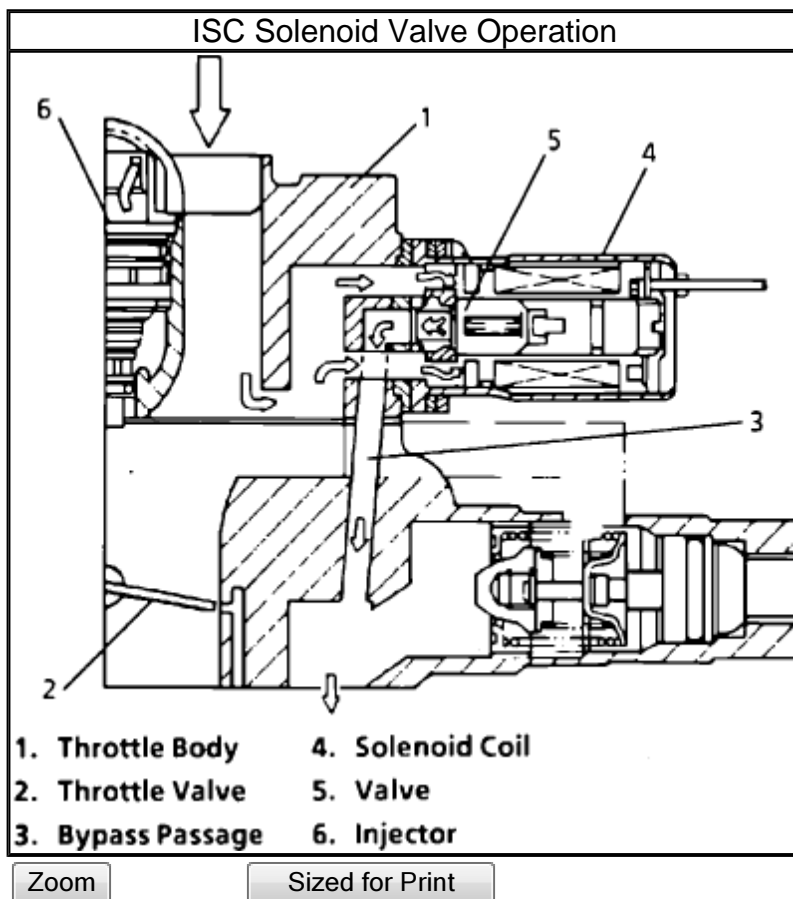


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1990 Geo Truck Tracker L4-1590cc 1.6L

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Description and Operation



Located on the throttle body, the Idle Speed Control (ISC) valve opens the air bypass passage when the solenoid is ON and closes it when the solenoid is "OFF." The ECM turns the ISC solenoid ON and OFF at a constant cycle of 20 times per second. It controls the bypass air flow by making "ON" time one cycle shorter or longer depending on conditions.

In this system, the ECM controls the ISC solenoid valve according to the signals from various sensors and switches to control the bypass air flow which plays the following three roles as required by certain circumstances.

- **IDLE-UP AIR FLOW**

When head lights & other lights, heater fan, rear defogger (if equipped) or air conditioner (if equipped) are operating, and/or the automatic transmission is in a range other than PARK or NEUTRAL, and/or the vehicle is at high altitudes, higher than 8,200 ft or 2,500 m, the bypass air is supplied to stabilize the engine idle speed. How much air is supplied varies depending on the load.

When head lights and other lights are ON, the idle speed rises only a little higher than the normal specified idle speed (920 rpm).

- **AFTER START AIR FLOW**

When and after the engine is started, the bypass air is supplied to prevent the engine from stopping when the throttle opener is OFF and to improve the engine performance at its start. How much bypass air is supplied varies depending on the engine cooling water temperature and it decreases as time passes when engine is cool. When engine is hot and 15 seconds have passed after engine starts, a given amount of bypass air is supplied until either the idle switch is turned OFF from ON once or engine speed exceeds 1,500 rpm once.

- **DASHPOT AIR FLOW**

A sudden change in the throttle valve opening (especially when decelerating) causes the air/fuel mixture ratio to change suddenly. To compensate for this condition, the bypass air flow will be increased or decreased depending on condition. By increasing or decreasing the air, the air/fuel mixture ratio is changed gradually and dashpot effect is obtained. The air is increased when throttle is opened and decreased when the throttle is closed.