1974-79 EXHAUST EMISSION SYSTEMS
General Motors Fuel Evaporation

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.

OPERATION

ENGINE 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.

ENGINE STOPPED

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.

TESTING

VAPOR SEPARATOR TANK

Check tank for fuel leaks, distortion or any damage. Replace tank if necessary.

CHECK & RELIEF VALVE

1) Remove check valve and inspect for leakage by blowing air into ports in the check valve. 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).
2) When air is applied from check side, the valve is normal if passage of air is restricted. When air is applied from the relief side (air cleaner side), the valve is normal if air passes into the fuel tank side but it should not leak into the check side (crankcase side).

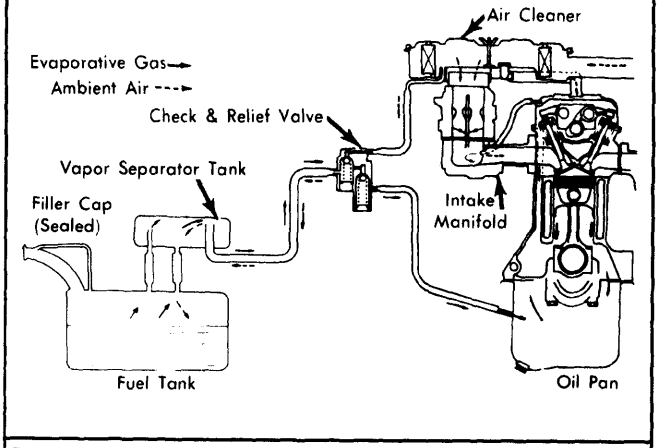

Fig. 1: LUV Fuel Evaporation System