1972 JEEP FUEL EVAPORATIVE EMISSION CONTROL

DESCRIPTION

The fuel vapor system consists of internal fuel tank venting, a vacuum-pressure fuel tank filler cap, a vapor separator (Wagoneer only) or expansion tank, a vapor storage canister (V-8 auto. trans. only), a limit fill valve and internal carburetor venting. Fuel vapor pressure in the fuel tank forces the vapor through vent lines to a vapor separator (Wagoneer only) or to an expansion tank (all other vehicles). Vapor is then routed through a single vent line to the limit fill valve which regulates the vapor flow to the charcoal canister or to the cylinder head cover.

OPERATION

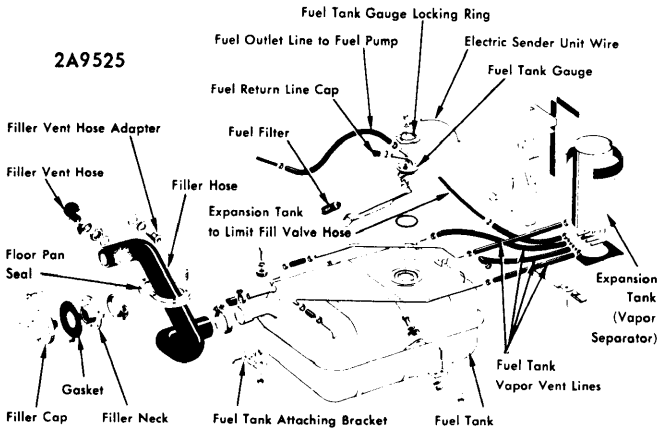
Fuel Tank Filler Cap – Filler cap incorporates a two-way relief valve which is closed to atmosphere under normal operating conditions. It is calibrated to open only when a pressure of .75-1.5 psi or .25-.5" vacuum occurs within the tank. When pressure or vacuum is relieved, valve returns to the normally closed position. *NOTE – It is normal to occasionally encounter an air pressure release when removing filler cap.*

Vapor Separator (Wagoneer Only) – Fuel tank vapor vent lines are routed to the vapor separator, located within left rear quarter panel. Vapor separator incorporates a liquid fuel shut-off valve. A single vent line leads from the separator to a limit fill valve at the engine firewall. The combined operation of the vapor separator and limit fill valve prevents liquid fuel flow through the vent line during downhill or uphill attitude of the vehicle.

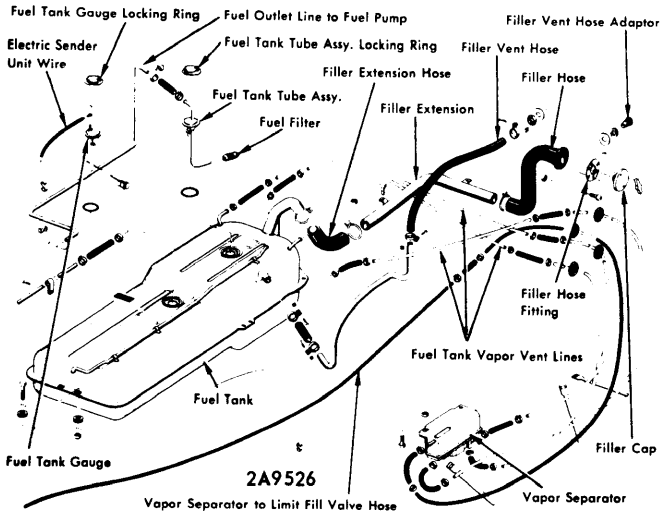
Expansion Tank – Fuel tank vapor vent lines enter the bottom of the sealed expansion tank and are positioned vertically side by side within the tank. The upper end of each tube is open to allow discharge of fuel tank vapors into the tank. Expansion tank allows expansion of fuel as required during temperature changes and simultaneously becomes a liquid trap that allows only vapors to pass. A single vent line leads from the expansion tank to a limit fill valve at the engine firewall. The combined operation of expansion tank and limit fill valve prevents liquid fuel flow through the fuel tank vent line during downhill or uphill attitude of the vehicle.

Limit Fill Valve – Valve is a combination vapor flow regulator and pressure relief valve. It regulates vapor flow from fuel tank vent line into the charcoal canister or cylinder head cover. Valve consists of a housing, a spring loaded diaphragm and a diaphragm cover. As tank vent pressure increases, diaphragm lifts permitting vapor to flow through. Pressure under which this occurs is 4" to 6" of water. *NOTE – Make sure purge hose from canister or cylinder head cover is connected to limit fill valve fitting which has a black colored end.*

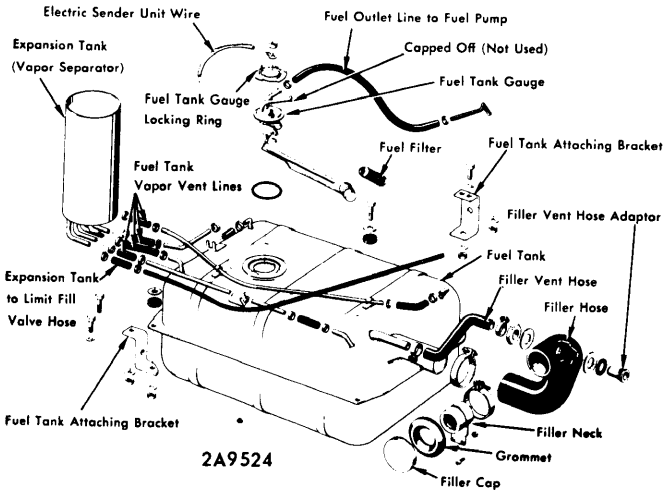
Charcoal Canister – Canister contains activated charcoal granules which absorb and store fuel vapors until they are drawn into the intake manifold through the PCV system. Vapors enter canister through a hose connected to fuel tank vent line and are drawn out (purged) through a hose connected to the PCV grommet. Fresh air is drawn into canister through a replaceable filter pad which is accessible from the bottom of the canister.



FUEL TANK & VENT LINES
COMMANDO

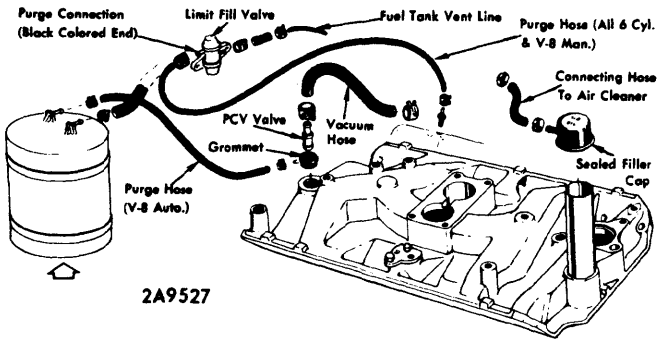


FUEL TANK & VENT LINES
WAGONEER



FUEL TANK & VENT LINES
CJ-5/CJ-6

1972 JEEP FUEL EVAPORATIVE EMISSION CONTROL (Cont.)



ENGINE COMPARTMENT VENT LINES & CONNECTIONS

TESTING

Disconnect vent line from fuel tank at limit fill valve, induce ¼ psi air pressure into the disconnected line. If this pressure can be maintained for a few seconds the vent system is sealed properly. *NOTE – Do not apply air pressure to limit fill valve (damage can occur).*

MAINTENANCE

Replace charcoal canister filter after first 18,000 miles of operation and every 12,000 miles thereafter. Install new filter and position it evenly around entire bottom of canister.