

CHRYSLER CORP. IMPORTS

Arrow
Arrow Pickup
Champ
Challenger
Colt
D-50 Pickup
Sapporo

DESCRIPTION & OPERATION

The system consists of a separator tank, two-way valve, fuel check valve, purge control valve, charcoal canister, vacuum relief filler cap and hoses to connect the system. California models are also equipped with carburetor vent system. These components are used to prevent escape of evaporative gases into the atmosphere.

Canister — Charcoal filled canister traps vapors from fuel tank and carburetor bowl vent (if equipped) while the engine is not running. During engine operation, fresh air is drawn through canister to carry fuel tank vapors into engine air cleaner, then into engine to be burned.

Two-Way Valve — This valve consists of a pressure and vacuum valve. The pressure valve is designed to open when fuel tank internal pressure has increased over normal pressure. The vacuum valve prevents a vacuum from forming in tank.

Separator Tank — The separator tank is designed to reduce fuel overflow in fuel tank caused by temperature rise and also to prevent liquid fuel from entering vapor line during extreme cornering. Front-wheel drive models have an expansion chamber (integral with fuel tank) rather than separator tank.

Purge Control Valve — This valve reduces hydrocarbon (HC) emissions by closing at idle to prevent vaporized fuel from entering air cleaner. Carburetor vacuum opens valve as engine speed increases. During engine warm-up, thermo valve incorporated in system, closes purge control valve to reduce CO and HC emissions.

Fuel Check Valve — If vehicle should roll over, one of the 2 balls in valve will close off fuel passage to prevent leaks.

Carburetor Bowl Vent System — California models are equipped with a manifold vacuum operated solenoid valve

controlled carburetor vent. When ignition is off, bowl vent valve is closed, allowing vapors to vent to canister. When intake manifold vacuum exceeds diaphragm pressure (ignition on), bowl vent valve opens to vent vapors into carburetor. During normal engine operation, solenoid valve keeps vent valve open when intake manifold vacuum equals atmospheric pressure. Federal model carburetor bowl vapors are drawn directly from bowl vent hole (balance tube) into carburetor.

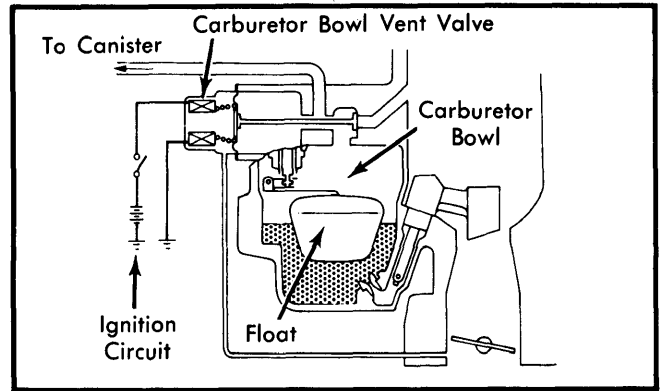


Fig. 1 Exploded View of California Model Bowl Vent

TESTING

Purge Control Valve — With engine stopped, remove purge hose from air cleaner and blow air into it. No air should pass through purge valve. Start engine and hold at 2000 RPM. Air should pass freely through purge valve. Replace valve if it does not respond as specified.

Two-Way Valve — Remove valve and blow lightly through both inlet and outlet with mouth. If air passes, with light resistance, in both directions; valve is good.

MAINTENANCE

Every 12 months or 15,000 miles, check fuel vapor vent line by blowing through line with compressed air. Also inspect and test valves and clean charcoal canister cover air suction port. Every 30,000 miles (Federal models) or 5 years/50,000 miles (California models), replace all vapor lines in system and replace charcoal canister.

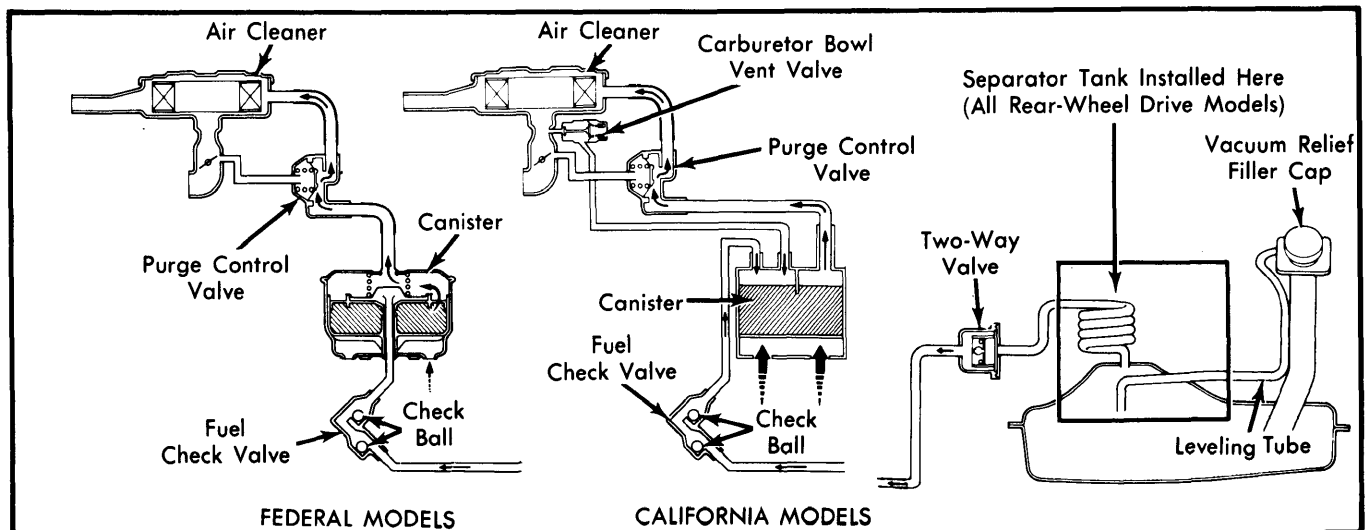


Fig. 2 Typical Chrysler Corp. Imports Fuel Evaporation System