

# Fuel Evaporation Systems

FORD MOTOR CO.

## DESCRIPTION

All Bronco, Econoline, and F-100 (and F-250-350 in California) vehicles are equipped with fuel evaporation emission control system. This closed system is designed to limit the amount of fuel released to the atmosphere. This system consists of a special fuel filler cap, a specially designed fuel tank, a fuel vapor separator, a carbon filled canister, and the necessary fuel vapor vent lines.

**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. Some tanks use a "U" shaped steel tube type vapor vent chamber.

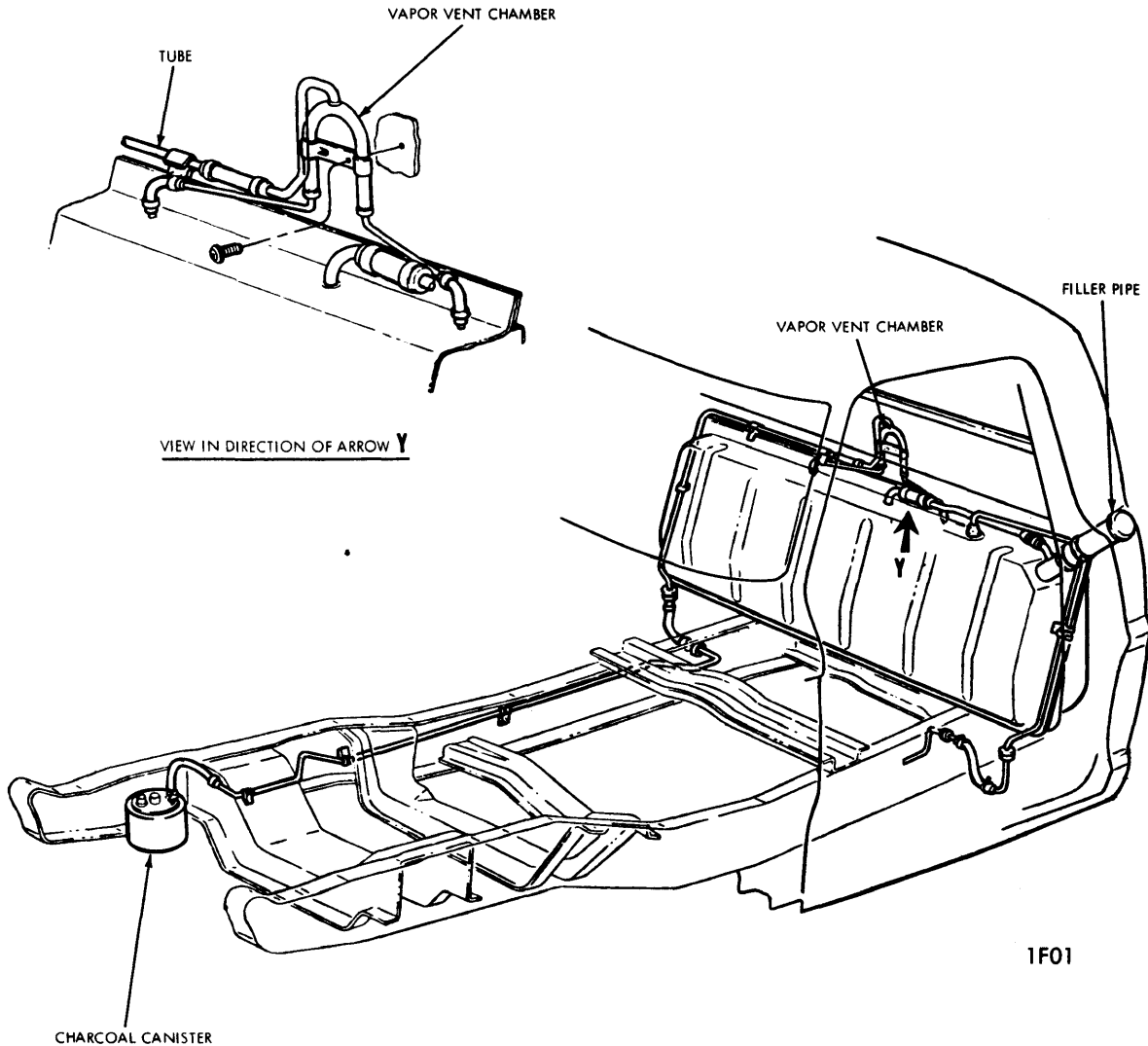
**Orifice Valve** — On all vehicles, liquid fuel is prevented from entering the vapor lines by means of restricted orifices. This orifice usually takes the form of a .050 orifice valve located in the emission control valve in the fuel tank dome, or built in to the "U" shaped vapor vent chamber.

