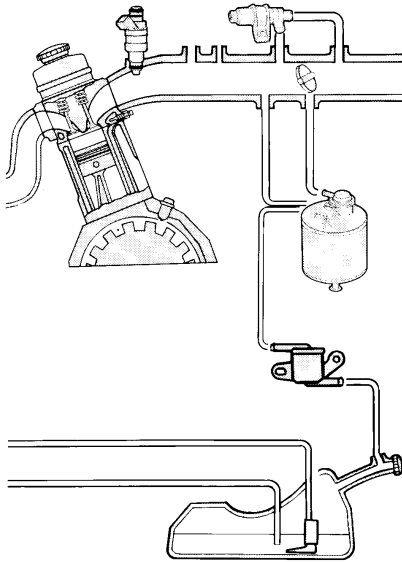


EVAP system

Functions



EVAP (Evaporative Emission) is a method of recovering the fuel evaporated in the fuel tank and preventing its release to atmosphere. The fuel vapour is conducted by a system of hoses from the fuel tank filler pipe, through a roll-over valve, to a filter (or canister) of activated carbon. The carbon filter absorbs the vapour and is fitted with an EVAP valve to prevent leakage when the engine is at rest.

Carbon filter

The fuel vapour from the tank enters the top of the filter, in which it is bound by the activated carbon. Air is discharged through a passage in the bottom of the unit. The filter holds approximately 90 grams of fuel, depending on the temperature and other conditions.

Roll-over valve

The valve closes if the car tilts sideways by more than 45°, helping to prevent fuel leakage in the event of an accident.

EVAP valve

Mounted in the top of the carbon filter, the EVAP valve is closed when the engine is at rest. The valve also remains closed when the engine is idling to ensure that it does not interfere with the idle running. This is achieved by using the vacuum in the intake manifold (to which the valve is connected) to effect closure.

The valve opens, allowing fuel vapour to pass from the carbon filter to the intake manifold as the engine load increases. Air is simultaneously drawn in through the opening in the bottom of the unit. Under normal conditions, the filter is emptied in about 15–20 minutes.

