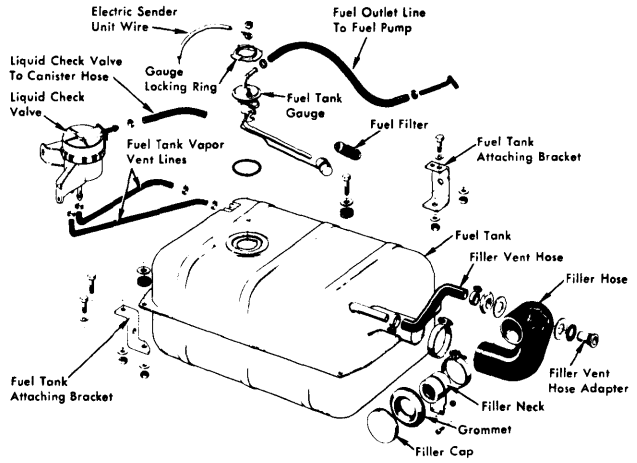
1973-74 JEEP FUEL TANK VAPOR EMISSION CONTROL

DESCRIPTION & OPERATION

A closed fuel tank system is used which routes raw fuel vapors into the PCV system (1973 6-Cyl.) or air cleaner snorkel (All Others) where it is burned with the air/fuel mixture. System prevents raw fuel vapors from entering the atmosphere and incorporates the following:

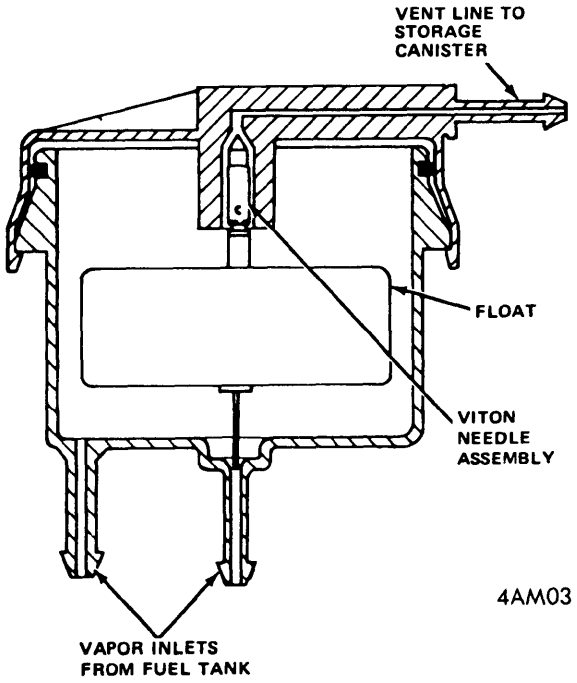
Fuel Tank Filler Cap – Filler cap incorporates a two-way relief valve which is closed to atmosphere under normal operating conditons. Relief valve is calibrated to open only when a pressure of .5-1.0 psi or a vacuum of .25"-.5" Hg occurs. When pressure or vacuum is relieved, valve returns to normally closed position. Filler cap is identified by a black colored relief valve housing. *NOTE – It is normal to occasionally encounter an air pressure release when removing filler cap.*

Fuel Tank – All series use a woven Saran sleeve type fuel filter, attached to the end of fuel outlet tube, inside fuel tank. This filter is rated at 65 micron and repels water. Under normal conditions it requires no maintenance or service. Fuel tank on all series is designed to provide adequate air displacement area for fuel expansion.



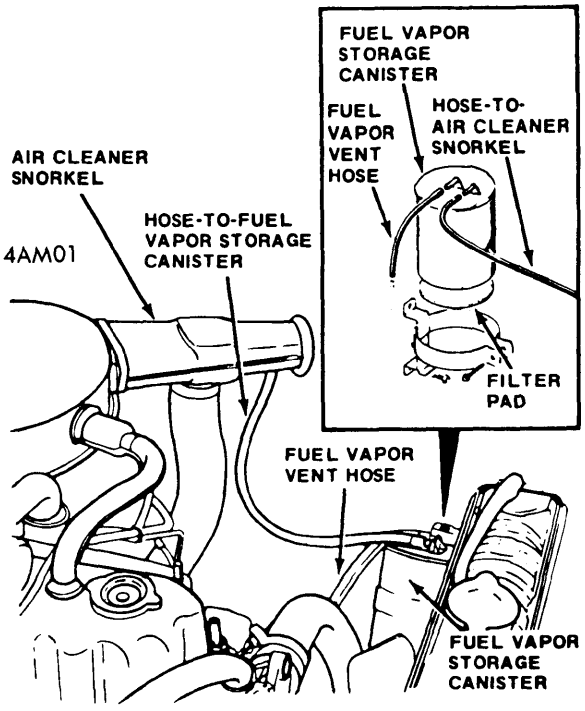
FUEL TANK VENT & CHECK VALVE (TYPICAL)

