

point when a vacuum signal is applied to the valve is cause for replacement.

Removal

- (1) Remove air and vacuum hoses from the switching valve.
- (2) Remove two screws securing switching valve to mounting flange and remove valve.
- (3) Remove gasket material from switching valve and mounting flange.

Installation

- (1) Position new gasket on mounting flange.
- (2) Position switching valve on mounting flange and secure with two screws. Tighten to 95 inch-pounds.
- (3) Reinstall air and vacuum hoses to switching valve.

CHECK VALVE (Injection tube assembly)

The check valve is not repairable and if necessary, should be replaced with a new check valve. To determine if the valve has failed, remove the air hose from check valve inlet tube. If exhaust gas escapes from inlet tube, valve has failed and must be replaced. If exhaust manifold injection tube assembly joint is leaking, remove injection tube assembly and replace gasket material. If tube nut joint is leaking retorque to 25-35 ft.-lbs.

Check Valve

Removal

- (1) Release clamp and disconnect air hose from check valve inlet.

- (2) Remove screws or tube nut securing injection tube to exhaust manifolds or exhaust pipe.
- (3) Remove the injection tube assembly from engine.
- (4) Remove gasket material from exhaust manifold and injection tube flanges.

Installation

- (1) Install new gaskets on exhaust manifold flanges and install injection tube assembly. Tighten flange mounting and injection tube bracket screws to 200 inch-pounds. On tube nut joint assemblies, install tube nut and tighten to 25-35 ft. lbs.
- (2) Connect air hose to check valve inlet and secure with clamp.

POWER HEAT CONTROL VALVE

The purpose of this valve is to increase the flow of hot exhaust gases through the left-hand exhaust manifold which rapidly brings the mini-catalyst up to operating temperature. Remove the vacuum line from the power heat valve and apply 6" Hg. of vacuum to the valve. The valve should be fully closed. If not, replace the valve.

Removal

- (1) Disconnect exhaust pipe at exhaust manifold.
- (2) Disconnect vacuum line from power heat valve and remove valve assembly.

Installation

- (1) Place power heat valve in position and connect exhaust pipe to valve and exhaust manifold.
- (2) Connect vacuum line to valve.

ASPIRATOR AIR SYSTEM

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GENERAL INFORMATION

All 1977 model standard type Federal and Canadian engines equipped with catalyst (except the 225 and 360-4BBL CID engines with high altitude calibration) have an aspirator valve. This valve utilizes exhaust pressure pulsation to draw air into the exhaust system, reducing carbon monoxide (CO) and to a lesser degree hydrocarbon (HC) 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 negative pressure (vacuum) pulses which occur in the exhaust ports and manifold passages (Fig. 1, View A). If the pressure is positive, the diaphragm closes, and no exhaust gas is