1982 Fuel Evaporation Systems

PORSCHE (Cont.)

drawn into intake system where it enters the combustion chamber and is burned.

This action purges the activated charcoal and renews its storage capacity. On air-cooled models fresh air is blown through charcoal canister from blower housing to aid in purging action.

On 944 models, control valves hooked in series regulate canister purging. Control valve 1 is an on/off valve controlled by throttle vacuum and temperature switch. Control valve 2 is a variable valve which regulates amount of canister purging according to intake manifold vacuum. Control valve 1 opens at part throttle with coolant temperatures above 130°F (58°C), and is closed at full throttle and idle, or when coolant temperature is below 130°F (58°C). Control valve 2 is slightly open at light throttle, and fully open at full throttle.

MAINTENANCE

Check entire system for leaks, damage, deterioration, etc. every 15,000 miles.

RENAULT

Fuego, Le Car, 18i

DESCRIPTION

The Fuel Evaporation Control System is designed to prevent fuel vapors from escaping into the atmosphere. The system includes a fuel tank with non-vented cap, a vapor expansion tank with 2-way check valve, a return line with check valve, a charcoal canister with vacuum controlled purge valve, a float bowl vent line with solenoid vent valve (Le Car only) and a purge hose.

OPERATION

LE CAR

When the engine is not running, fuel vapors that expand in the fuel tank pass through the expansion tank, check valves, and into the charcoal canister. Carburetor vapors are also routed to the canister when the engine is stopped or idling. When the throttle is moved off idle, the vent valve solenoid is energized and float bowl is vented to atmosphere.

At low engine loads, a ported vacuum line opens the canister purge valve, and intake manifold vacuum pulls the stored vapors into the air cleaner and intake manifold. When engine load is high or throttle wide open, vapors are routed through the intake manifold primarily.

Fig. 2: Le Car Fuel Evaporation Control System

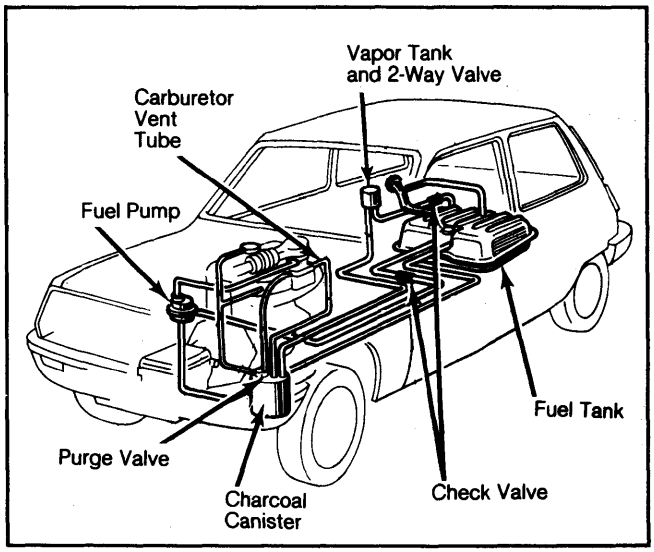
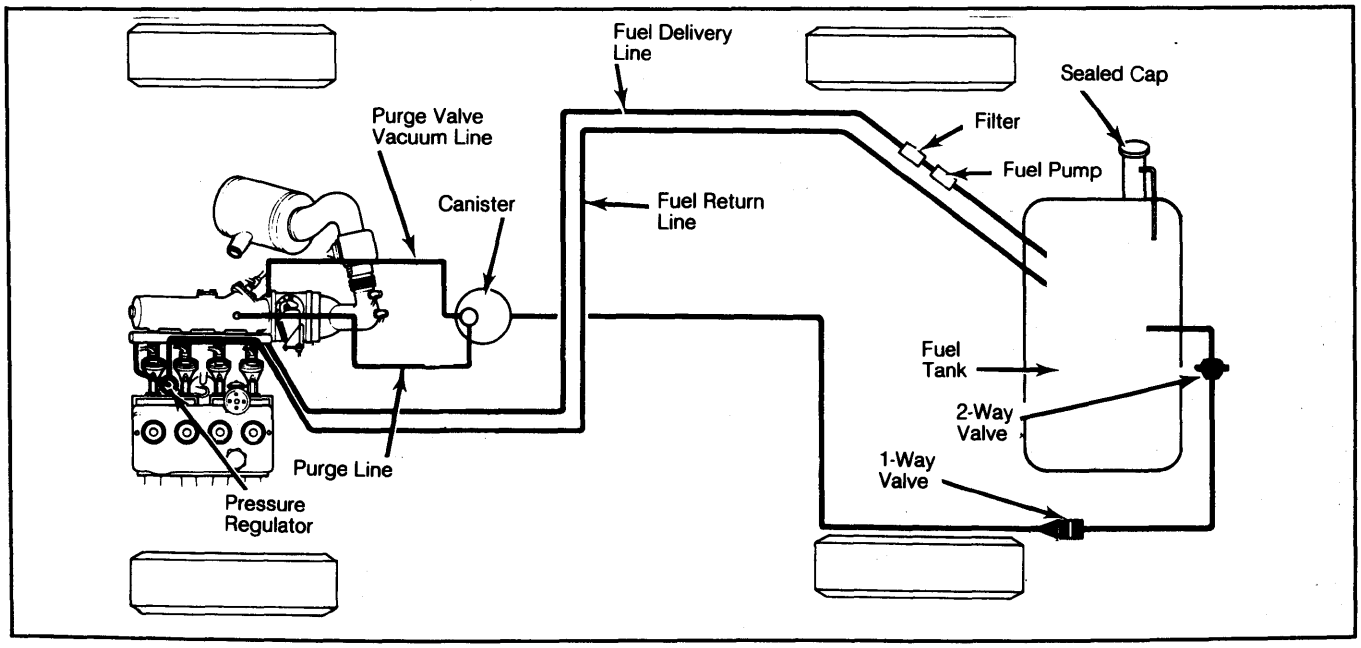


