1974-79 EXHAUST EMISSION SYSTEMS
Renault Air Injection System

1979 R-5

NOTE: For 1974-78 models, see AIR INJECTION SYSTEMS article in this section.

DESCRIPTION

The air injection system is designed to lower exhaust emissions by creating an afterburning of exhaust gases in the exhaust system. This is done by injecting fresh air into the exhaust ports. Systems consist of air intake filter, air pump, relief valve, diverter valve, deceleration valve, check valve and air shut-off valve (if equipped).

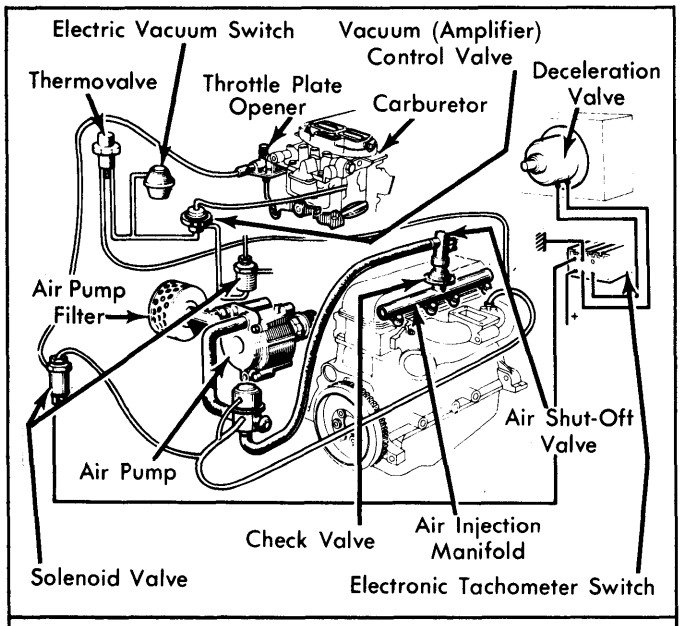

Fig. 1: R-5 Air Injection System

OPERATION

RELIEF VALVE

The relief valve is part of the relief/diverter valve assembly. The purpose of the relief valve is to vent air pump air to the atmosphere when there is too much system pressure.

DIVERTER VALVE

The diverter valve is also used as a venting device. It is responsive to vacuum levels from the intake manifold. This valve is part of the relief/diverter valve assembly. When sudden high manifold vacuum levels are detected by the diverter valve (such as during deceleration), the diverter valve will "dump" air pump air to the atmosphere.

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.

DECELERATION VALVE

This device operates in conjunction with a throttle plate opener to keep the throttle blades slightly open during deceleration. This prevents backfire and high emissions due to an overly rich mixture.

TESTING

SYSTEM AIR PRESSURE

1) With engine running at normal operating temperature and at 3000 RPM, detach hose from outlet side of diverter valve. Connect a pressure gauge to diverter valve outlet port and note reading.
2) It should be approximately 4.3 psi (.30 kg/cm²). If below this pressure, check air filter, air pump, and/or drive belt. If above this pressure, relief valve may not be opening.

CHECK VALVE

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