

RENAULT EXHAUST GAS RECIRCULATION

Le Car

DESCRIPTION

The exhaust gas recirculation system is designed to control formation of NO_x emissions. This is done by reintroducing some exhaust gas back into the combustion chamber. The exhaust gases are lower in temperature than the combustion flame. By reducing combustion chamber temperatures, NO_x formation is reduced.

The system on Federal vehicles includes an EGR valve, coolant switch, choke switch, gearbox switch, and an EGR vacuum solenoid. California vehicles use an EGR valve and thermal vacuum valve.

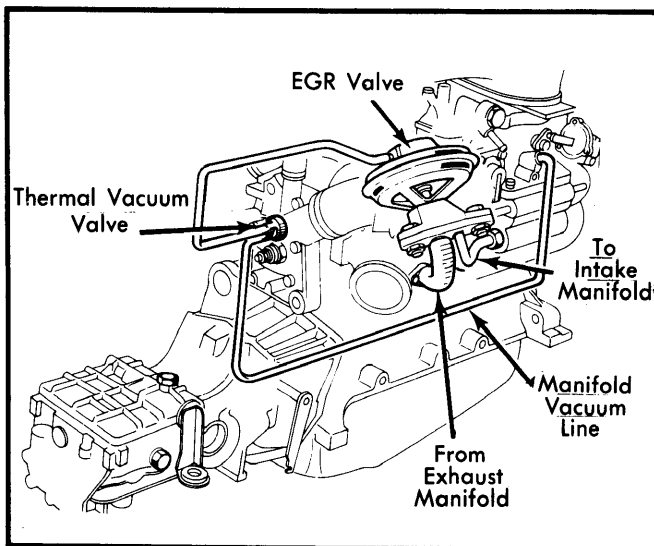


Fig. 1 Le Car EGR System (California Models)

OPERATION

FEDERAL VEHICLES

The Federal EGR system is operated normally by carburetor ported vacuum. It functions at any engine temperature when

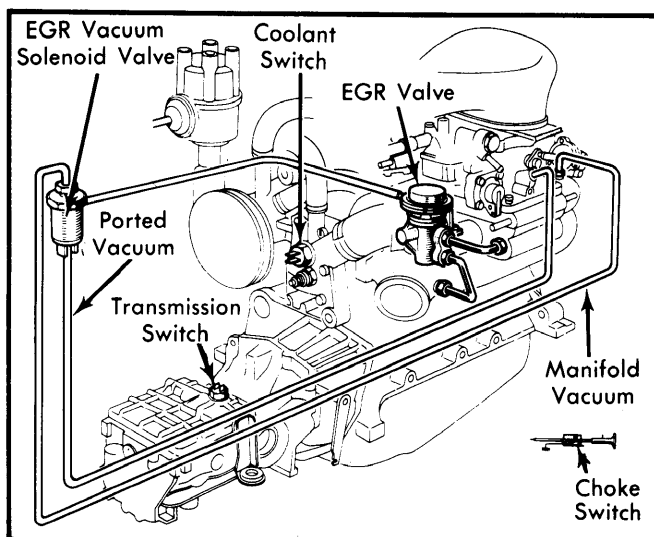


Fig. 2 Le Car EGR System (Federal Models)

the throttle is above idle. However, the system has an overheat mode that operates when coolant is above 113° F (45° C), gearbox is in neutral and choke knob is out. Under these conditions, the solenoid valve is energized and full manifold vacuum is applied to the EGR valve. This full EGR operation prevents overheating.

EGR VALVE

The California EGR system has a thermal vacuum valve that allows vacuum to reach the EGR valve when coolant temperature is over 113° F (45° C). Below the specified temperature there is no EGR.

CALIFORNIA VEHICLES

The back-pressure controlled EGR valve operates only when exhaust pressure is high enough to close a vacuum bleed port. Manifold vacuum then pulls the valve open, allowing exhaust gases to enter the intake manifold. When exhaust back pressure drops, the bleed port is opened, intake vacuum bleeds off, and the valve closes.

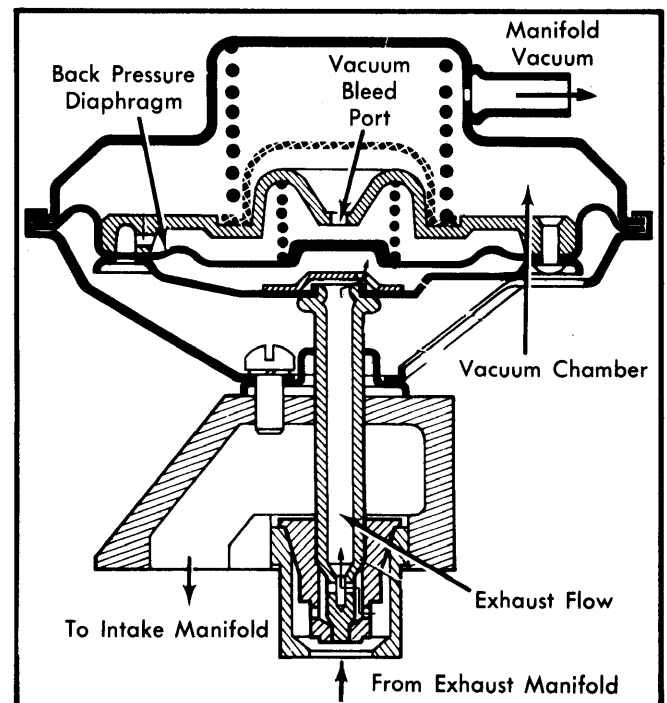


Fig. 3 Le Car Back Pressure EGR Valve

TESTING

Warm engine to normal operating temperature. Accelerate engine while watching valve stem through open area at bottom of valve. Stem movement indicates the valve is operating.

MAINTENANCE

The EGR system must be cleaned and inspected every 12,000 miles. Remove valve and clean off exhaust deposits. Check condition of hoses and connections.