CHEVROLET LUV THERMOSTATIC AIR CLEANER

LUV Pickup (1972-73)

DESCRIPTION

The automatic temperature controlled air cleaner is designed so that the temperature of ambient air is automatically controlled, to hold the air/fuel ratio constant for efficient fuel combustion. The system consists of the thermo-sensor, vacuum motor, hot air control valve, hot idle compensator and connecting pipes. All components are mounted to the air cleaner body.

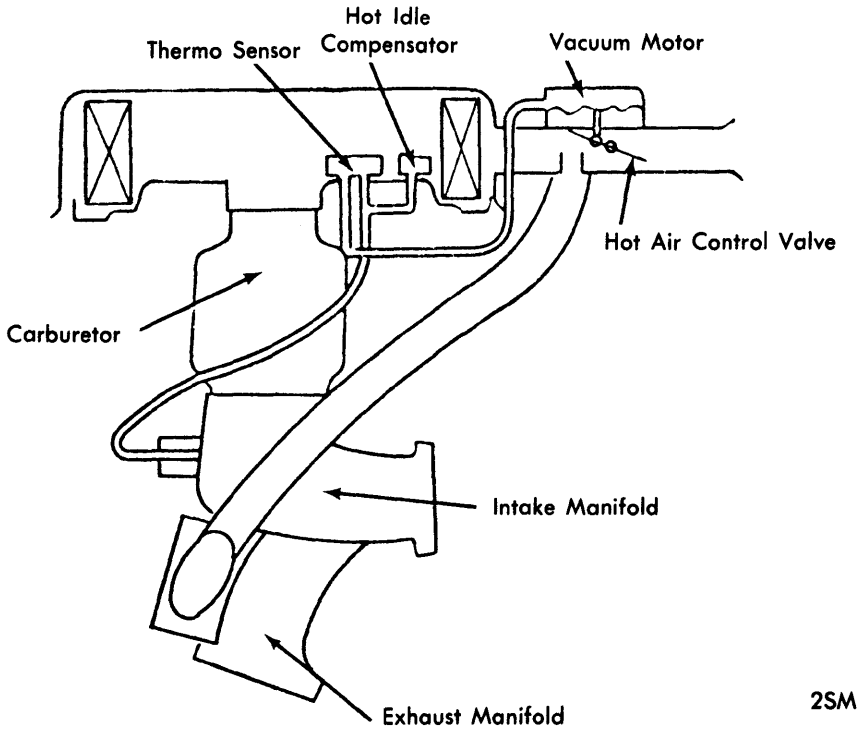
OPERATION

When air cleaner is cold the vacuum motor diaphragm is pulled by intake manifold vacuum and opens the hot air control valve. This allows intake of hot air from a stove on exhaust manifold. When the air cleaner reaches a certain temperature, the thermo-sensor comes into function and stops the supply of vacuum from the intake manifold. When vacuum is stopped, the hot air control valve opens and permits entry of cool outside air. This holds the temperature of intake air at a nearly constant temperature. As negative pressure in the intake manifold decreases (closing throttle valves) the vacuum motor diaphragm returns to its normal state and permits entry of cool air into the carburetor even when thermo-sensor is out of function.

Hot Idle Compensator - The fuel/air mixture tends to thicken when engine is running at idle, because of the relatively high engine compartment temperatures. To offset these high temperatures, a hot idle compensator feeds cool ambient air into the intake manifold to control the air/fuel ratio.

SERVICE PROCEDURES

Service Intervals - The hot air control valve and the idle compensator should be inspected every 12,000 miles for proper operation. The air cleaner element should be replaced every 24,000 miles.



TEMPERATURE CONTROLLED AIR CLEANER