1981 Fuel Evaporation Systems

FORD

DESCRIPTION

All models are equipped with fuel evaporation emission control systems. This closed system is designed to limit the amount of fuel vapor released to the atmosphere. The system consists of a special fuel filler cap, a specially designed fuel tank, a carbon-filled canister, an orifice valve and necessary fuel vent vapor lines. All 6 cylinder models with dual fuel tanks, and all V8 models use 2 carbon canisters.

Fuel Filler Cap – The fuel filler cap has a one-way vent, this prevents tank collapse by allowing air to enter the tank as fuel is consumed.

Fuel Tank – In most installations the fuel tank is constructed with a dome in the top. Fuel vapors rise and tend to gather in this dome.

Orifice Valve – On all vehicles, liquid fuel is prevented from entering the vapor lines by means of restricted orifices. This orifice usually takes the form of a .050 orifice valve located in the emission control valve in the fuel tank dome.

Carbon Canister – The carbon filled canister acts as a storage system for fuel vapors vented from the fuel tank and carburetor. The outlet of the canister is connected to the carburetor bowl vent.

OPERATION

Fuel vapors trapped in the sealed fuel tank are vented through the orifice vapor separator assembly in the top of the tank. Vapors then leave the separator through a single vapor line and continue to the carbon canister in the engine compartment. There they are absorbed by carbon granules, until such time as they are purged from the canister by carburetor vacuum.

MAINTENANCE

No regular replacement of components is required with this system. Periodic inspection of system components should be made to be sure system is functioning properly.

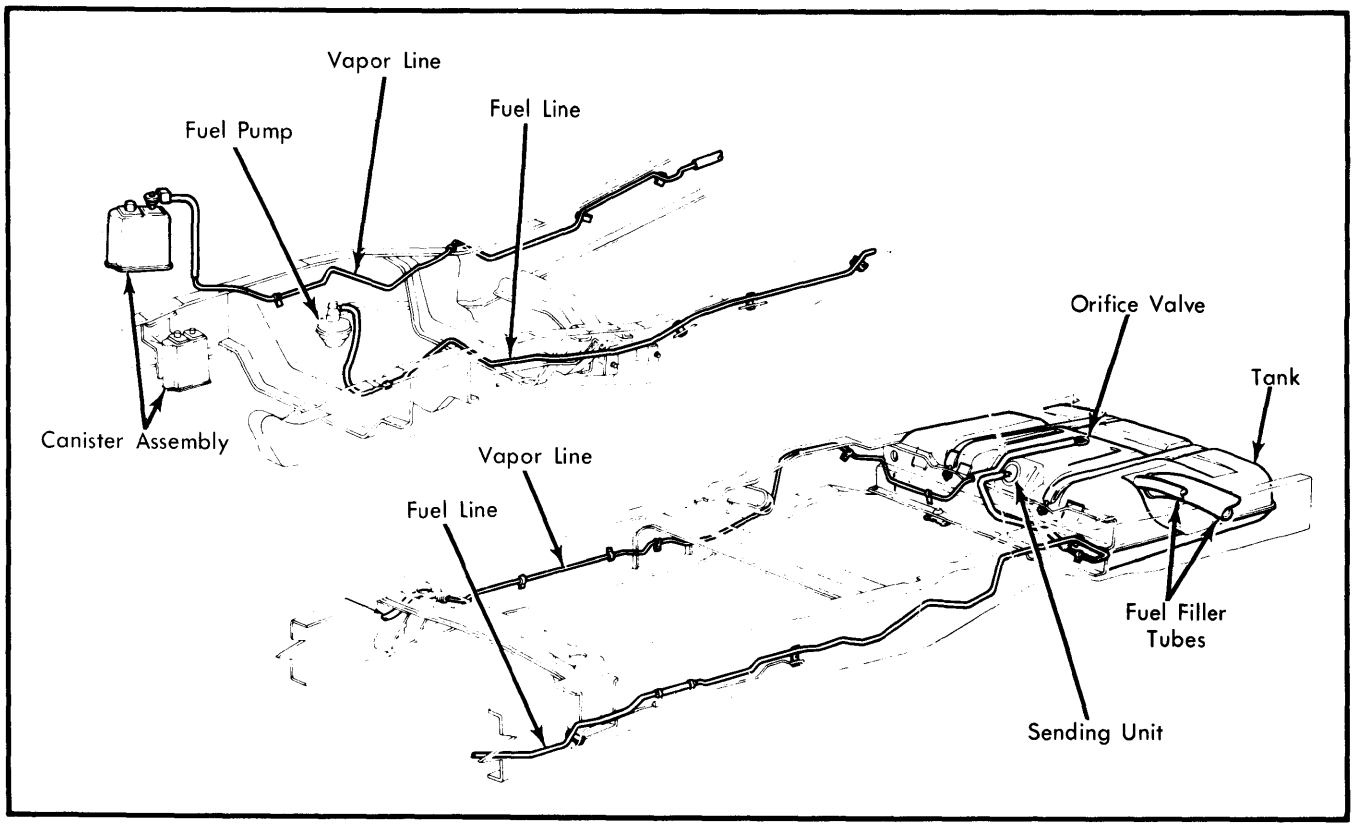

Fig. 1 Typical Ford Evaporation Emission Control System (F100/250 Regular Cab Shown, Others Similar)