1974-79 EXHAUST EMISSION SYSTEMS
Austin & MG Fuel Evaporation

All Models

DESCRIPTION

The fuel evaporation system is a completely sealed system and is designed to prevent fuel vapors from entering atmosphere. System consists of a modified fuel tank, vapor separator, carbon canisters, sealed filler cap, and an anti-run on control valve.

FUEL TANK

MG Models - Fuel tank is fitted with an internal capacity limiting tank which provides an air chamber within tank to ensure space for fuel expansion when tank is completely full. Limiting tank is open at bottom and has a control bleed at top which prevents it from being completely filled when main tank is filled. Main fuel tank is vented by a line extending to a low point in the separation tank.

Austin Marina - Fuel tank is fitted with two capacity limiting tubes extending from filler neck to main portion of tank. These tubes ensure that sufficient space is available for fuel displaced due to high ambient temperatures. An air lock is created in filler tube to prevent tank from being completely filled.

FUEL LINE FILTER

An in-line fuel filter, if equipped, is installed in main fuel line as a safeguard to prevent foreign material causing float level to be exceeded.

MIXTURE TEMPERATURE COMPENSATOR

Mixture temperature compensator consists of a temperature sensitive valve controlling an air by-pass, extending from the air cleaner to the controlled vacuum area in the carburetor. Under conditions where fuel is at a high temperature (prolonged idling in high ambient temperatures), valve will open to supply additional air which will lean out the mixture enriched by fuel vapors from evaporative loss control system and increased fuel flow due to high fuel temperature.

VAPOR SEPARATOR

Located in vent line between fuel tank and primary carbon canister. Vapor separator prevents liquid fuel from flowing through vent line and into carbon canister.

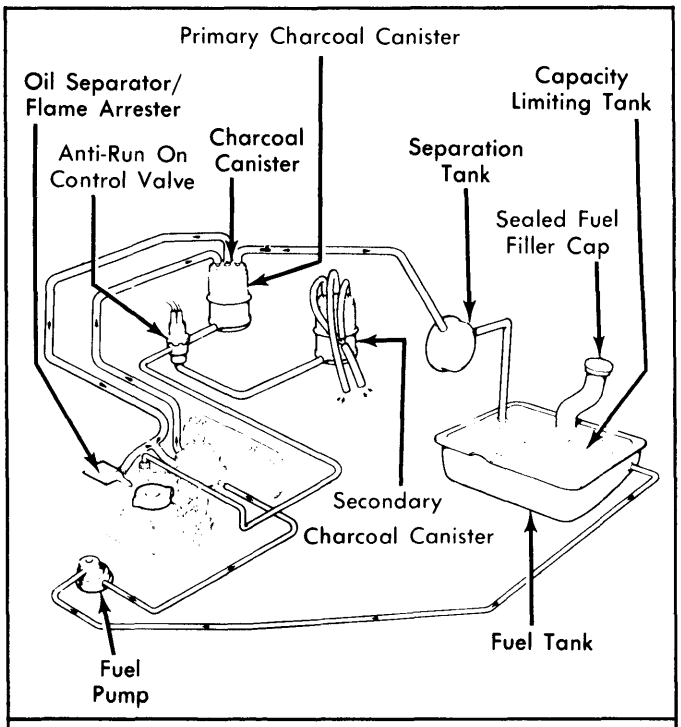

Fig. 1: MG Midget Fuel Evaporation System

CARBON CANISTERS

Canisters are mounted in engine compartment and consist of containers filled with activated carbon. Vent line from fuel tank is connected to top of primary canister and fuel vapors from tank are absorbed by activated carbon when engine is not running.

A second vent line from top of primary canister is connected to constant vacuum area of carburetor so that when engine is running, fuel vapors will be drawn into the engine and burned. This line is also connected to the crankcase ventilation system. A third vent valve line on top of secondary canister connects to front of carburetor. A line at bottom of secondary canister connects to the anti-run-on control valve.

ANTI-RUN-ON CONTROL VALVE

This valve controls purging of carbon canisters and also prevents engine run on when ignition is turned off. Valve will close when ignition is turned off which will create a slight vacuum in float chamber of carburetor to prevent run-on. When oil pressure drops to zero, or engine is turned off, valve will be deactivated.

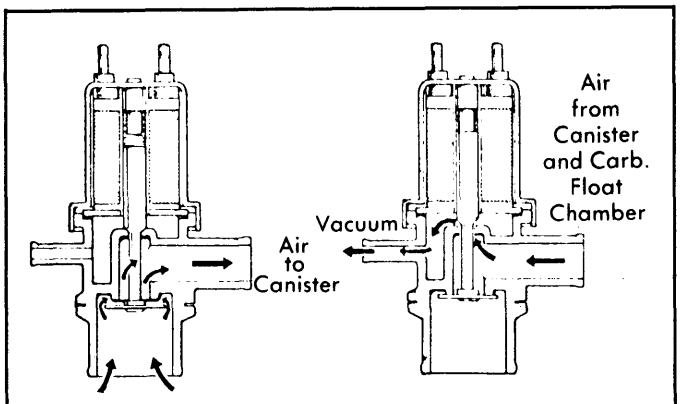

Fig. 2: Anti-Run-On Control Valve

MAINTENANCE

Every 12,500 miles, check all fuel lines and connections for chafing, leakage, or deterioration. Also check fuel cap for proper sealing. Every 25,000 miles, replace carbon canisters.

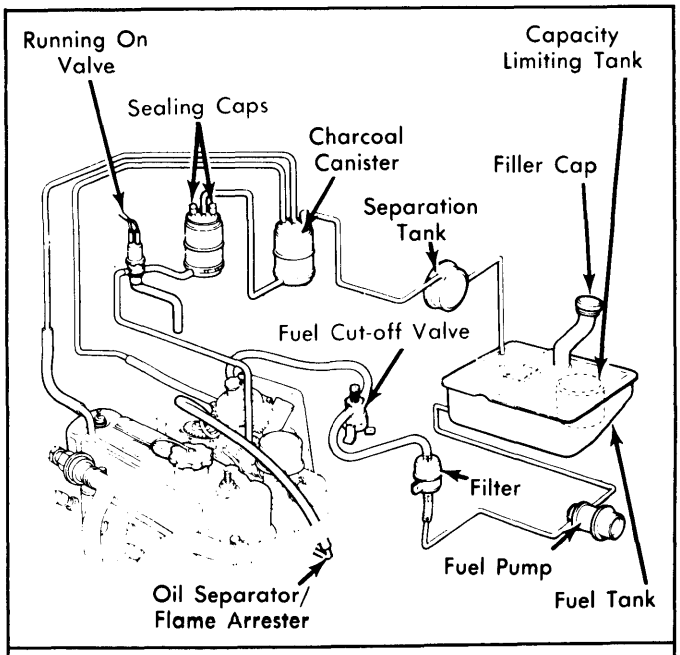

Fig. 3: MGB Fuel Evaporation System