1970 FORD MOTOR CO. FUEL EVAPORATIVE EMISSION CONTROL

NOTE – This system installed on cars offered for sale in California.

►CHANGES, CAUTIONS, CORRECTIONS

►*3-WAY CONTROL VALVE HUMMING OR BUZZING NOISE CORRECTION: This noise caused by vapor flow through valve in hot weather when fuel in tank agitated by vehicle motion. Correct by installing new valve, Part No. D0DZ-9A153-C, identified by 1/32" hole in each end cap (3/32" holes on previous type cap).*

DESCRIPTION & OPERATION

The Fuel Evaporative Emission Control System is similar to that introduced on the 1970 Maverick California cars and is designed to prevent fuel vapors being emitted to the atmosphere. The fuel supply system is closed with a sealed fuel tank filler cap and a vent system through which fuel vapors are conducted through a vent line to the engine compartment where they are burned in the engine. The following new or modified parts are used:

Fuel Tank – Tank has an extended fill neck with a centrally located fill vent and a non-vented (sealed) filler cap to provide approximately 10% air space when the tank indicates "full". This provides for full expansion due to temperature fluctuations. Tank has four metal or plastic vent tubes with a pick-up point at each corner of the tank to provide venting action regardless of the vehicle angle. These vent tubes terminate in a connector assembly (for Vapor Separator connection) which varies on the different car models.

Vapor Separator – This is a "wing" type or cylindrical tank (various designs used on different car models) installed above the main fuel tank and is designed to separate the fuel vapors from any liquid fuel rising in the vent lines (liquid fuel and condensate are returned to the tank). Vapor vent line from separator is connected to the three-way control valve.

Three-Way Control Valve – This valve is located near fuel tank and is connected in vent line from separator-to-engine compartment. It controls venting of the fuel system under all conditions as follows:

1) When filling the tank, valve closes vent line to maintain an expansion volume within the tank and prevent over-filling.

2) Valve opens under pressure to vent tank to carbon canister to relieve any fuel tank pressure resulting from fuel and air expansion due to increase in temperature. In the event of a vapor line obstruction, valve will vent the tank to the atmosphere.

3) In normal operation, valve admits air to the fuel tank to compensate for fuel consumption. It will also admit air to relieve any vacuum caused by decrease in fuel and air volume due to decrease in temperature.

Carbon Canister – *Not used on all models – see Note below.* Fuel tank vent line (from three-way control valve) is connected to a canister filled with activated carbon located in the engine compartment. With engine not running, fuel vapors are stored in this canister. Canister is also connected to carburetor air cleaner and with engine running, fuel vapors are drawn into the engine and burned (this action clears the canister and renews its storage capacity).

Note – On some car models, canister is not used and fuel vapor vent line is connected to the engine valve cover. On these cars, fuel vapors are stored in crankcase when engine is not running and are vented to the intake manifold by the regular crankcase ventilation system when engine is running.

PERIODIC MAINTENANCE

Control Valve – Replace at 12 month intervals.

Carbon Canister – Periodic service not required. Replace canister if damaged or when contaminated by oil, water, or paint.

TESTING & DIAGNOSIS

System trouble will be indicated by restricted fuel flow or deformed main fuel tank. Inspect system for leaks, pinched or kinked lines, or inoperative three-way control valve.

PARTS REPLACEMENT

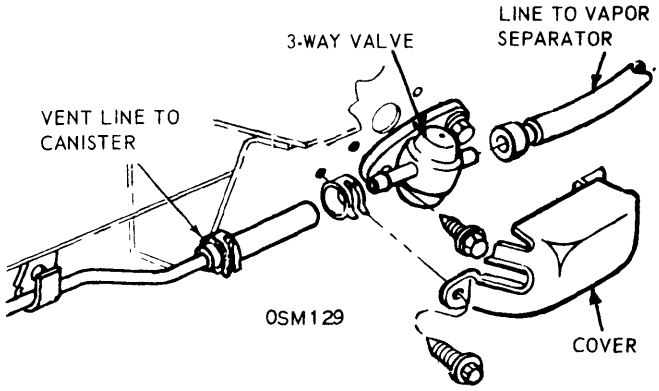
Component parts of system cannot be repaired and should be replaced if damaged or inoperative. Each component can be disconnected and replaced individually.

