

Accelerator Pedal Position sensor

- A no-contact accelerator position sensor is used. This sensor uses a Hall element, which can output the intensity of the magnetic field in the form of electrical signals. This is accomplished through the use of the Hall effect*1, which can attain output voltage linearly in proportion to the amount of pedal effort applied on the accelerator.

(See page EG-209)

Throttle Position Sensor

- A no-contact throttle position sensor is used. This sensor uses a Hall element, which can output the intensity of the magnetic field in the form of electrical signals. This is accomplished through the use of the Hall effect*1, which can attain output voltage linearly in proportion to the position of the throttle valve.

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ETCS-i (Electronic Throttle Control System-intelligent)

- In the conventional throttle body, the throttle valve opening is determined invariably by the amount of the accelerator pedal effort. In contrast, the ETCS-i uses the engine ECU to calculate the optimal throttle valve opening that is appropriate for the respective driving condition and uses a throttle control motor to control the opening.
- The functions of the ordinary throttle position control (nonlinear control), idle speed control (ISC), traction control (including VSC), and cruise control have been integrated in the single-valve electronically controlled throttle body.
- Excellent driving stability and comfort have been achieved by effecting integrated control with the power train, and vehicle stability has been ensured through cooperative control with the ECT and VSC systems.
- Two CPUs, one for the ETCS-i, and the other for the EFI control, monitor each other to ensure a reliable system.
- A dual system is used so that the vehicle can continue to operate in the event of a problem, thus ensuring reliability.

(See page EG-200)