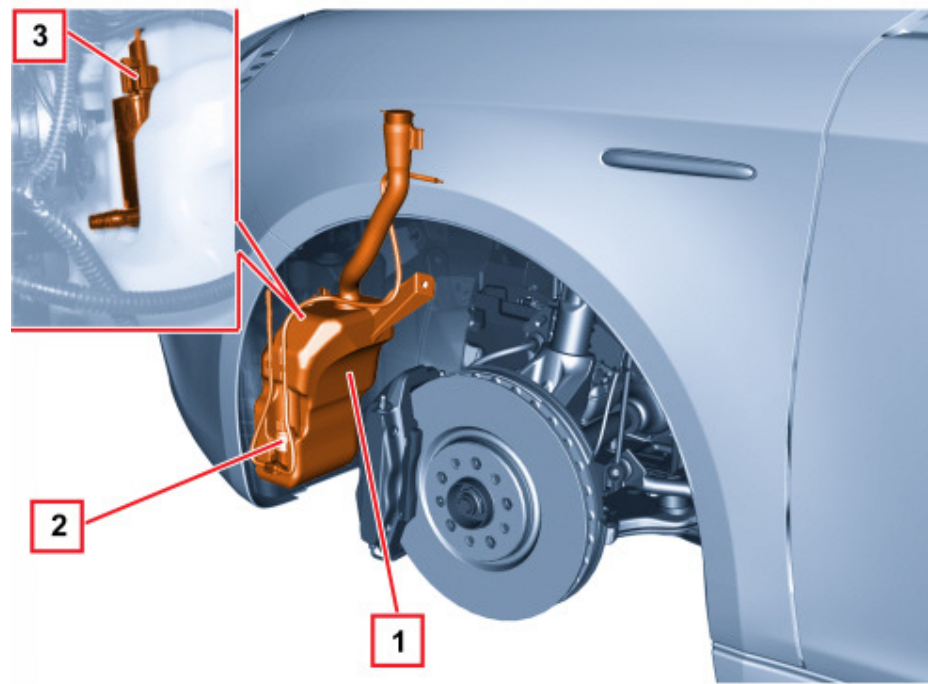


SPECIFICATIONS

The vehicle is equipped with a system that cleans and washes the front windscreen. The vehicle may be fitted as an option with a pressurized liquid washing system for the front headlamps.

Reservoir

The reservoir is located in the left side of the wheel arch compartment and it allows the screen washer system pump to supply the water-antifreeze mixture required to clean the front window.If the vehicle is equipped with the relevant option, it also supplies the headlamp washer system via a special pump. The reservoir is made out of plastic and contains external housings for the pump that supplies the windscreen washer and headlamp washers (if fitted).



- 1 - Windscreen washer fluid reservoir
- 2 - Pump supplying fluid to the jets
- 3 - Pump supplying fluid to the jets

Commands

The control of the wiping functions and, in particular, of the:

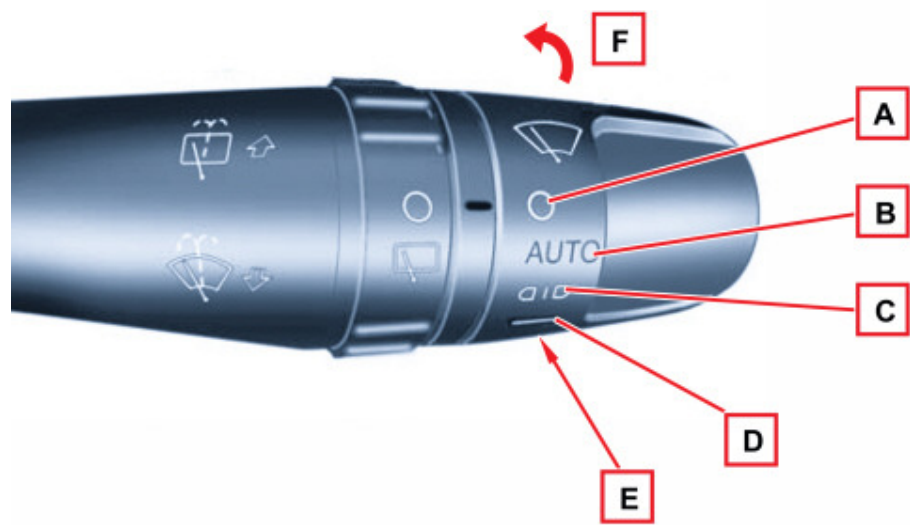
- windscreen wiper: sweep rate;
- rearscreen wiper: sweep rate and control during reversing;
- windscreen wiper function: smart washing;
- rearscreen washer function: smart washing;

