CHRYSLER CORP. ASPIRATOR AIR SYSTEM

DESCRIPTION

The aspirator air system consists of an aspirator valve and an aspirator tube assembly. The valve uses exhaust pressure pulsation to draw air into the exhaust system to reduce carbon monoxide (CO), and hydrocarbon (HC) emissions. The tube assembly connects the aspirator valve to the air cleaner at one end, and the exhaust manifold at the other end.

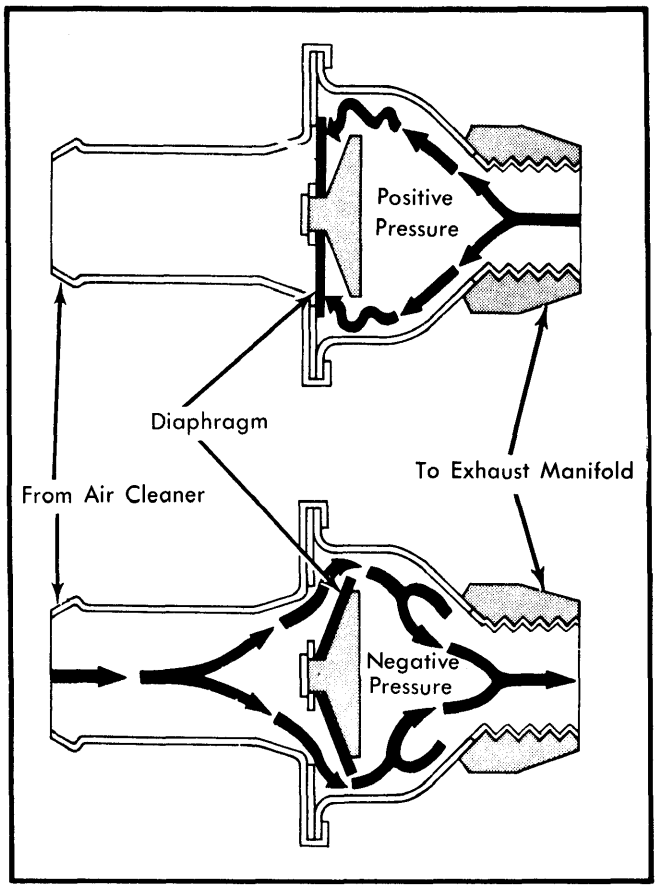

Fig. 1 Aspirator Valve Air Flow

OPERATION

The aspirator valve draws fresh air from the "clean" side of the air cleaner past a one-way, spring loaded diaphragm made of rubber. The diaphragm opens to allow fresh air to mix with the exhaust gases during negative pressure (vacuum) pulses which occur at 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 "clean" side of the air cleaner. The valve works best at idle and slightly off-idle, when the negative pulses are at maximum. At higher engine speeds the valve remains closed.

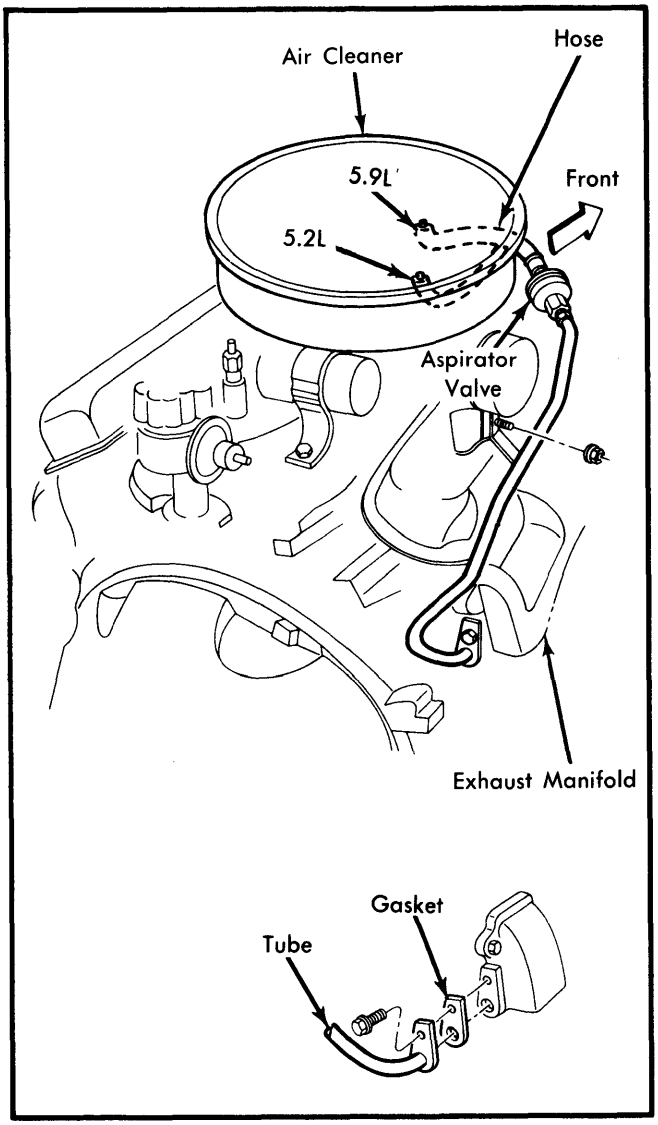

Fig. 2 Aspirator Air System Assembly (V8 Shown – 6-Cylinder Similar)

TESTING

The aspirator valve is not repairable. If the valve fails, it must be replaced. Check all connections for proper assembly. If leakage is noted at any joints, repair before testing valve.

To test aspirator valve, disconnect hose from aspirator inlet. With engine idling in neutral, vacuum exhaust pulses should be felt at the aspirator inlet. If hot exhaust gas is escaping from the inlet, the valve is defective and must be replaced.