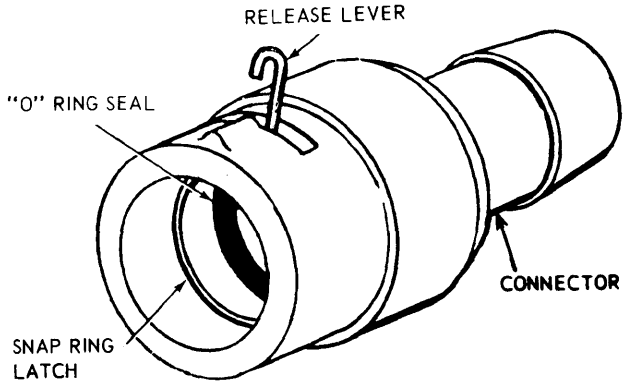
FUEL TANK SERVICING

Fuel tanks are fitted with metal or plastic vent lines and interior parts. Observe following cautions when cleaning tanks:

Fuel Tanks with Metal Vent Tubes – These tanks can be steam-cleaned and repaired in usual manner. When steam-cleaning these tanks, make certain vent tubes are also cleaned.

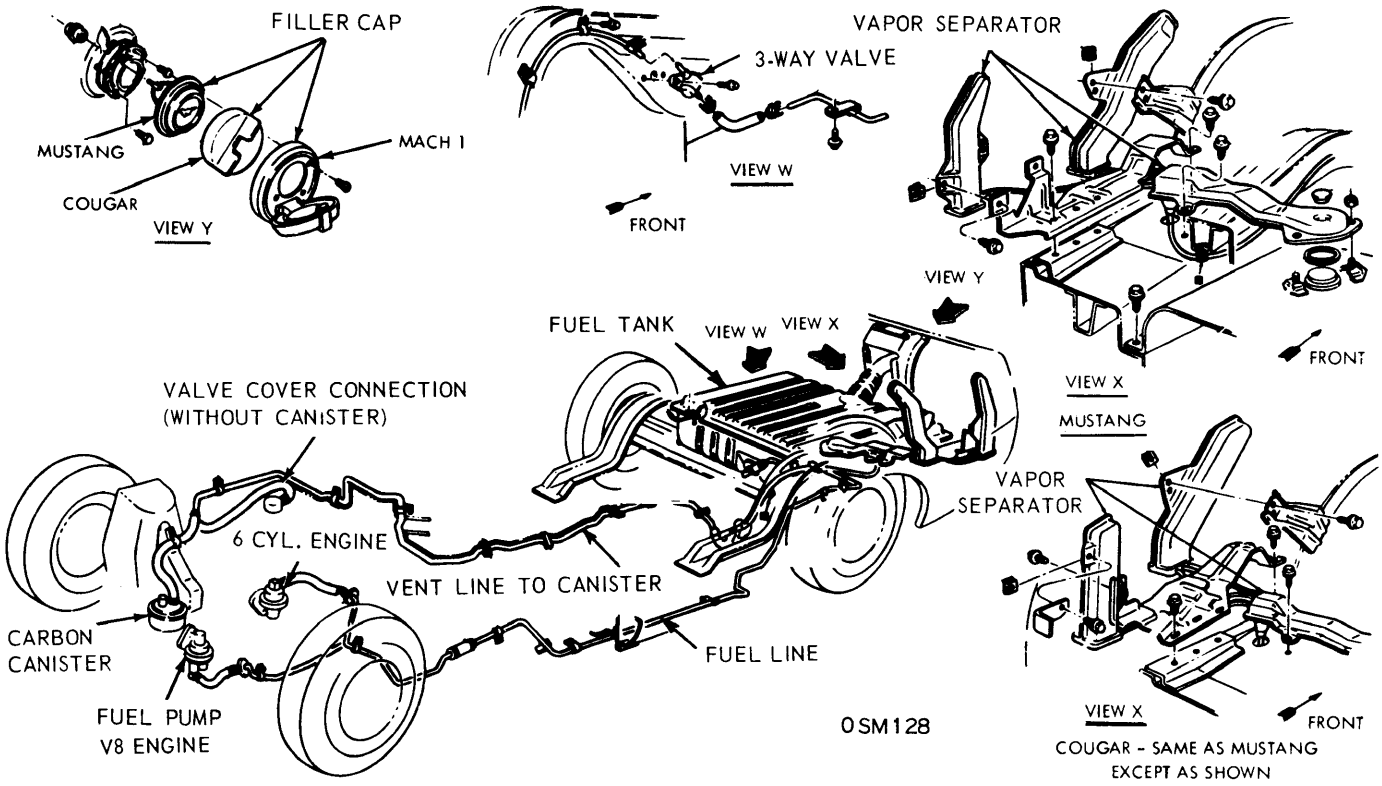
Fuel Tanks with Plastic Vent Tubes – Clean these tanks with cold flushing system only. *Do not steam-clean, solder, or weld these tanks (will cause damage to plastic parts).* If vent system damaged, tank must be replaced. *NOTE – These tanks used on Montego, Mustang, Fairlane & Cougar.*



