1974-79 EXHAUST EMISSION SYSTEMS
Jaguar Fuel Evaporation

All Models

DESCRIPTION

System is designed to prevent fuel vapors from entering the atmosphere. System consists of a modified fuel tank, vapor separators, carbon canister, and a series of vent lines. On 6-cylinder models, carbon canister is vented to crankcase purge line. On V12 models, canister is vented at throttle edge of intake manifold throttle bodies.

OPERATION

When engine is stopped, fuel vapors formed in the fuel tank pass through a vent line to a carbon canister. The carbon canister, located in the engine compartment, is filled with activated charcoal which absorbs the fuel vapors.

When the engine is running, intake manifold vacuum draws fuel vapors from carbon canister. These vapors enter crankcase ventilation system purge hose (6-cylinder models) or intake manifold (V12 models) and are drawn into combustion system where they are burned. This action purges the activated charcoal and renews its storage capacity.

ANTI-RUN-ON VALVE

1978 XJ6 Models - Valve is located in carbon canister vent line. Valve prevents engine dieseling after ignition is switched off by closing canister vent and simultaneously allows a slight vacuum to top of carburetor float bowl. This vacuum equals vacuum already present in low mixture needle. When ignition is switched off, voltage is applied to valve solenoid until oil pressure drops to zero at which time oil pressure switch breaks circuit and valve solenoid is de-energized.

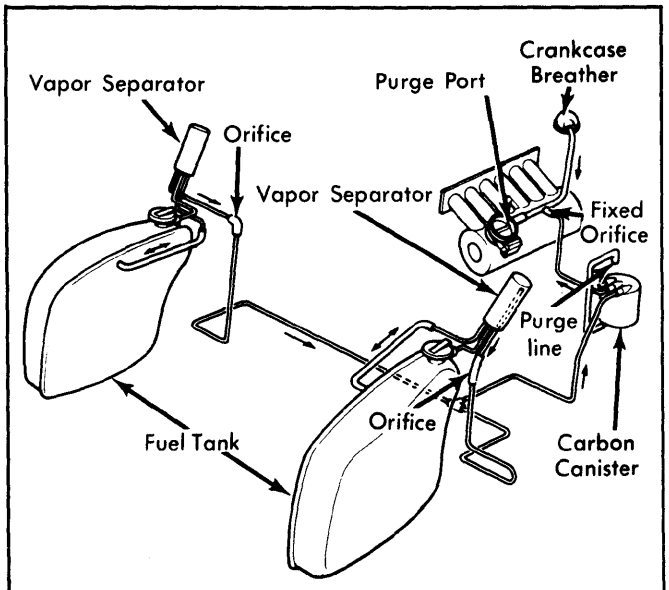

Fig. 1: Fuel Evaporation System (XJ6)

OVERRUN VALVE

V12 Models - One valve located in each intake manifold. Valves are used to limit manifold vacuum. This maintains proper air/fuel ratio under all conditions and prevents engine dieseling after ignition is switched off.

VAPOR SEPARATORS

Vapor separators are located in rear window pillars. Raw fuel and vapors are separated and liquid fuel is allowed to drain back into fuel tank while vapors flow on to carbon canister.

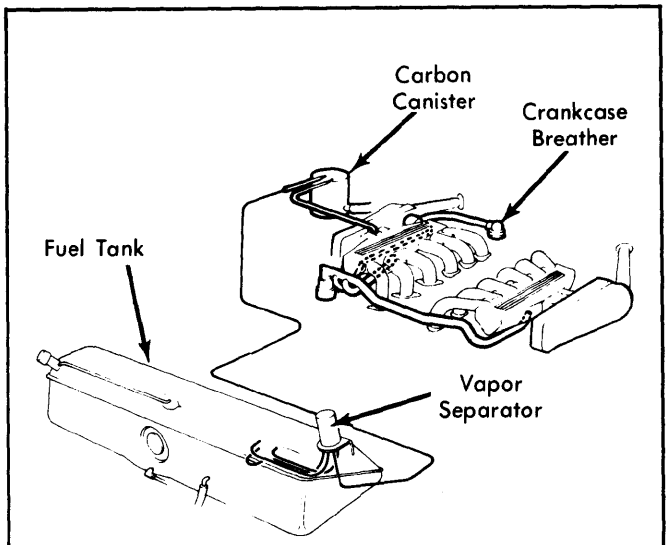

Fig. 2: Fuel Evaporation System (XJS)

MAINTENANCE

Every 6000 miles or 6 months, check all components for leakage or deterioration. Every 12,000 miles or 12 months, replace all carburetor filter elements, fuel line filter, and check all components for leakage or deterioration. Every 50,000 miles, replace carbon canister.