

ACCELERATOR PEDAL POSITION SENSOR



ITS FUNCTION



The accelerator pedal position sensor is an **electronic device that detects the position of the accelerator pedal** by detecting the pressure applied by the driver and transmitting this data to the engine control unit (ECU). The ECU **adjusts the amount of fuel injected** and the throttle opening, thereby enabling **effective management** of engine torque, fuel consumption, and pollutant emissions.

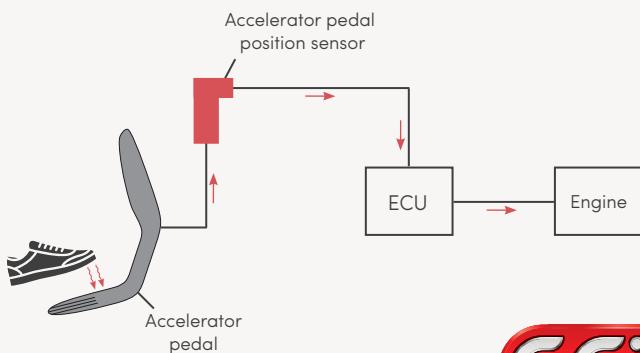
GOOD TO KNOW

The operation of the accelerator pedal has evolved from the classic mechanical system to the modern electronic system since 1988:

- **Mechanical accelerators:** these use a cable to connect the accelerator pedal to the engine to control the air intake. This system is robust but subject to wear due to friction, and offers a less immediate response.
- **Electronic accelerators:** they detect pressure and send signals to the engine control unit, which adjusts the throttle opening to provide faster response, improve engine efficiency, and reduce fuel consumption.



ILLUSTRATION



How the accelerator pedal position sensor works



TECHNOLOGIES

Accelerator pedal position sensor operate using **three main technologies, depending on the manufacturer:** the Hall effect, the dual potentiometer, and the redundant sensor.

Today, **Hall effect sensors are the most commonly used** in recent vehicles, but potentiometers are still found on some entry-level models.

TECHNICAL HOTLINE

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