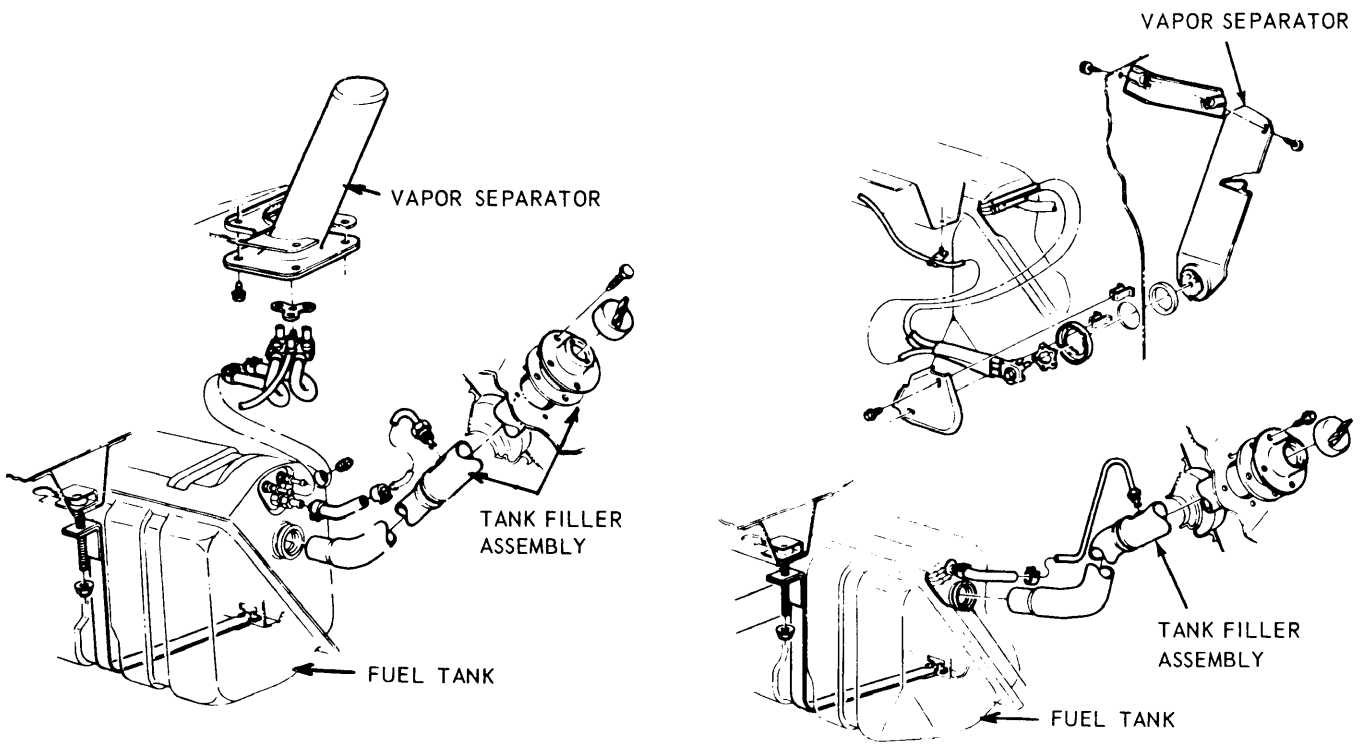


THREE-WAY CONTROL VALVE (TYPICAL)

1970 FORD MOTOR CO. FUEL EVAPORATIVE EMISSION CONTROL (Cont.)



TYPICAL FUEL EVAPORATIVE EMISSION CONTROL SYSTEM (COUGAR & MUSTANG SHOWN)

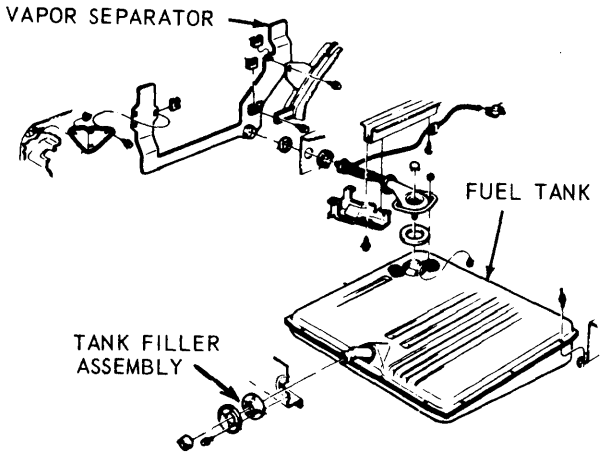