**Vapor Separator Tank** — Broncos use a vapor separator tank mounted some distance above the main and auxiliary fuel tank. This mini tank separates any liquid fuel from the vapors rising from the tanks and returns it to the main tank. The vapor then passes on to the carbon canister.

**Carbon Canister** — The carbon filled canister acts as a storage system for fuel vapors vented from the fuel tank (and in some instances the carburetor). The outlet of the canister is connected to the carburetor or air cleaner.

## OPERATION

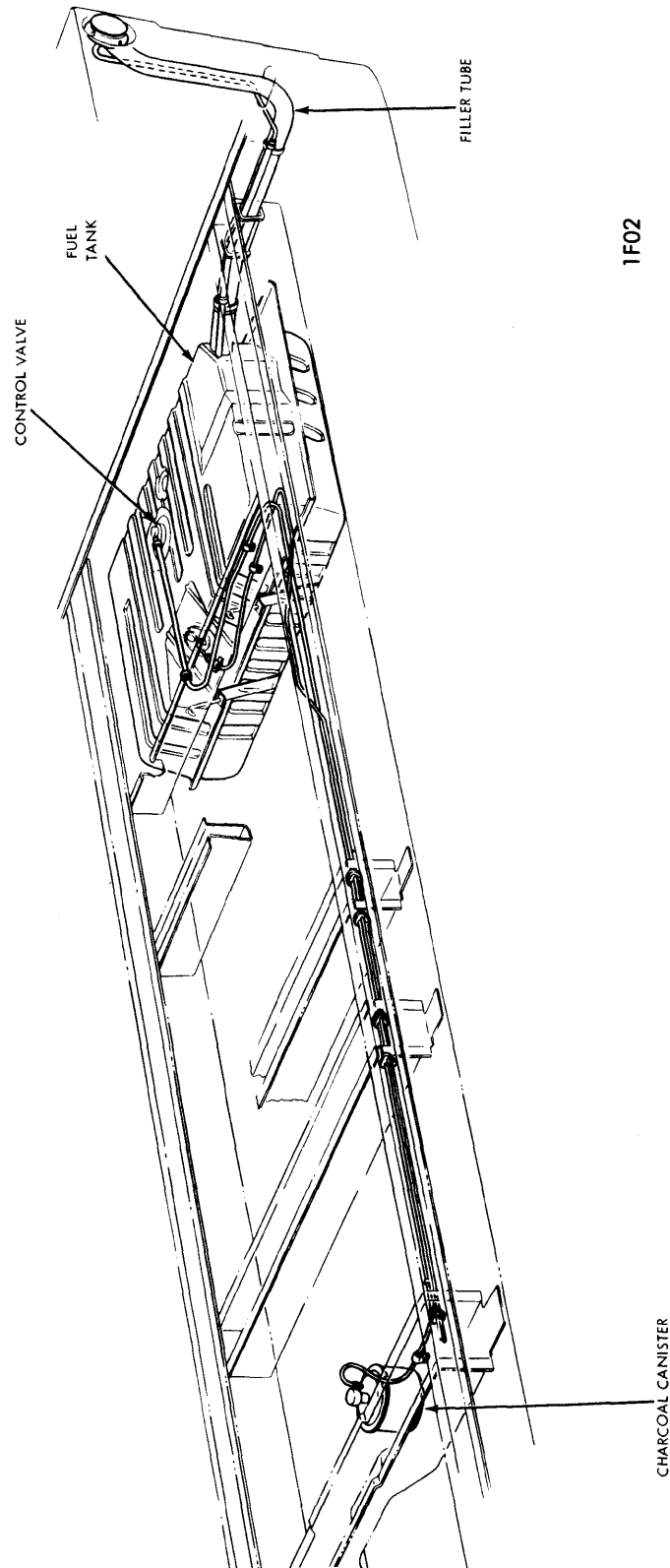
Fuel vapors trapped in the sealed fuel tank are vented through the orifice vapor separator assembly in the top of the tank. Vapors then leave the separator through a single vapor line and continue to the carbon canister (in the engine compartment) where they are absorbed by the carbon granules until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



