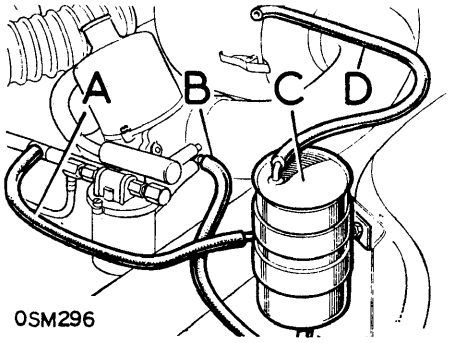
ROVER 3500S

NOTE – Complete evaporative emission control is effected by use of separate emission control systems for 1) Carburetors & Automatic Enrichment Device and 2) Fuel Tank. Each system is covered separately below.

CARBURETOR EVAPORATIVE EMISSION CONTROL

DESCRIPTION & OPERATION

Float chambers of carburetors and automatic enrichment device are vented through a vent line to a center fitting on an activated charcoal canister mounted on left hand fender skirt and fuel vapors are adsorbed by the charcoal when engine is standing. Canister is also fitted with two vent lines; one line extending from top of canister to air cleaner, and a second line from bottom of canister extending to carburetor elbow adapter on engine. During accelerating conditions, air from the air cleaner is drawn through the canister where it picks up fuel vapors from the charcoal and these emissions are then drawn into the engine and burned in the cylinders. This action purges the canister and restores the adsorbing capacity of the charcoal. This system also prevents fuel vapor accumulations in the intake system which might cause hard hot starting.



OSM296

A – Hose to Carburetor float chambers.
B – Hose to carburetor elbow adapter.
C – Charcoal Canister.
D – Hose to air cleaner.

CARBURETOR CANISTER & CONNECTIONS

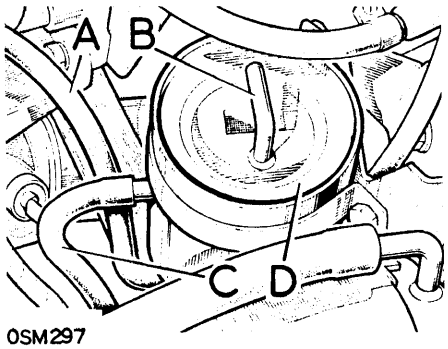
FUEL TANK EVAPORATIVE EMISSION CONTROL

DESCRIPTION & OPERATION

The fuel system is completely sealed and fuel tank is vented through the fuel emission system to prevent fuel vapors being discharged into the atmosphere. This system uses the following units:

Fuel Tank – Fuel tank is fitted with a sealed filler cap and is vented by two breather lines extending from opposite ends of tank to a low point in the expansion tank (lines are spliced into a single expansion tank line at upper end of inverted "U" routing of the lines to minimize liquid fuel carry-over to the expansion tank).

Expansion Tank – Mounted adjacent to fuel tank to provide an overflow reservoir for fuel displaced from main tank by temperature increases. Expansion tank is connected to charcoal canister in engine compartment by vent line so that all fuel vapors are directed to the canister and adsorbed by charcoal when the engine is not running. This vent line also acts as a fuel tank vent and air from the atmosphere will flow through the canister, vent line, expansion tank and tank breather lines to the fuel tank as fuel is used. This action will also return any liquid fuel in the expansion tank to the fuel tank.



OSM297

A – Hose to carburetor elbow adaptor.
B – Atmospheric vent pipe.
C – Hose to fuel tank (expansion tank).
D – Charcoal Canister.

FUEL TANK CANISTER & CONNECTIONS

Charcoal Canister – Mounted on right side of radiator grille panel with vent line from expansion tank connected to fitting on side of canister. Fuel vapors from tank flow through this line and are adsorbed by the charcoal when the engine is standing. Canister is also fitted with two vent lines; one line at top of canister is an air vent and open to the atmosphere, second vent line at bottom of canister is connected to carburetor elbow adaptor on right side of engine. When engine is running, air is drawn through the canister (through upper atmospheric vent) where it picks up fuel vapors from the canister and these emissions are then drawn into the engine and burned in the cylinders. This action purges the canister and restores the adsorbing capacity of the charcoal. The atmospheric vent also admits air which flows through the vent lines to the fuel tank to relieve any vacuum resulting from fuel consumption or contraction due to temperature changes.

SERVICING OF SYSTEM

Canister replacement at recommended intervals is the principal service requirement of the evaporative emission system. Canisters must be replaced immediately whenever charcoal is fouled by flooding of the carburetors or other liquid contamination. *CAUTION – Do not attempt to clean the canister. Use of compressed air may cause ignition of the activated charcoal in the canisters.*

CANISTER REPLACEMENT

Removal – Disconnect hoses from canister. Remove clamp bolts and lift canister from its mounting bracket.

Installation – Check all hoses for deterioration and replace as required. Check hose connections at carburetor and automatic enrichment device float chambers and at fuel tank. Install new canister on mounting bracket and tighten clamp bolts. Connect hoses to canister as shown in illustration.