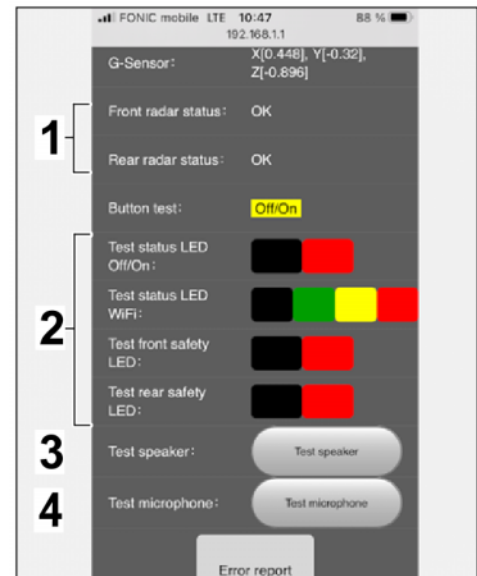


Figure 28

91 63 23 40: –Retrofitting PORSCHE front camera (dashcam) (1 x)–

Labor time: **263 TU**

- Includes:
- Installing retainer plate for PORSCHE front camera (dashcam) on windshield.
 - Routing and connecting electric wire harness.
 - Coding PORSCHE front camera (dashcam) in Dealer mode and formatting micro SD memory card.
 - Reading out fault memories and correcting and deleting faults.

Important Notice: Technical Bulletins issued by Porsche Cars North America, Inc. are intended only for use by professional automotive technicians who have attended Porsche service training courses. They are written to inform those technicians of conditions that may occur on some Porsche vehicles, or to provide information that could assist in the proper servicing of a vehicle. Porsche special tools may be necessary in order to perform certain operations identified in these bulletins. Use of tools and procedures other than those Porsche recommends in these bulletins may be detrimental to the safe operation of your vehicle, and may endanger the people working on it. Properly trained Porsche technicians have the equipment, tools, safety instructions, and know-how to do the job properly and safely. Part numbers listed in these bulletins are for reference only. The work procedures updated electronically in the Porsche PIWIS diagnostic and testing device take precedence and, in the event of a discrepancy, the work procedures in the PIWIS Tester are the ones that must be followed.

© 2022 Porsche Cars North America, Inc.