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## F-100 FUEL TANK & LINES

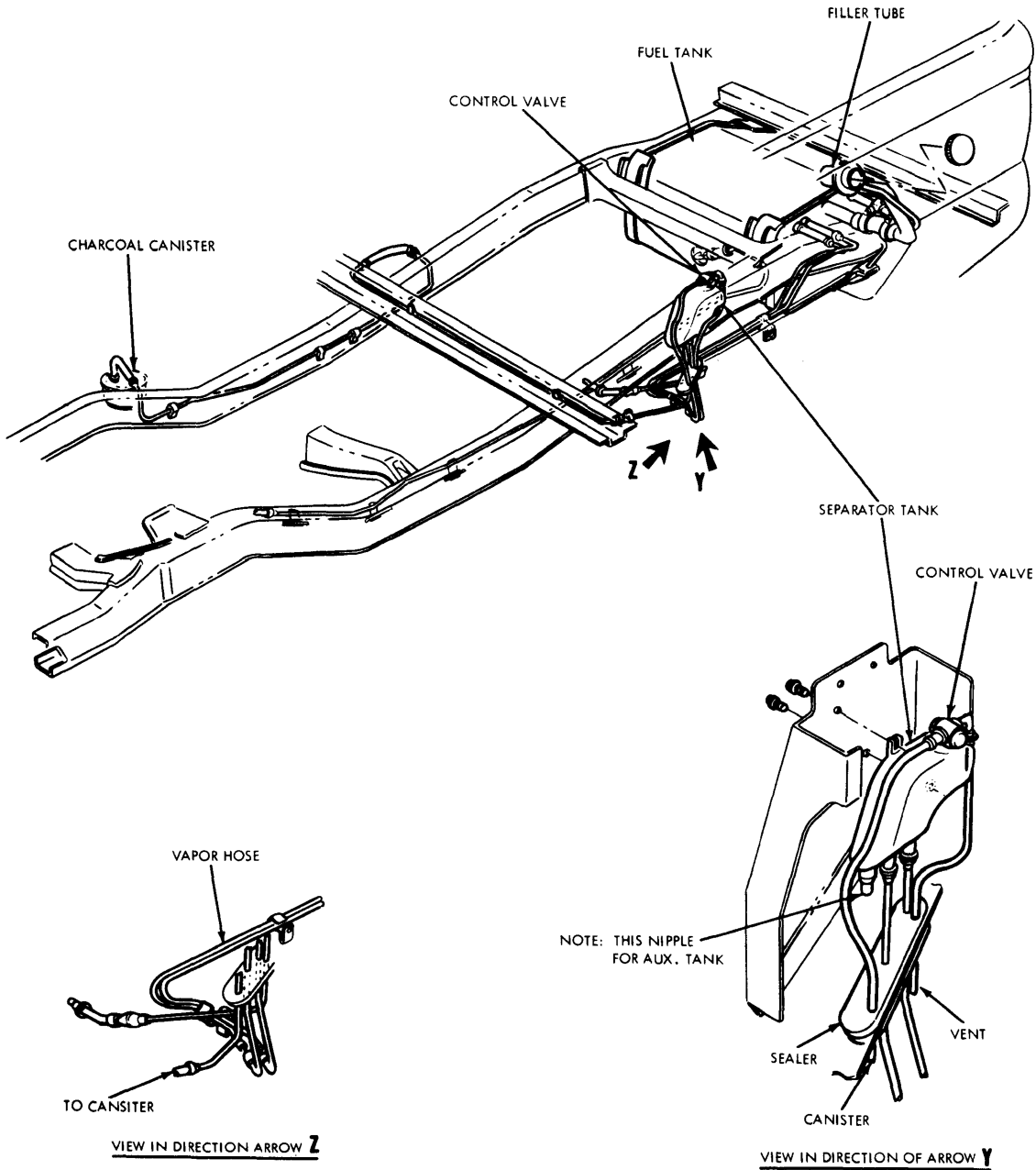
## FORD MOTOR CO. (Cont.)



**ECONOLINE FUEL TANK & LINES**

# Fuel Evaporation Systems

FORD MOTOR CO. (Cont.)



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## BRONCO FUEL TANK & LINES