CRUISE CONTROL

WITH SPEED LIMITER

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As its name indicates, this system has a dual function. It is used, on the one hand, to adopt a constant cruising speed and, on the other, **to fix a maximum speed that cannot be exceeded.**

BASIC FACTS

The cruise control with speed limiter combines comfort and safety functions.
For example, on a motorway in cruise mode, the driver is no longer obliged to keep his foot on the accelerator. In addition, whatever the road configuration, maintaining a constant speed enables overall consumption to be reduced.
During normal driving, the driver can never perfectly stabilise his speed. Acceleration phases are followed by imperceptible decelerations leading to over consumption. For its part, the speed control prevents the driver from exceeding a threshold speed, without realising it. However, this mode of operation does not determine a minimum speed and cannot therefore act as a speed stabiliser. Whatever the mode selected, the driver can immediately take over control of the speed, either manually or by pressing one of the car's pedals.

IN SHORT

THE CRUISE CONTROL ENSURES A CONSTANT CRUISING SPEED WHATEVER THE ROAD CONFIGURATION, AND AS WELL AS PROVIDING DRIVING COMFORT, IT REDUCES THE CAR'S CONSUMPTION. THE SPEED LIMITER SIGNALS WHEN THE SPEED FIXED AS THE LIMIT HAS BEEN EXCEEDED, BY "HARDENING" THE ACCELERATOR PEDAL.

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HOW DOES IT WORK?

1 THE PROTOCOL

The driver sets the reference speed using four commands located on the steering wheel. The system's ECU constantly compares this value with speed data either directly from the computer, or from the wheel tachometers sent by the ABS.

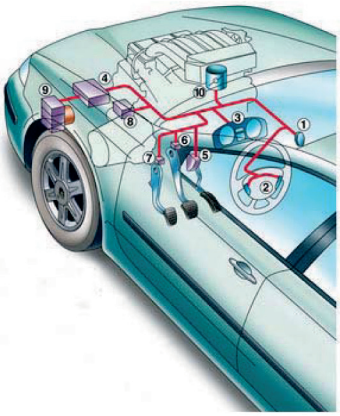
• **In cruise control mode,** the system acts on the micromotor of the gas throttle valve command, for a petrol engine, or on the injection pump for a diesel engine, to ensure a constant speed. Any action on the accelerator enables the fixed speed to be exceeded. The cruising mode is then automatically reactivated when, following deceleration, the cruising speed is reached once again. Inversely, any pressure on the brake pedal or clutch deactivates the system.

• **In speed limiter mode,** the system does not act directly on the cruising speed. However, when the threshold speed is reached, it activates a micromotor which creates a "hard point" on the accelerator. The pedal has a tendency to rise under the driver's foot. This constitutes a signal, but not a limit: greater foot pressure will enable this hard point to be passed to continue acceleration. This does not mean that the speed control function is deactivated. It takes up its role once again when the car's speed falls below the threshold value.

2 TWO FUNCTIONS WITH DISTINCT PURPOSES

The cruise control is above all an element used for comfort and to reduce the vehicle's fuel consumption.

The speed limiter contributes to safety by preventing the driver from accidentally exceeding a speed he has chosen as the limit.



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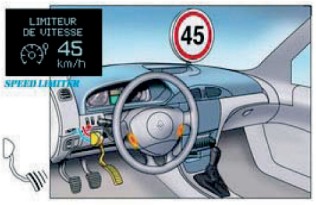

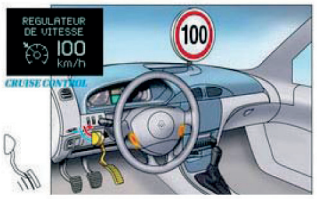

1 | On-off button
2 | Steering wheel command
3 | Dashboard
4 | UCE motor
5 | Accelerator pedal position sensor
6 | Brake pedal switch
7 | Clutch pedal switch
8 | Automatic gearbox
9 | ABS
10 | Throttle valve unit

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