

1974-79 EXHAUST EMISSION SYSTEMS

Renault Vacuum Advance/Retard Systems

3-383

All Models

DESCRIPTION

The vacuum advance system operates in response to engine coolant temperature and transmission gear position to activate the vacuum advance mechanism. System consists of a solenoid valve, vacuum (amplifier) control valve, transmission switch, thermal switch, and calibrated orifice, all common to the EGR system.

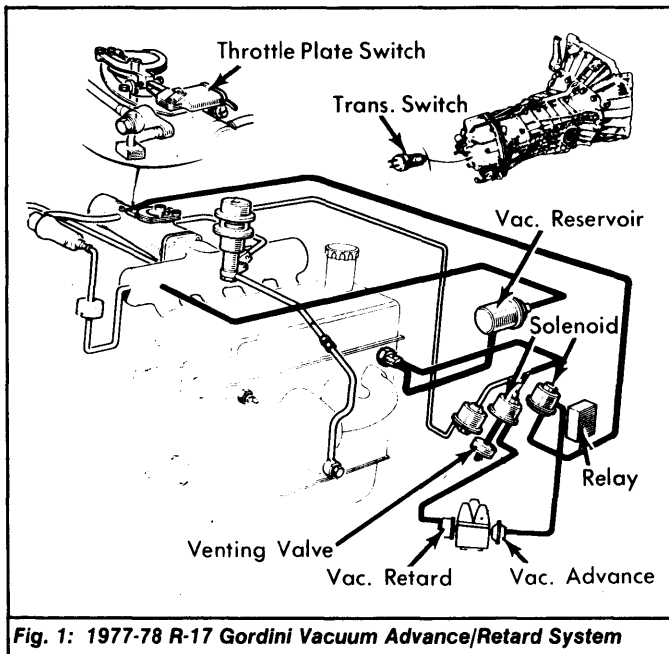
The 1977-78 R-17 Gordini vacuum advance/retard system is used to control the application of distributor vacuum advance and retard under varying engine operating modes. System consists of a distributor with vacuum advance/retard units, throttle plate switch, vacuum reservoir, solenoid switches, relay, and thermal switch and vacuum venting valve.

OPERATION

VACUUM ADVANCE/RETARD SYSTEM

When coolant temperature is above 113°F (45°C), solenoid valve on retard side of distributor is activated by intake manifold vacuum. See Fig. 1. Vacuum from vacuum reservoir acts on retard diaphragm, pulling breaker plate spindle and retarding ignition timing.

During cold engine operation, or when 5th gear is selected, the solenoid valve on the advance side of the distributor allows vacuum to pass. This pulls the advance diaphragm forward which moves the breaker plate to advance ignition timing.



VACUUM ADVANCE SYSTEM

When engine coolant temperature is less than 113°F (45°C), No. 1 and No. 2 outlets of the thermal switch are connected. Intake manifold vacuum then flows to the distributor vacuum advance unit. Applying vacuum advance helps cold engine driveability and cold engine emissions.

After coolant reaches 113°F (45°C), No. 2 and No. 3 outlets of the thermal switch are connected. Vacuum then flows through the solenoid valve (vacuum control valve on California models), to the advance mechanism, according to transmission gear position. Only when 4th gear is selected, will the transmission switch activate the solenoid to apply vacuum to the vacuum advance unit.

On California models, a Blue and White delay valve, slowly releases vacuum inside vacuum advance unit. Vacuum between distributor and thermal switch goes to atmosphere through a calibrated orifice. See Fig. 2.