is managed by the electronic module inside the steering column switch unit. The right lever allows the activation of the various functions.

Operation

Windscreen wipers

Manual mode operation



- Pos. A: OFF (wipers off)
- Pos. B: Automatic
- Pos. C: Intermittent
- Pos. D: Continuous first speed

- Pos. E: Continuous second speed
 - Pos. F: Anti-panic (temporary speed - unstable)
- When the ring nut for the steering column stalk right lever is moved downwards, to one of the positions:
- automatic
 - intermittent
 - first speed continuous
 - second speed continuous

the windscreen wiper motor is activated according to the following logic.

- automatic: see below
- Intermittent: the windscreen wiper is operated at the first speed but with a pause between one stroke and the next, that varies according to the speed of the vehicle (from a minimum of 1.1 secs. above 110 km/h to a maximum of 4.7 secs with the vehicle stationary).
- First speed continuous: the windscreen wiper is operated at the first speed at 45 strokes/minute.
- Second speed continuous: the windscreen wiper is operated at the second speed at 65 strokes/minute.

Automatic mode operation

A special rain sensor manages the automatic operation: it is a sensor with an infrared LED installed in the windscreen capable of detecting the presence of rain and, consequently, of managing the wiping depending on the water present on the glass.



The rain sensor is activated by placing the ring nut for the right steering column stalk lever in the AUTO position. The frequency of the windscreen wiper strokes is automatically adjusted depending on the amount of water on the windscreen. This frequency can vary from no stroke (no rain - windscreen dry) up to the second continuous speed (heavy rain - windscreen wet).

The activation of the rain sensor involves a windscreen wiper arm stroke as feedback to confirm that it has been switched on.

 The user can alter the sensitivity of the rain sensor, using the vehicle set up menu in the instrument panel.

 If the car is stopped off leaving the ring nut in the AUTO position, the next time it is started there is no wiping cycle even if it is raining; this prevents accidental activation which could cause dangerous conditions for the user (for example, washing the windscreen by hand, blades frozen in place, etc.).

To restore the automatic operation of the system, move the ring nut from the AUTO position to any other position and then return it to the AUTO position.

If there is a problem with the rain sensor (sensor faulty), the following strategies are activated:

- if the problem is present at the activation (operation of the ring nut), the windscreen wiper immediately works in intermittent operation, irrespective of whether or not there is rain on the glass
- if it occurs during operation (with the rain sensor activated): the windscreen wiper is operated in accordance with the last command sent by the rain sensor until another mode is selected or the operation of the windscreen wiper is deactivated.

In any of these cases the instrument panel signals the failure of the sensor; this makes it possible to highlight the incorrect operation of the sensor.

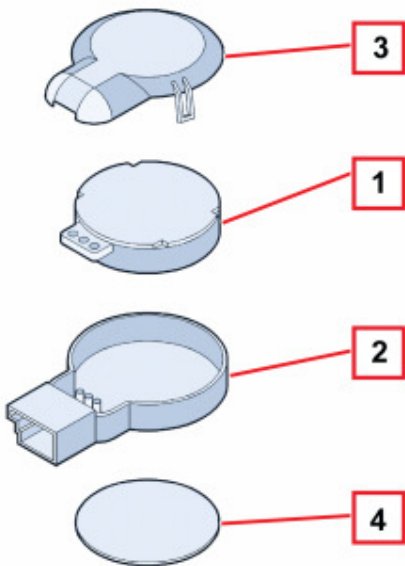
The fault reading remains activated until the fault disappears.