Fuel Tank Vent & Check Valve – Fuel vapors (from tank) are routed through vent lines to a liquid check valve, located at body side sill adjacent to left rear wheel housing. Check valve incorporates a float and needle assembly. Should liquid fuel enter check valve, float will rise and force needle upward to close vent passage, preventing liquid fuel from flowing through the valve. After passing through check valve, vapors are routed through vent line to engine compartment. Vent line is connected to charcoal canister. Fuel vapors are then drawn in PCV system or air cleaner snorkel and burned along with air/fuel mixture.



LIQUID CHECK VALVE (TYPICAL)

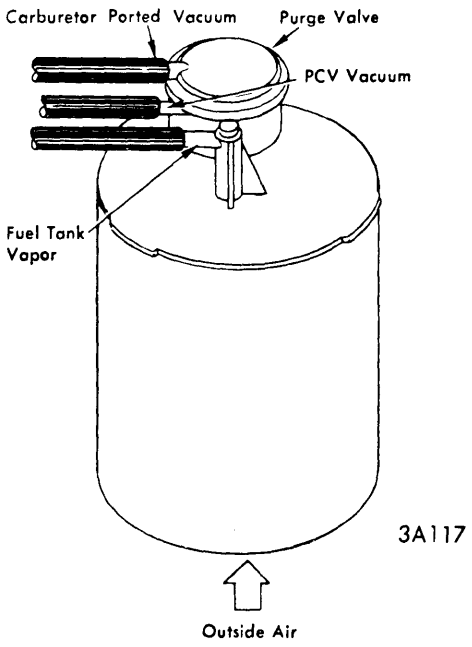
Charcoal Canister – Fuel resistant nylon body of canister contains activated charcoal granules which absorb and store fuel tank vapors until they are drawn into intake manifold through PCV system or carburetor air cleaner. Outside air is drawn into canister through a replaceable filter pad which is accessible through bottom of canister body.



FUEL VAPOR CANISTER & HOSES (TYPICAL)

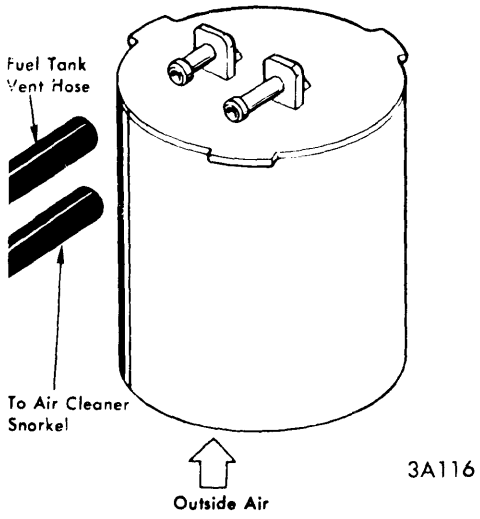
1973-74 JEEP FUEL TANK VAPOR EMISSION CONTROL (Cont.)

1973 6-Cylinder – A purge valve, located at top of canister, is connected by hoses to fuel tank vapor line, PCV vacuum hose, and carburetor ported vacuum line. During idle operation (vacuum less than 12" Hg) purge valve is seated and vapor flow from canister is limited through small (PCV) opening in purge valve housing. During cruise speed operations (vacuum greater than 12" Hg) purge valve opens and uncovers large (ported vacuum) opening in center of valve housing, increasing vapor flow.



CHARCOAL CANISTER (1973 6-CYLINDER)

1973 V8 & 1974 All Models – Canister used with these engines is not equipped with purge valve and has only two connections. One is to fuel vapor line and other is to tube at underside of air cleaner snorkel. Fuel vapors are drawn from canister by vacuum which develops as incoming air passes over tube in air cleaner snorkel. Vapor flow from canister is proportional to air velocity in snorkel opening.



CHARCOAL CANISTER (1973 V8 & 1974 ALL MODELS)

MAINTENANCE

Evaporative Emission Control – Inspect check valve, hoses, connections, and canister every 15,000 miles (replace as necessary). Canister fuel vapor inlet filter should be replaced at each inspection interval.