1980 Fuel Evaporation Systems

PEUGEOT

505
604

DESCRIPTION

The fuel evaporation system used on Peugeot models is designed to prevent fuel vapors from entering the atmosphere. The system used on the 505 consists of a sealed fuel tank cap, relief valve, purge valve, thermovalve, charcoal canister, and connecting hoses. The 604 system includes a sealed filler cap, 2 charcoal canisters, 2 calibrated orifices, a purge valve, electrovalve, thermovalve, and connecting hoses.

OPERATION

505 MODELS

When the engine is off, vapors from the tank are vented through the relief valve to the canister. When the engine is running, but cold, a very small amount of air is drawn through the canister orifice and into the intake manifold. When the engine is warm, vacuum flows through the thermovalve, opens the purge valve, and draws air through the canister. All vapors are drawn into the engine and burned. When the engine is operated at full throttle, vacuum drops and purging stops until the engine load is reduced.

604 MODELS

When the ignition is "OFF" the electrovalve vents the carburetor float bowls to the charcoal canisters. The fuel tank is also vented to the canisters. When the engine is running, but coolant is below 131°F (55°C), the thermovalve cuts off vacuum flow to the purge valve. When the engine warms up, the thermovalve opens. Vacuum opens the purge valve and pulls stored vapors into the intake manifold for burning.

TESTING

NOTE – *Testing information for 505 models is not available from manufacturer.*

604 SYSTEM TESTS

Thermovalve – 1) Connect thermometer to automatic choke heat coolant tube. Disconnect vacuum line at purge valve port A and connect vacuum gauge to line. Disconnect vacuum line at vacuum amplifier port R and plug line.

2) Start engine and warm up. Vacuum gauge should register vacuum when coolant reaches 126-131°F (52-55°C). If not, replace thermovalve. Reconnect all hoses.

Purge Valve – 1) Disconnect hoses from purge valve. Plug control vacuum line. Start engine and blow low pressure air through valve in direction of arrow (toward engine). If air flows through, valve should be replaced.

2) Connect control vacuum line to purge valve. Air blown through toward engine should pass freely. If not, replace valve. Connect all hoses.

Electrovalve – Disconnect wiring plug from electrovalve when ignition is "ON". Movement of plunger in valve should be felt when wiring is reconnected. If not, measure for voltage across connector. If no voltage, repair circuit to ignition switch. If voltage is present, replace electrovalve.

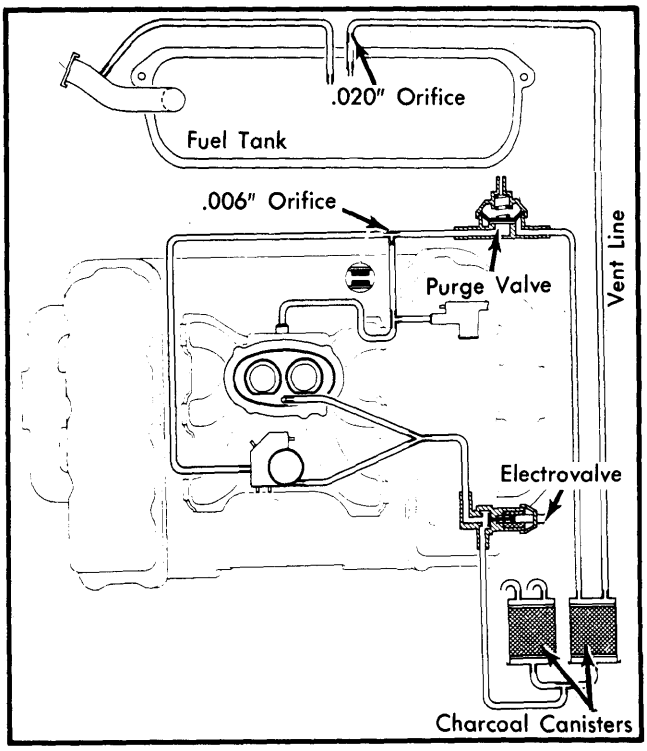

Fig. 2 Peugeot 604 Fuel Evaporation System

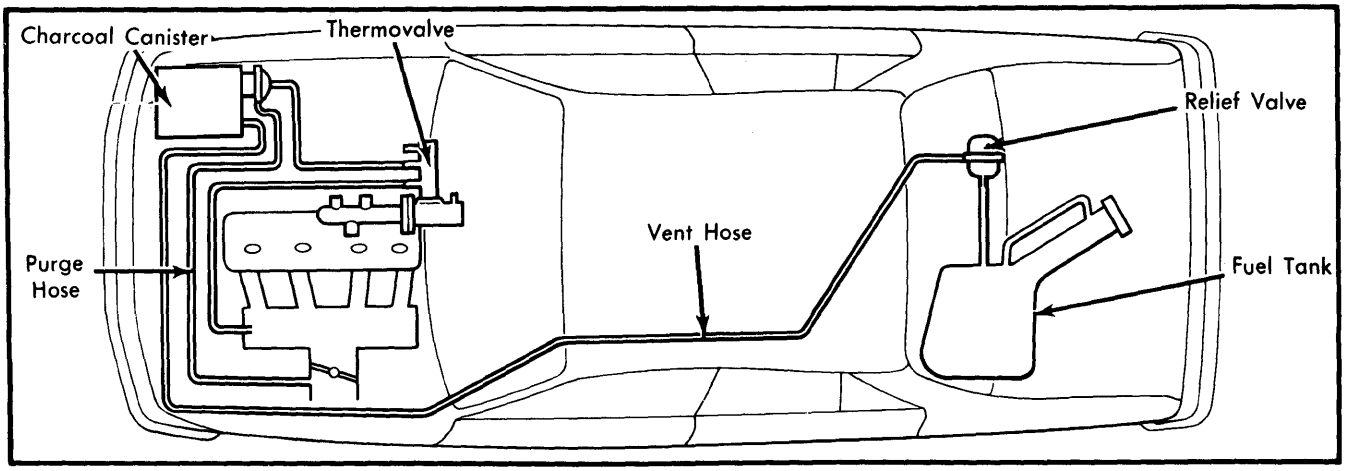

Fig. 1 Peugeot 505 Fuel Evaporation System