Rain sensor

The device consists of a sensitive element (1) containing infra red transmission elements and a reception element.

A containment structure (2) and a cover (3) that protects the sensitive element.

A contact disc (4) spread with silicone material (SilGel612) to bond it to the glass.

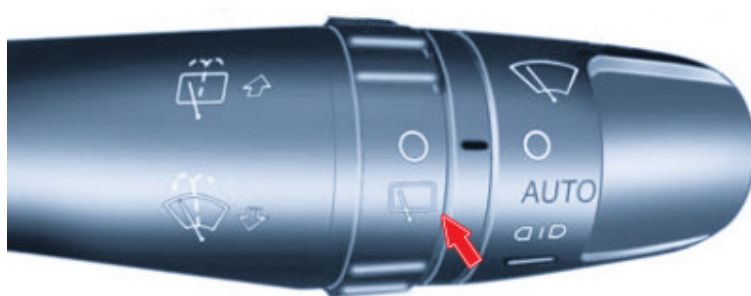


- 1 - Sensitive element
- 2 - Retaining structure
- 3 - Cover
- 4 - Contact disc

 The layer of silicone material is protected by a film that is removed when the component is installed. Avoid touching with your hands to prevent damage to the silicone. Because it is not possible to disconnect and reconnect the part without damaging the silicone layer, the sensor should be replaced if the windscreen is replaced.

 If a new part is installed during service, check that no air bubbles remain between the glass and sensor, apply a load of at least 50N to ensure any bubbles emerge.

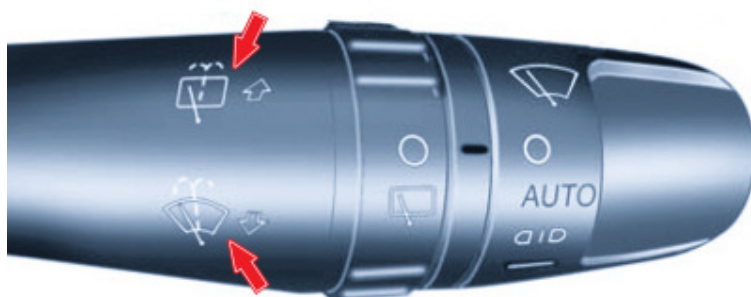
Rear window wiper



When the rearscreen wiper ring nut located on the right steering column switch unit lever is turned, the rearscreen wiper is activated in one of the following modes:

- intermittent: with a pause between strokes of 2.7 secs
- subject to the windscreen wiper (if there is a simultaneous windscreen/rearscreen wiper request): In this case the operation is synchronous with a frequency equal to half that of the windscreen wiper
- if reverse gear is engaged it is continuous.

Windscreen washer



Front windscreen washing

Pulling the right steering column switch unit lever activates the front washing.

Keeping the lever pulled for more than 0.5 secs produces the automatic operation of the windscreen wiper at the first continuous speed.

When the control is released there are a further 3 strokes to clean the windscreen plus another one 6 seconds later (to remove any drips).

If the windscreen wiper was already activated before the washing command using the lever, the washing logic is only effective for activating intermittent operation.

Rear windscreen washing

Pushing the right steering column switch unit lever activates the rear washing. Keeping the lever pushed for more than 0.5 secs produces the automatic operation of the rearscreen wiper at the continuous speed.

When the control is released there are a further 3 strokes to clean the rearscreen plus another one 6 seconds later (to remove any drips).

If the rearscreen wiper was already activated before the washing command using the lever, the washing logic is only effective for activating intermittent operation.

Headlamp washing

The headlamp washer consists of a pump, located next to the screen washer pump illustrated previously, that sends detergent to two retractable jets located in the front bumper which spray a powerful jet onto the headlamps.

With the dipped headlamps on, when there is a front windscreen washing request, the washing of the headlamps is also operated for 1.2 secs.

The headlamp washer pump operates at successive impulses for about half a second.