

# Fuel and Emissions Systems

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## System Description (cont'd)

### Idle Control System

When the engine is cold, the A/C compressor is on, the transmission is in gear, the brake pedal is pressed, or the alternator is charging, the ECM/PCM sends signals to the throttle actuator to maintain the correct idle speed.

### Brake Pedal Position Switch

The brake pedal position switch signals the ECM/PCM when the brake pedal is pressed.

### Fuel Supply System

#### Fuel Cutoff Control

During deceleration with the throttle valve closed, current to the injectors is cut off to improve fuel economy at engine speeds over 850 rpm (A/T) (M/T: 907 rpm). Fuel cutoff also occurs when the engine speed exceeds 7,000 rpm, regardless of the position of the throttle valve, to protect the engine from over-revving. When the vehicle is stopped, the ECM/PCM cuts the fuel at engine speeds over 5,000 rpm (A/T) (M/T: 4,800 rpm). On a cold engine, fuel cut occurs at a lower engine speed.

#### Fuel Pump Control

When the ignition switch is turned to ON (II), the ECM/PCM grounds PGM-FI main relay 2 which feeds current to the fuel pump for 2 seconds to pressurize the fuel system. With the engine running, the ECM/PCM grounds PGM-FI main relay 2 and feeds current to the fuel pump. When the engine is not running and the ignition switch is turned to ON (II), the ECM/PCM cuts ground to PGM-FI main relay 2 which cuts current to the fuel pump.

#### PGM-FI Main Relays 1 and 2

PGM-FI main relay 1 is energized whenever the ignition switch is turned to ON (II) to supply battery voltage to the ECM/PCM, to power the injectors, and to power PGM-FI main relay 2. PGM-FI main relay 2 is energized to supply power to the fuel pump for 2 seconds when the ignition switch is turned to ON (II) and when the engine is cranking or running.