

Checking The EVAP Control System

Purpose:

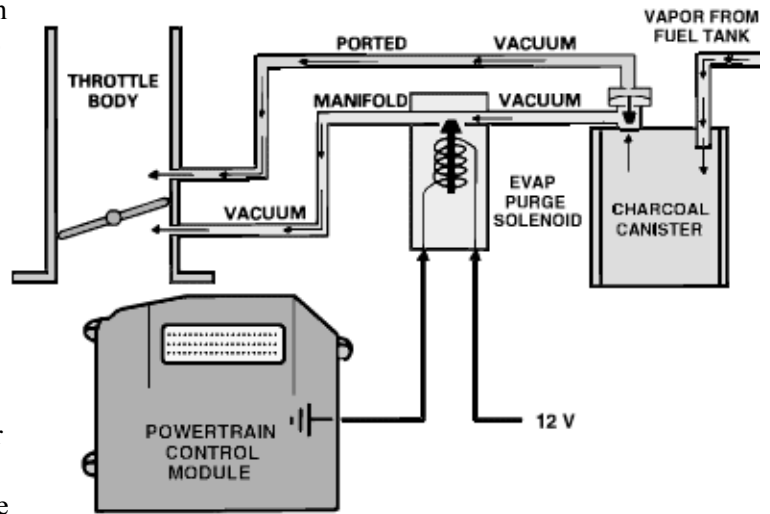
An evaporative control system is used to reduce emission of fuel vapors into the atmosphere by evaporation and to reduce unburnt hydrocarbons emitted by the engine.

Construction:

The system consists of an EVAP Purge Solenoid, a Charcoal Canister, a Pressure Vacuum Filler Cap, and a Rollover and Pressure Relief Valve.

Operation:

The evaporative emission system prevents gasoline vapors in the fuel system from escaping into the atmosphere. When the vehicle is not running, fuel in the fuel tank evaporates. The vapors travel through vent hoses or tubes to be stored in the charcoal canister. Once the vehicle is running, these vapors are drawn into the engine and consumed with combustion gases.



Visual Inspection:

- * Check routing & condition of all vacuum hoses. See Vehicle Emission Control Information (VECI) label, (underhood).
- * Ensure all vacuum hoses and electrical wires are routed a minimum of three inches from the exhaust manifold, to prevent deterioration due to high temperatures.

NOTE: Use only fuel resistant hoses when servicing the evaporative control system.

Purge Shutoff Switch Test:

1. Check vacuum hoses for proper routing.
2. Remove fuel vapor hose from canister and plug.
3. Remove purge hose from intake manifold.
4. Remove vacuum signal hose from purge switch and install vacuum pump.
5. Blow on purge hose, passage should be closed. (If passage is open replace Purge Switch/Canister assembly).
6. Apply vacuum (15 in/Hg) to signal port of purge switch.
7. Blow on purge hose, passage should be clear. (If passage is closed replace Canister-Purge Switch assembly).
8. If Purge Switch is operating properly, reinstall vacuum and vapor hoses.

NOTE: The Charcoal Canister and Purge Shutoff Switch are usually a combined unit and are not serviced separately. If the purge switch or canister is defective the complete assembly must be replaced.

NOTE: A faulty Purge Shutoff Switch can result in increased emissions and/or poor driveability.

Rollover and Pressure Relief Valve Test:

1. Inspect fuel and vapor hoses for proper routing, cracks, or restrictions.
2. Inspect fuel tank cap for proper seal and fit.
3. Remove fuel tank vent hose from EVAP Canister. Apply light air pressure (3-6 psi.) to the Fuel tank filler tube. Air flow should be present at fuel tank vent hose. If air flow is not present, and Fuel Tank is not over-full, replace Pressure/Relief Rollover Valve.

NOTE: In vehicle rollover valve is in the inverted position the plunger is forced against the guide plate and raw fuel is prevented from flowing through the valve orifice into the fuel tank vent tube.

NOTE: Most vehicles are equipped with only one rollover/pressure relief valve. These dual function valves relieve fuel tank pressure and prevent fuel flow through the fuel tank vent lines should the vehicle be rolled over.

As always, check the service manual for the proper procedures and specifications for your particular vehicle.