1982 Fuel Evaporation Systems

PEUGEOT (Cont.)

OPERATION

When engine is off, vapors from tank are vented through relief valve to canister. When engine is running and cold, a small amount of air is drawn through the canister orifice and into the intake manifold. When coolant temperature rises over 104°F (40°C), thermovalve opens and vacuum flows to purge valve, which opens and allows air to be drawn through canister. All vapors are then drawn into the engine and burned. When engine is operated at full throttle, vacuum drops and purging stops until load is reduced.

MAINTENANCE

Check all components for leakage and deterioration. Replace as necessary.

PORSCHE

911SC, 924, 924 Turbo, 928, 944

DESCRIPTION

Porsche fuel evaporation control system is designed to prevent fuel vapors from being emitted into the atmosphere. The system consists of a non-vented fuel tank filler cap, an expansion chamber, an activated charcoal canister, a purge valve, a vent valve, 2 control valves on 944 and a series of vent lines interconnecting components between fuel tank and air cleaner.

On air-cooled models, a pressure line, used to purge the system, is connected between the engine blower assembly and charcoal canister.

OPERATION

Expanded fuel, caused by high ambient temperatures, is collected in the expansion tank. This fuel is returned to main tank by venting action as fuel is used from main tank.

Fig. 1: Porsche 924 & 924 Turbo Fuel Evaporation System

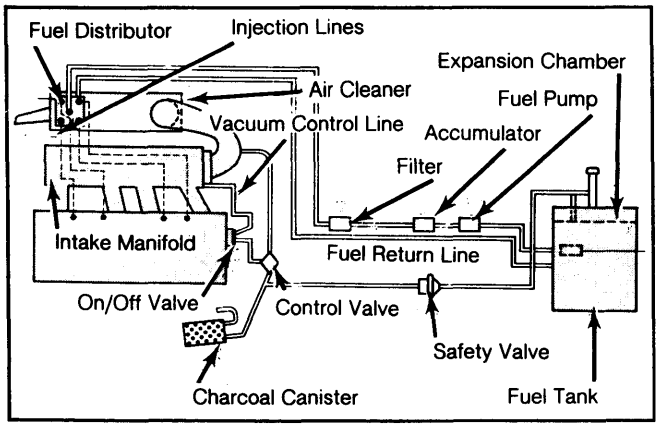


Fig. 2: Porsche 911SC Fuel Evaporation System

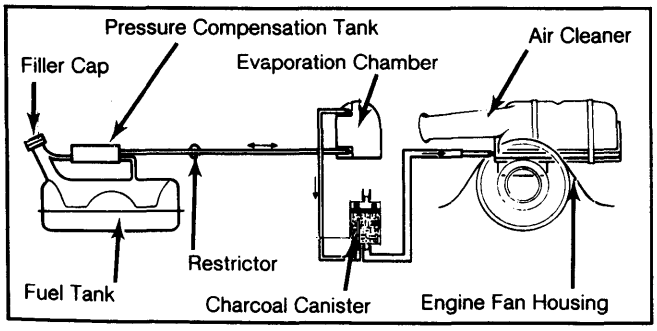


Fig. 3: Porsche 928 Fuel Evaporation System

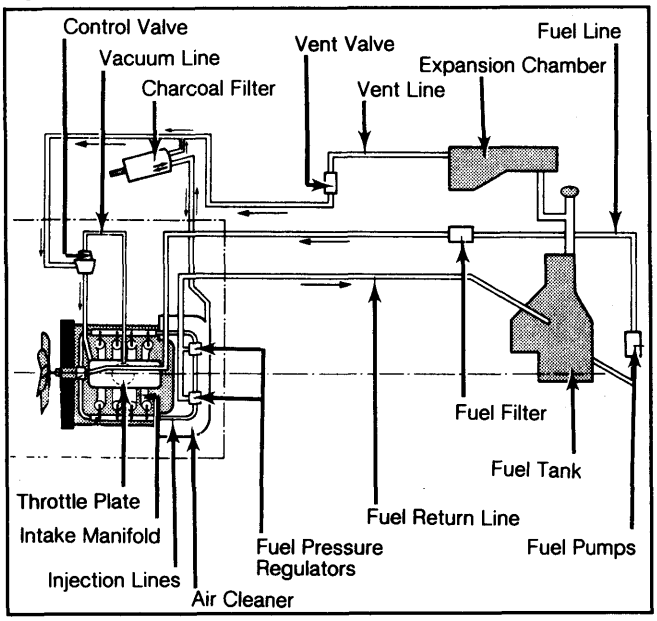
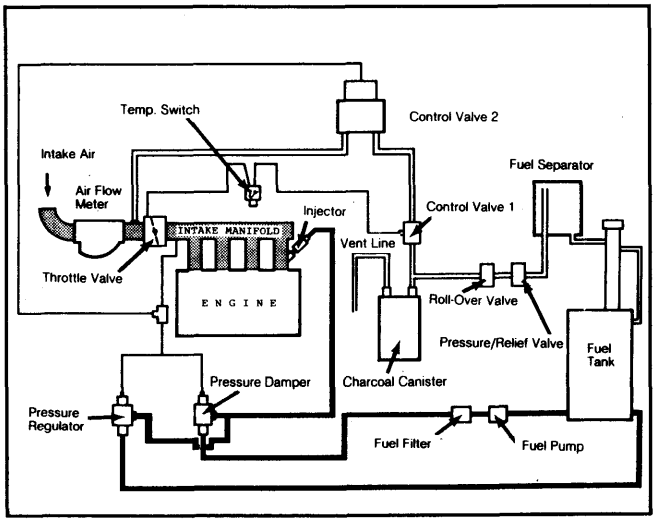


Fig. 4: Porsche 944 Fuel Evaporation System



Fuel vapors produced in main tank pass through a vent line to a carbon canister where they are stored in the activated charcoal in the canister. A second vent line connects canister to air cleaner. When engine is running, intake vacuum draws fresh air through carbon canister. This fresh air mixes with fuel vapors and is

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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

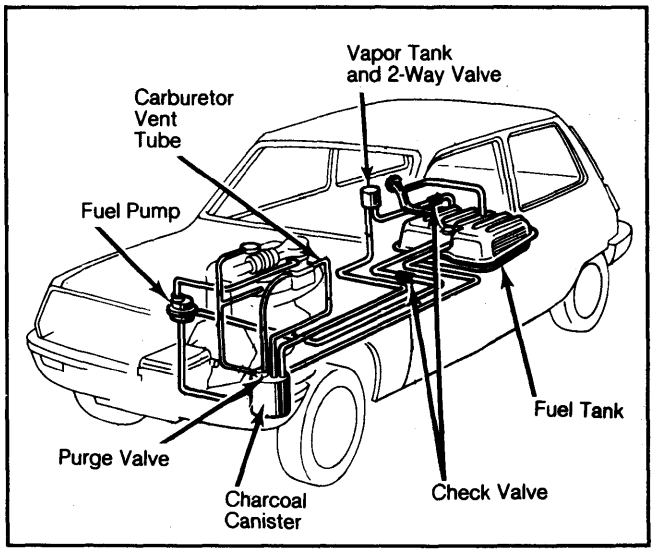

Fig. 1: Fuego & 18i Evaporation Control System