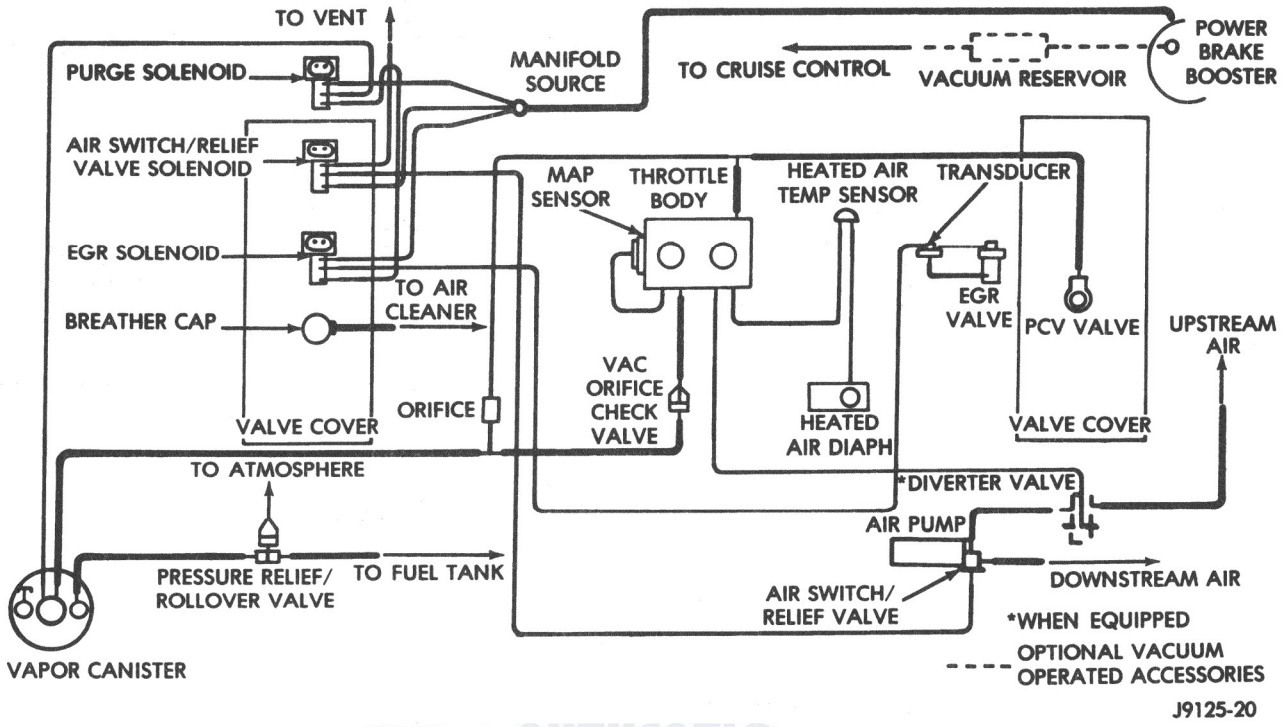
ENGINE VACUUM SCHEMATIC—3.9L AND 5.2L ENGINES



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EVAPORATION CONTROL SYSTEM

The function of the evaporation control system is to prevent the emissions of gasoline vapors from the fuel tank into the atmosphere. When fuel evaporates in the fuel tank, the vapors pass through vent hoses or tubes to a carbon filled evaporative canister. They are temporarily held in the canister until they can be drawn into the intake manifold when the engine is running.

The vapors are drawn into the engine at idle as well as off idle. This system is called a Bi-level Purge System where there is a dual source of vacuum to remove fuel vapor from canister.

On fuel injection engines, the source of vacuum at idle is a tee in the PCV system.

The evaporative canister is a feature on all models for the storage of fuel vapors from the fuel tank.

The hoses used in this system are specially manufactured and if replacement becomes necessary it is important to use only fuel resistant hose.

ROLLOVER AND PRESSURE RELIEF VALVE

Dakota vehicles are equipped with a combination pressure relief and rollover valve. The dual function valves relieve fuel tank pressure and prevent fuel flow through the fuel tank vent hoses in the event of vehicle rollover.

The valve incorporates a pressure relief mechanism that releases fuel tank pressure when the fuel tank pressure increases above the calibrated sealing value. Refer to Group 14 Fuel Tank Section For Service.

EVAPORATIVE CANISTER

A sealed, maintenance free, evaporative canister is used on all vehicles. The canister is mounted on the right side of the radiator closure panel (Fig. 2). The evaporative canister is filled with granules of an activated carbon mixture. Fuel vapors entering the canister are absorbed by the charcoal granules.

Fuel tank pressure vents into the canister. Fuel vapors are temporarily held in the canister until they can be drawn into the intake manifold. The canister purge solenoid allows the canister to be purged at predetermined time and engine conditions.

CANISTER PURGE SOLENOID

Vacuum for the evaporative canister is controlled by the Canister Purge Solenoid (Fig. 3). The solenoid is operated by the engine controller. The engine controller regulates the solenoid by switching the ground circuit on and off based on engine operating conditions. When energized, the solenoid prevents vacuum from reaching the evaporative canister. When not energized the solenoid allows vacuum to flow through to canister.