1975-79 EXHAUST EMISSION SYSTEMS
Chrysler Corp. Aspirator Air System

1977-79 Chrysler Corp.

DESCRIPTION & OPERATION

All Federal engines are equipped with the Aspirator Air Valve System, instead of the air pump type of injection system. The aspirator air valve utilizes exhaust pressure pulsation to draw air into the exhaust system, thereby reducing carbon monoxide and hydrocarbon emissions.

It draws fresh air from the "clean" side of the air cleaner past a one-way spring-loaded diaphragm (made of high-temperature rubber). The diaphragm opens to allow fresh air to mix with the exhaust gases during engine vacuum modes which occur in the exhaust ports and manifold passages. If the pressure is positive, the diaphragm closes and no exhaust gas is allowed to flow past the valve and into the air cleaner. *See Fig. 1.*

The aspirator valve works most efficiently at idle and slightly off-idle, where negative (vacuum) pulses are at maximum. At higher engine speeds, the aspirator valve remains closed.

NOTE: Do not confuse the aspirator valve with the air injection check valves.

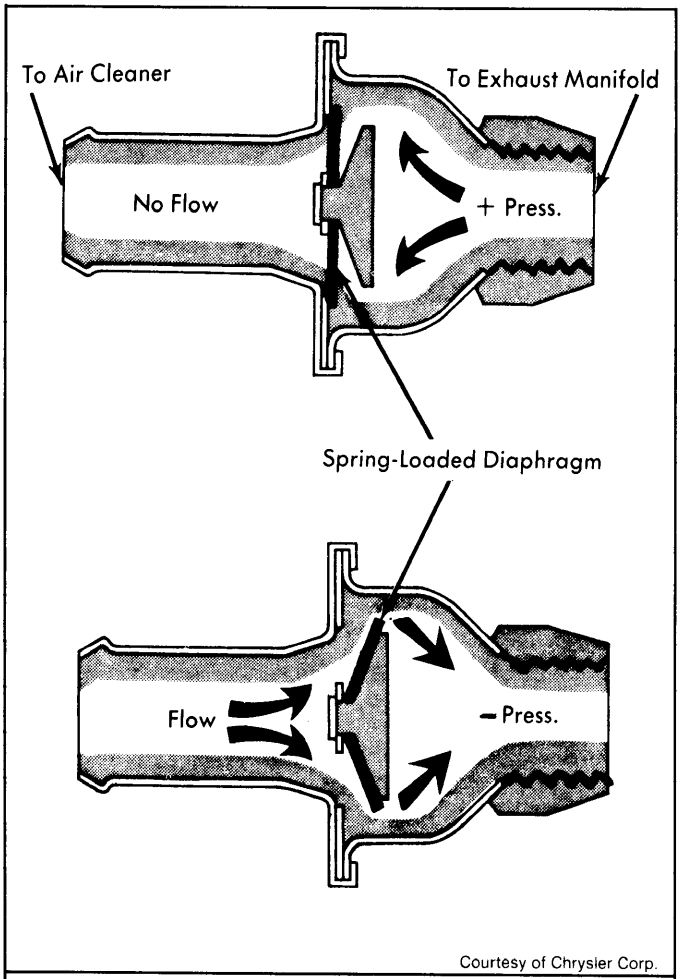

Fig. 1: Section View of Aspirator Air Valve

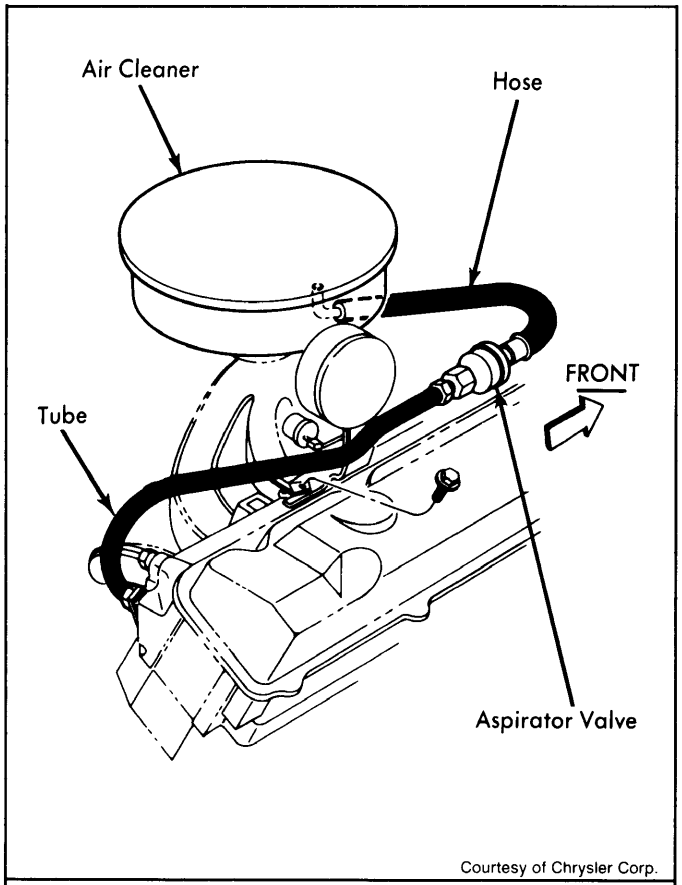

Fig. 2: Illustration of Aspirator Valve Typical Location

SERVICING & TESTING

1) Aspirator valve is not repairable. Valve failure results in excessive exhaust system noise underhood at idle and hardening of the rubber hose from the valve to the air cleaner.

2) If there is excessive exhaust noise under the hood, first check the aspirator tube/exhaust manifold assembly joint and all hose connections at aspirator valve and air cleaner. *See Fig. 2.*

3) If joint at manifold is leaking, disconnect it and replace the gasket. If either hose connection is leaking and the hose has not yet hardened, install hose clamps.

4) To determine if aspirator valve has failed, disconnect hose from aspirator inlet. With engine at idle in Neutral, the vacuum pulses can be felt at the aspirator inlet. If hot exhaust gases are escaping from the aspirator inlet, the valve has failed and must be replaced.