FORD & MERCURY SEDAN

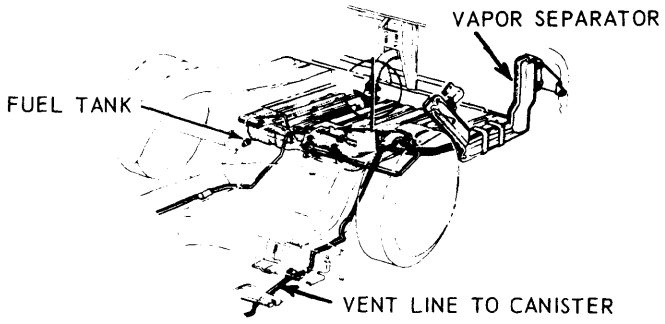
FORD & MERCURY STATION WAGON

FUEL TANK & VAPOR SEPARATOR ASSEMBLIES (ALL MODELS)

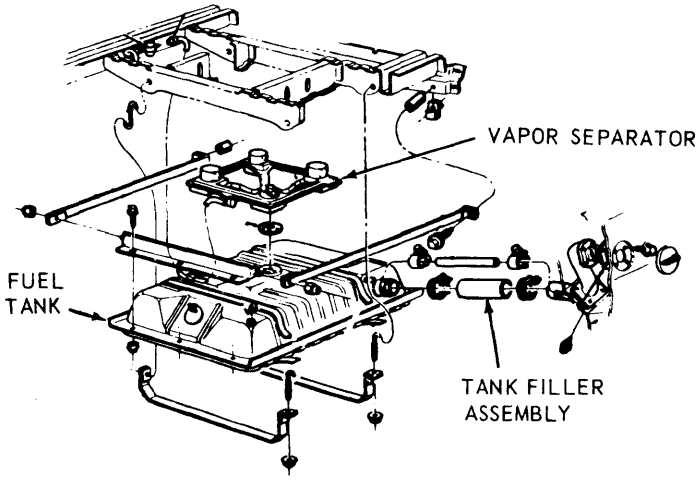
1970 FORD MOTOR CO. FUEL EVAPORATIVE EMISSION CONTROL (Cont.)



