

RENAULT AIR INJECTION SYSTEM

Le Car

DESCRIPTION

The air injection system injects fresh air into the exhaust manifold to help complete combustion. The additional oxygen enables the exhaust gases to burn more completely and lower emissions. The system includes an air filter, air pump, relief/diverter valve, air shut-off valve, check valve, and air injection manifold.

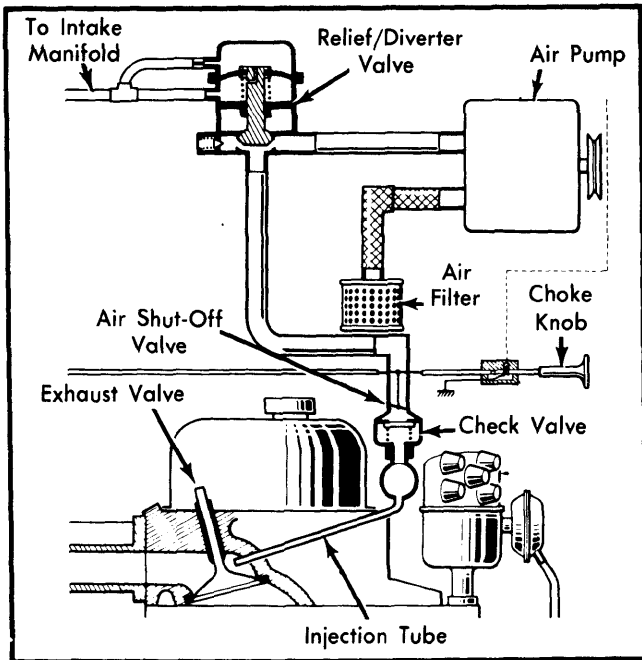


Fig. 1 Le Car Air Injection System

OPERATION

RELIEF/DIVERTER VALVE

The relief valve maintains a constant air pump pressure of 3.85-5.7 psi (.27-.40 kg/cm²). Excess pressure is vented to atmosphere. The diverter valve switches air injection from the exhaust manifold to atmosphere during deceleration. This

reduces backfiring. When intake manifold vacuum rises above 8 in. (200 mm) Hg, the diverter valve closes and diverts air pressure. A calibrated air bleed in the valve gradually opens the valve and restores air injection.

CHECK VALVE

This is a one-way flow control device. It protects the system against backpressure and against backfire flame from reaching the air pump.

AIR SHUT-OFF VALVE

This device is set by the position of the choke knob. It is open when the choke knob is in and closed when the choke knob is out. During cold engine operation, when choke is out, it will prevent air pump air from reaching the exhaust ports.

TESTING

SYSTEM AIR PRESSURE

- 1) With engine running at normal operating temperature and at 3000 RPM, detach hose from outlet side of diverter valve.
- 2) Connect a pressure gauge to diverter valve outlet port and note reading.
- 3) Pressure should be between 3.85-5.7 psi (.27-.40 kg/cm²). If lower, check air filter, drive belt, or pump. If higher, relief valve may not be operating properly.

CHECK VALVE

- 1) Remove check valve from system.
- 2) Blow through valve in direction of air pump air flow. It should flow freely.
- 3) Turn valve around and blow through opposite side. No air should go through.
- 4) If valve acts in any other way, replace it.