

## How it Works:

# Vapor Canister Purge Valve Solenoid

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The vapor canister purge valve is a solenoid valve controlled by the ECU, usually located in the engine bay on the canister intake hose or it can be located near the fuel tank.

As part of the Evaporative Emission Control (EVAP) system, the vapor canister purge valve solenoid prevents fuel vapors from escaping into the atmosphere or entering the vehicle cabin and communicates with the ECU to allow stored fuel vapor in the charcoal canister to be recycled into the engine combustion process. Vehicles may experience higher than normal fuel consumption, excessive hydrocarbon build up, and fail emissions testing if the vapor canister purge valve solenoid is not replaced.

In some cases, the vapor canister purge valve can get stuck in the closed or open position.

- If the vapor canister purge valve is stuck in the closed position, fuel vapors will travel straight to the exhaust rather than recycling to the engine.
- If the vapor canister purge valve is stuck in the open position, excess air will affect the engine fuel to air ratio and limit engine performance.

Another common cause of failure for the vapor canister purge valve solenoid is a vacuum leak. This is most noticeable by a rough idle.

Signs of a faulty Vapor Canister Purge Valve Solenoid:

- Check engine light
- Difficulty starting engine
- Poor engine performance
- Rough engine idle
- Reduced fuel economy



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