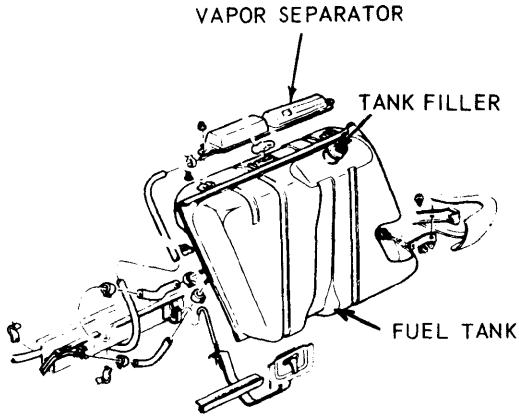
FAIRLANE & MONTEGO SEDAN



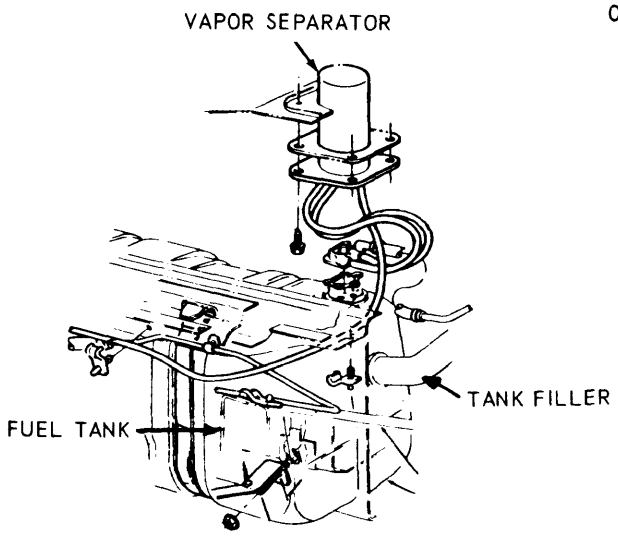
MAVERICK



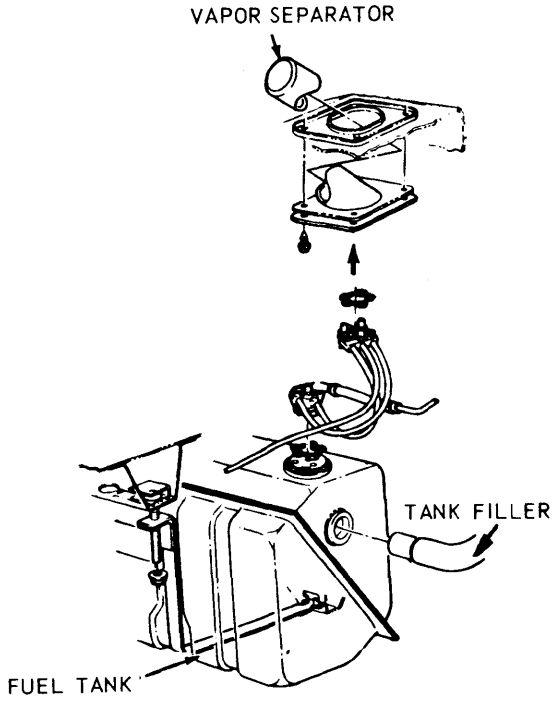
FAIRLANE RANCHERO



FAIRLANE & MONTEGO STATION WAGON



MARK III & THUNDERBIRD



LINCOLN CONTINENTAL

OSM129

FUEL TANK & VAPOR SEPARATOR ASSEMBLIES
(ALL MODELS)