Fig. 1: Fuego & 18i Evaporation Control System



1982 Fuel Evaporation Systems

RENAULT (Cont.)

The check valves in the expansion tank and fuel lines allow replacement air to enter the fuel tank as fuel is removed, and prevent fuel from escaping the tank should the car roll.

When the engine is not running, fuel tank vapors pass through the 2-way and 1-way valves into the canister. When the engine is started and throttle is opened above idle, the purge valve is opened and vapors are drawn into the intake manifold. The check valves in fuel lines allow vent air to enter the tank (to replace fuel being drawn out) and prevent leakage in case of rollover.

MAINTENANCE

The system should be checked every 12,000 miles. The filter located at the air inlet of the charcoal canister should be cleaned at each service.

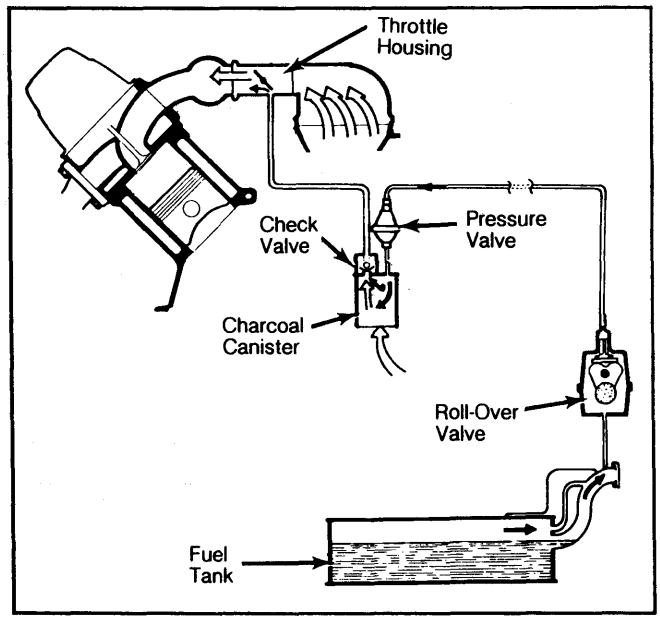
SAAB

900, 900 Turbo

DESCRIPTION

The Saab fuel evaporation system is designed to prevent fuel vapors from reaching atmosphere. System includes a plastic fuel tank, vented filler cap, roll-over valve, pressure valve, charcoal canister and fuel lines.

Fig. 1: Saab Fuel Evaporation Control System



Note direction of flow.

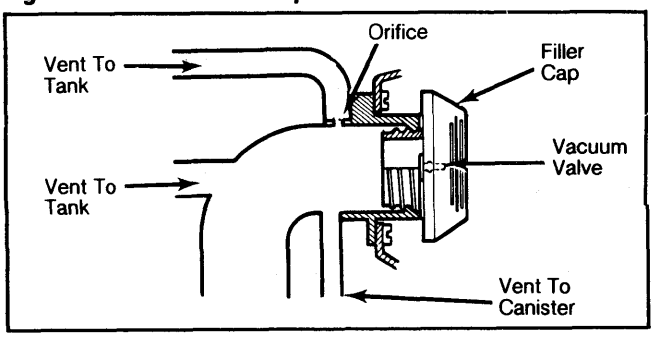
OPERATION

When engine is stopped, fuel vapors from fuel tank flow through vapor line into charcoal canister where they are stored. When engine is running, fresh air drawn through charcoal canister creates a vacuum that pulls the stored fuel vapors into the engine.

A roll-over valve in the fuel evaporation line shuts off line if vehicle turns over. It is located in the line above fuel tank. The pressure valve is located in the left rear pillar and maintains a small pressure in the tank to reduce the amount of vapor the canister must store.

The special filler cap contains a pressure valve to let air into the tank if the vent lines become plugged. This prevents tank collapse or engine fuel starvation.

Fig. 2: Saab Fuel Filler Cap



Note direction of flow.

MAINTENANCE

The system should be checked and the charcoal canister replaced at 60,000 miles.