

Installing Rain Sensor

Vehicle Type: **911 Carrera (996)**

Model Year: **As of 1999 (X)**

Concern: **Service installation of rain sensor.**

Information: The rain sensor functions according to an optical principle. It is fastened to the inner side of the windshield near the interior mirror and mounted in the swept area of the windshield wiper. (Figure 1). The rain intensity is measured with infrared light, and the windshield wiper pause intervals are controlled automatically.

Benefits of the rain sensor:

- If there is a sudden increase of rainfall or if there is varying rain intensity, the reaction time of the rain sensor is much shorter than that typical of a driver.
- The wiper blades are not activated on a dry windshield, thereby avoiding increased wear.
- When activated, the interval wiping occurs automatically, eliminating the need to manually switch the interval wipers on and off. This results in one less task for the driver, thereby creating increased passive safety.

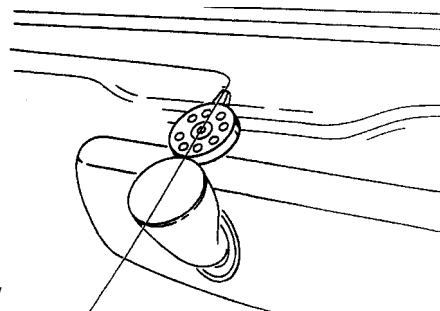


Figure 1

Parts Information:	Part Number	Description
	996 612 981 00	Rain sensor kit

Includes: Rain sensor, wiper interval relay, and electrical wiring harness.

Req'd. Materials: 2 tie wraps, cleaner and cleaning cloth, adhesive tape.

Note: If it becomes necessary to replace the windshield, a spare part adhesive pad (P/N 996 612 982 00) is available to refasten the rain sensor. (Refer to Step 4)

Instructions: Observe the following instructions to ensure trouble-free operation of the rain sensor.

To activate the rain sensor, turn the ignition on and set the windshield wiper/washer stalk to stage 3 - intermittent operation (Figure 2, Item 3). Activation is indicated by an illuminated light emitting diode in the center of the rain sensor.

The rain sensor does not operate when the ignition is switched off or if the power supply is interrupted. It will resume operation if the stalk is left in stage 3 and the power is resumed with the ignition switched on.

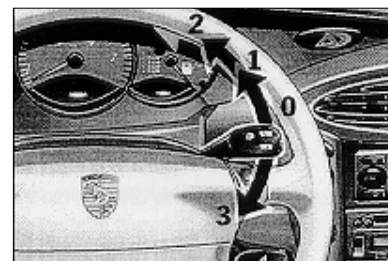


Figure 2

If wiper stage 1 or 2 is selected, wiping operation is not influenced by the rain sensor.

Instructions: (cont'd) There might be raindrops on the windshield when the vehicle is started after a rainfall. It is possible that the rain sensor will not detect these raindrops until such time there is sufficient wind force to move them. In this rare case the wiping process may have to be initiated manually one time (windshield wiper/washer stalk in stage 1 or 2).



Warning!

Warning! There is danger of damage to the windshield wiper system if the interval wipers are left on when passing through an automatic car wash! Always switch off the interval wiper/rain sensor when passing through a car wash. There is also danger of injury if the interval wipers are left on when servicing the windshield (e.g. when scraping off ice or manually washing the car). Always set the windshield wiper/washer stalk to position 0 and remove the ignition key before servicing the windshield!

Please inform your customers accordingly.

Tools Required: Torx T27 socket wrench
Key file, round or half-round

- Work Procedure:
1. Preparatory work.
 - 1.1 Disconnect the battery and cover terminals.
 - 1.2 After removing the driver's side windshield frame trim and the A-pillar trim, route the harness from the interior rearview mirror to relay carrier 1.
 - 1.3 Remove the left side vent with headlight switch. (Technical Manual, Group 7, Section 70 18 37).
 - 1.4 If the vehicle has an automatic dimming (anti-dazzle) mirror, a groove must be made in the plastic cable cover to accommodate the rain sensor harness.
 2. Install rain sensor.
 - 2.1 Thoroughly clean the bonding area on the windshield with a clean cloth.
 - 2.2 Remove protective film from the bonding surface on the rain sensor. Do not touch either of the bonding surfaces after cleaning. Position rain sensor on the inner side of the windshield (depending on the design of the interior rearview mirror) and press firmly into place.
 - With automatic dimming (anti-dazzle) mirror: To the right of the cable cover, with the connecting cable pointing toward the cable cover (Figure 3).
 - With standard interior rearview mirror: Between the mirror base and the windshield frame trim, and the cable harness pointing vertically upward (Figure 1).
 - 2.3 Ensure the cable harness is routed along the windshield frame and the A-pillar to relay carrier 1 without tension. Fasten harness to existing fixing points with adhesive tape.

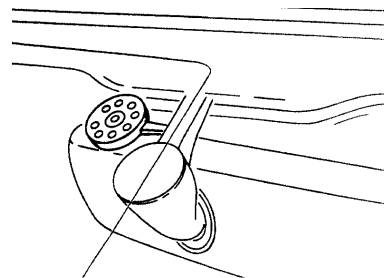


Figure 3

Work Procedure: **2.4** Replace the wiper interval relay (relay carrier 1, slot 16) with the supplied relay (Figure 4).

2.5 Insert 3-pole plug on the new relay.

3. Function test.

3.1 Connect battery, turn the "ignition on", and set the windshield wiper/washer stalk to stage 3. The green light-emitting diode on the rain sensor indicates operational readiness. Spray water onto the sensor area of the windshield from the outside and ensure the rain sensor triggers the wiping process.

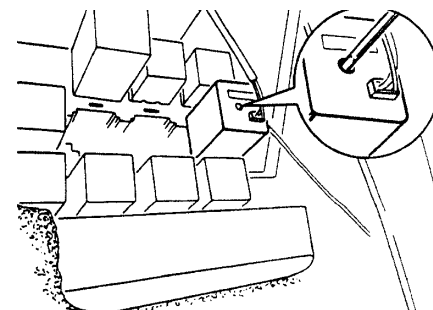


Figure 4

3.2 Completely reassemble the vehicle. Reset the clock and input the radio code; if necessary.

Note: The rain sensor has been factory set to optimum performance. However, the wiping cycles can be modified if desired by adjusted the control setting on the relay (Figure 4, enlarged view). Turning this setting approx. 45 degrees towards plus (marked on the relay housing) corresponds to a doubling of the wiping cycles. Similarly, turning the control 45 degrees towards minus halves the wiping cycle.

4. In case of repairs (e.g. if the windshield is replaced), the rain sensor can be removed from the windshield without damage. Perform this by pressing the rain sensor to the side when removing. Carefully remove the old rain sensor adhesive pad and clean any residues. Affix a new adhesive pad (P/N 996 612 982 00) and fit rain sensor as described in Steps 1 to 3.

Working Time:	Labor Operation	Time	Description
	92 12 23 00	160 TU	Rain sensor installed. <i>Includes: Preparing vehicle for installation, installing rain sensor, replacing wiper interval relay, performing function test and completing the vehicle.</i>

Literature: 911 Carrera (996) Technical Manual, Group 7, Section 70 18 37 - Disassembling and assembling the dashboard.

911 Carrera (996) Technical Manual, Group 9, Circuit Diagrams - Construction components, Relay support 1, Relay support 2

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