1980 Fuel Evaporation Systems

LUV

LUV

DESCRIPTION

System is designed to route the fuel vapors from the fuel tank into engine crankcase, where it is mixed with blow-by gases and drawn into the intake manifold. The system consists of a vapor separator tank, check and relief valve and tubes connecting the various components.

California models are equipped with a vent switching valve and charcoal canister to prevent carburetor float bowl vapors from reaching the atmosphere.

OPERATION

When Engine is Running – When vacuum develops in the fuel tank or the engine crankcase and the difference between the relief side and the fuel tank or crankcase is .2-.6 in. Hg, the relief valve opens and allows air from the air filter to enter the fuel tank or crankcase. This air replaces fuel vapors and brings the fuel tank or crankcase back to balanced atmospheric pressure.

On California models, the vent switching valve is closed to prevent air from flowing through the canister and into the carburetor. When vacuum exceeds a specified level, the canister purge valve is opened and air is drawn through the canister into the intake manifold.

When Engine is Not Running – The fuel vapor taken up into the vapor separator is routed into the check and relief valve. When the vacuum becomes 1-1.4 in. Hg, the check valve opens and allows vapor into the crankcase. While the check valve is open, the valve at the air filter side remains closed to prevent flow of vapor into the atmosphere. On California models, the vent switching valve is opened to allow fuel vapor into the canister from the float chamber.

SERVICE PROCEDURES

The system and all components should be inspected for condition and proper functioning every 15,000 miles.

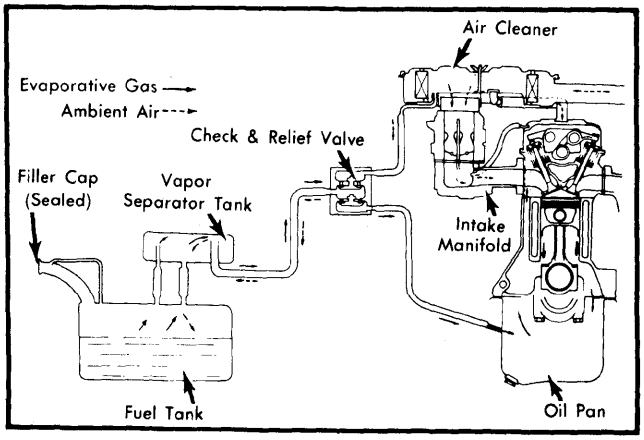

Fig. 1 LUV Evaporative Emission Control System (Federal Models)

Vapor Separator Tank – Check tank for fuel leaks, distortion or any damage. Replace tank if necessary.

Check and Relief Valve – 1) Remove check valve and inspect for leakage by blowing air into ports in the check valve. Valve should perform as follows:

2) When air is applied from the fuel tank side, the check valve is normal if air passes into the crankcase side, but it should not leak into the relief side (air cleaner side).

3) When air is applied from check side, the valve is normal if passage of air is restricted.

Canister and Purge Valve – 1) Remove canister from vehicle and check by applying 7.5 psi air pressure to port marked "V.C." No air should leak.

2) Apply and maintain 15 in. Hg vacuum to port marked "Purge". Gradually apply vacuum to port "V.C."; purge valve should open when 7.1-8.7 in. Hg is applied to "V.C.". Replace if valve does not operate correctly.

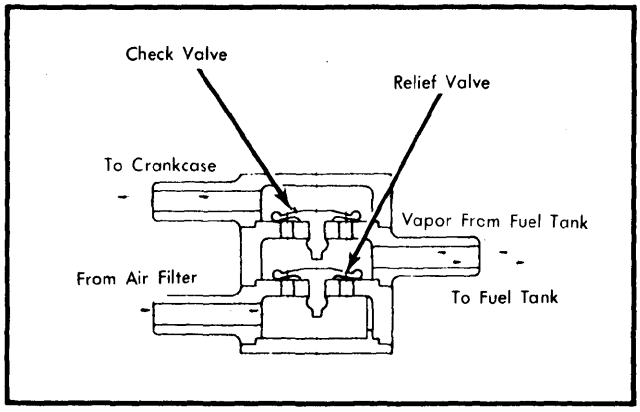

Fig. 2 LUV Check and Relief Valve

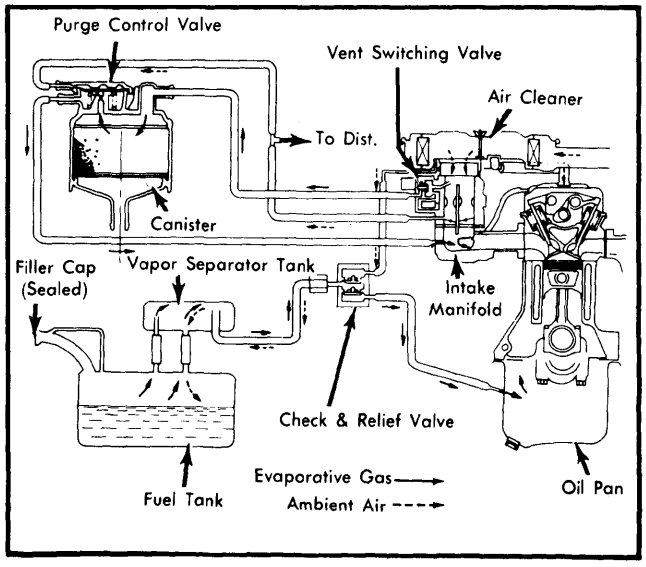

Fig. 3 LUV Evaporative Emission Control System (California Models)