1982 Fuel Evaporation Systems

JEEP

DESCRIPTION

The fuel evaporation control system is used on all models. It is designed to retain raw fuel vapors, which would normally escape to the atmosphere, and transferring them to the intake manifold for burning. System consists of a special fuel tank, sealed gas cap, rollover check valve, charcoal canister, and connecting lines and hoses.

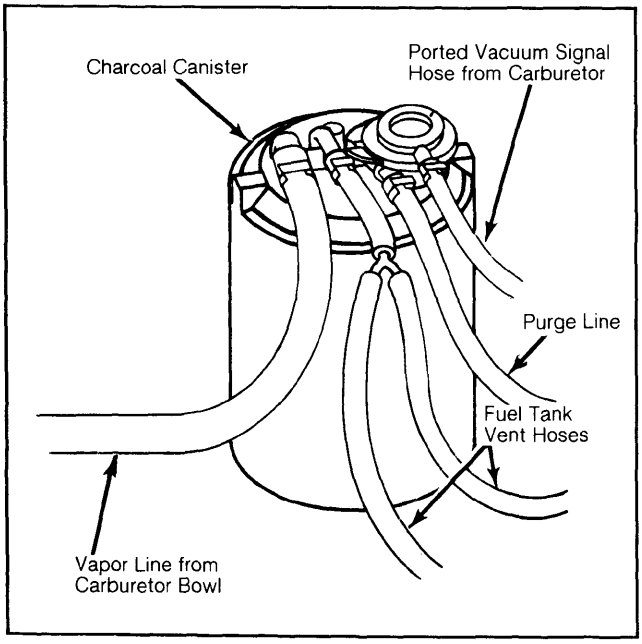
OPERATION

During periods of non-operation, raw vapors from the fuel tank and carburetor are channeled to the charcoal canister, where they are stored. When engine is running, canister is purged of these vapors, which are then taken into the intake manifold and burned. The rollover valve prevents fuel flow from tank in the event of vehicle rollover.

ROLLOVER VALVE

Valve consists of a plunger and a stainless steel ball. When valve is inverted, the stainless steel ball pushes the plunger against its seat, blocking fuel flow through valve.

Fig. 1: Typical Charcoal Canister Connections



Vapors are stored in canister until engine is started.

CHARCOAL CANISTER

All models are equipped with a dual-purge type canister. Two inlets are provided: 1 for the carburetor fuel bowl vapors and 1 for the fuel tank vapors. The outlet is connected to intake manifold vacuum. The 4th nipple (secondary purge) connects to the carburetor spark port.

When the engine is running, manifold vacuum draws fresh air through the inlet filter in the bottom of the canister and purges stored vapors. When ported vacuum reaches 12 in. Hg, the secondary purge circuit is opened, and canister is purged at a much higher rate.

CARBURETOR BOWL VENT

The carburetor bowl vent used on all models provides an outlet for fuel vapors when the engine is not running. When the engine is running, the fuel bowl is vented to the inside of the air cleaner. The bowl is automatically closed by a mechanical link to the throttle when the engine is started.

MAINTENANCE

No adjustments are required with this system. The air inlet filter in bottom of charcoal canister should be replaced every 30,000 miles. A regular inspection of system components should be made and defective components replaced as necessary.

Fig. 2: Typical Jeep Evaporation Control System