

# 1974-79 EXHAUST EMISSION SYSTEMS

## Chrysler Corp. Mixture Control Valve

### 1977-79 Models

### DESCRIPTION

The Mixture Control Valve (MCV) is a deceleration device used to decrease intake manifold vacuum during deceleration. During deceleration, the MCV supplies additional air into intake manifold, decreasing HC emissions. A thermo valve may be incorporated into system to override the mixture control valve during cold engine start-up. The mixture control valve is located on carburetor or intake manifold.

### OPERATION

#### MIXTURE CONTROL VALVE

At constant speed, an orifice for MCV maintains balanced vacuum in spring chamber and vacuum reservoir. Valve is held closed by spring force. When throttle suddenly closes, high intake manifold vacuum, acting on spring pressure forces diaphragm open and extra air reaches intake manifold through special passage. Valve gradually closes from pressure equalization between spring chamber and reservoir.

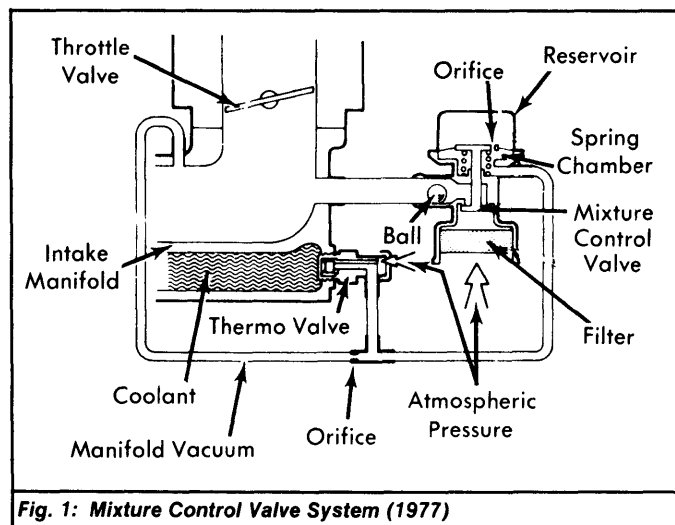


Fig. 1: Mixture Control Valve System (1977)

#### THERMO VALVE

When coolant temperature is below a pre-set value, the thermo valve is opened and permits atmospheric pressure to tap into intake manifold vacuum, causing mixture control valve to work ineffectively. This prevents driveability problems during cold engine start-up. When coolant temperature rises above a pre-set temperature, the thermo valve closes and activates the mixture control valve.

#### CHECK VALVE

A check valve is included inside PCV. It permits the system to respond to lower reservoir vacuum instantly and cut-off air flow to intake manifold, when normal engine operation resumes. This prevents excessively lean mixtures from occurring when cruising after deceleration.

### TESTING

**1977 Models** - 1) With engine coolant temperature below 68°F (20°C), start engine and allow it to idle. Disconnect Red stripe vacuum hose from mixture control valve.

2) Place hand under mixture control valve and reconnect vacuum hose. See Fig. 3. No suction should be felt. If suction is felt, thermo valve or mixture control valve is defective and should be replaced.

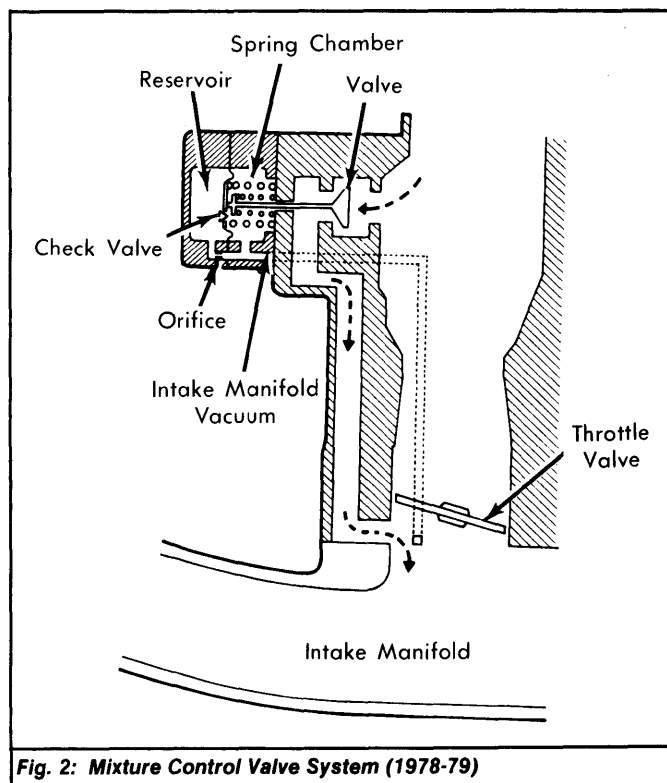


Fig. 2: Mixture Control Valve System (1978-79)

3) With engine coolant temperature above 68°F (20°C), disconnect vacuum hose from mixture control valve. Place hand under mixture control valve and reconnect vacuum hose.

4) A strong suction should be felt. If no suction is felt, thermo valve or mixture control valve is defective and should be replaced.

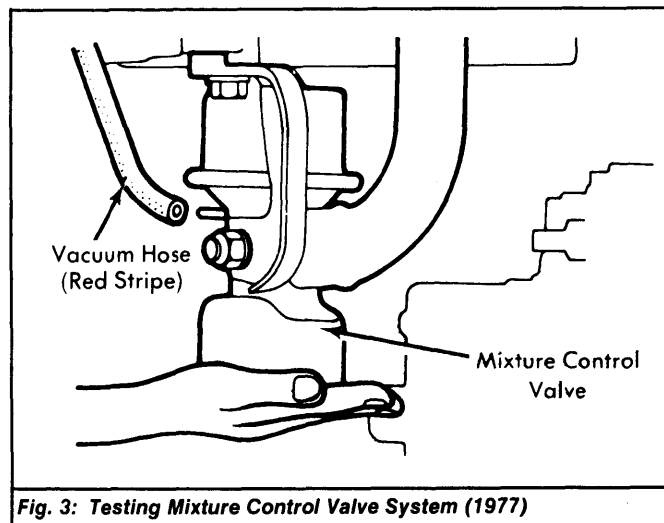


Fig. 3: Testing Mixture Control Valve System (1977)

**1978-79 Models** - 1) With engine at idle, valve must be in closed position. If it is not, lean mixture and rough idle will result. If MCV displays rough idle, it cannot be repaired. Replace MCV.

2) Increase engine speed rapidly from idle to 2500 RPM, then release. Valve should open. If not, clogged vacuum passage, broken diaphragm or defective valve may be the problem. Replace MCV.