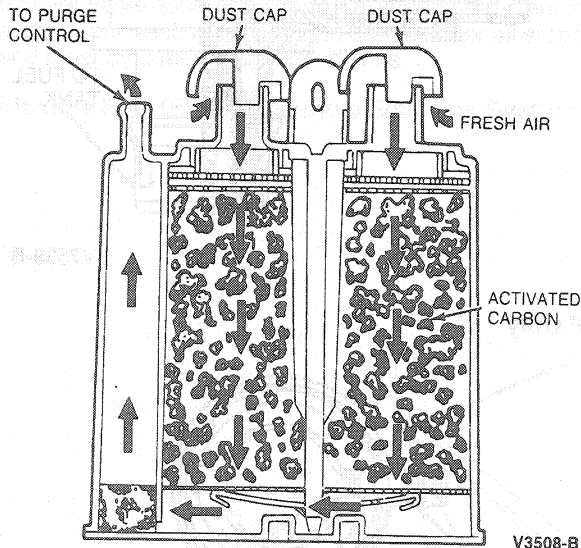


**DESCRIPTION AND OPERATION (Continued)**

**Carbon Canister (Fuel Vapor Storage System)**

Fuel vapor generated from the fuel tank is stored in a carbon-filled canister until the engine is started, at which time the vapor is drawn into the intake system. On some vehicles, a secondary fuel tank vapor orifice may be installed in the tank vent line connection at the canister. If this orifice becomes plugged, abnormal operation of the fuel system may result.

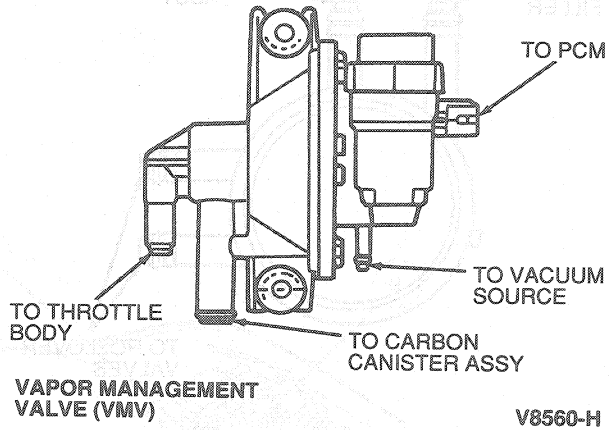
FF vehicles use four carbon canisters mounted on a bracket as an assembly under the luggage compartment floor. The FF canister system operates the same as unleaded gasoline systems.



**Vapor Management Valve**

**FF Vehicles Only**

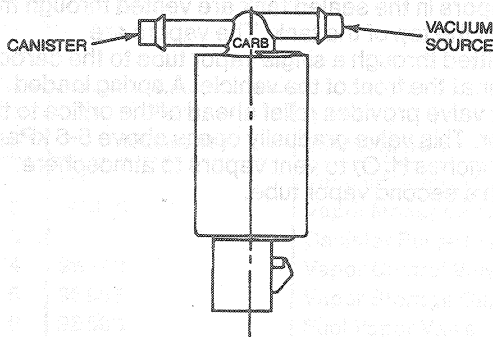
The vapor management valve (VMV) is in-line with the carbon canister assembly and controls the flow of fuel vapors out of the canister assembly. The VMV closes off vapor flow from the canisters when the engine is not running. After the engine is started, in response to a signal from the powertrain control module (PCM) (12A650), the VMV opens and closes to allow vapors to flow from the canisters to the engine.



**Purge Solenoid Valve**

**Unleaded Gasoline Only Vehicles**

The purge solenoid valve is in-line with the carbon canister and controls the flow of fuel vapors out of the canister. It is normally closed. When the engine is shut off, vapors from the fuel tank flow into the canister. After the engine is started, the solenoid is engaged and opens, purging the vapors into the engine with the valve open. Vapors from the fuel tank are routed directly into the engine.



**Pressure and Vacuum Relief System**

**Sealed Fill Cap**

The fill cap is a sealed cap with a built-in pressure-vacuum relief valve. Fuel system vacuum relief is provided after negative 1.7 kPa (0.25 psi) and pressure relief above 14 kPa (2 psi). Under normal operating conditions, the fill cap operates as a check valve, allowing air to enter the tank as gasoline is used, while preventing vapors from escaping the tank through the cap.