FIESTA EXHAUST GAS RECIRCULATION (EGR) SYSTEM

Fiesta

DESCRIPTION

The exhaust gas recirculation system is designed to introduce small amounts of exhaust gas back into the combustion cycle. The purpose for this is to help reduce the buildup of NOx emissions. Exhaust gas serves to lower high heat conditions in the combustion cycle which are part of the cause of NOx formation. System consists of an EGR valve which is mounted directly on the intake manifold (*Fig. 1*) a stainless steel tube from exhaust manifold, a ported vacuum switch, and a connection to the EGR spark port on the carburetor.

OPERATION

Above a predetermined vacuum level, the exhaust gas recirculation (EGR) valve is opened. Exhaust gas is allowed to flow from the exhaust gas passages through a stainless steel tube and into the passages in the intake manifold. At lower vacuum levels, no recirculation takes place, since the valve is closed and gas cannot reach the intake manifold.

TESTING

1) Visually examine EGR valve, vacuum hose and stainless steel tube for obvious physical damage. Replace as necessary.

2) Detach vacuum hose from EGR spark port (with engine off and cold). Apply external vacuum. EGR valve stem should not move. If it does, replace the ported vacuum switch, as switch should be closed and not allow the passage of vacuum to the valve.

3) Start engine and warm to normal operating temperature, then apply vacuum again to end of hose at EGR port. EGR valve should open. If not, replace PVS.

4) If system acts as though it is plugged, check lines and connections. Remove EGR valve and check for extensive carbon deposits on valve stem. If these can be easily knocked off, do so. If valve requires a lot of cleaning, replace the valve.

NOTE – *Do not dip valve in solvent.*

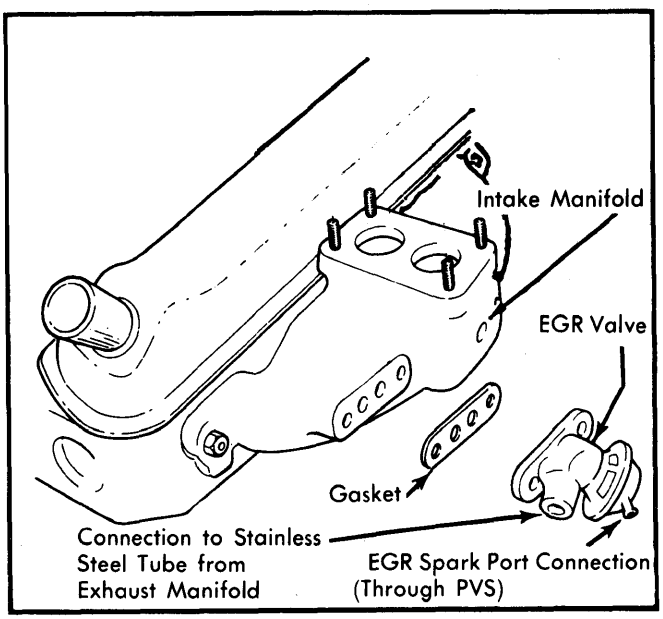

Fig. 1 Illustration of EGR Valve Mounting

5) With engine running at normal operating temperature, slowly open and close throttle, watching for movement of EGR valve stem. If stem does not move, set engine at 2000-2500 RPM. Remove vacuum hose from EGR valve and pinch closed. Engine speed should increase noticeably.

6) If EGR system still does not respond, return to idle. Remove and plug EGR vacuum hose. Connect another hose between EGR valve and manifold vacuum source. If engine idle drops and becomes rough, replace EGR valve.

7) Remove EGR gas supply tube. Plug openings at EGR and exhaust manifold. Remove and plug vacuum hose. With engine at normal operating temperature, idle should be smooth and normal. If not, check for leaks at EGR spacer or gaskets, carburetor gaskets. Repair or replace as necessary.