

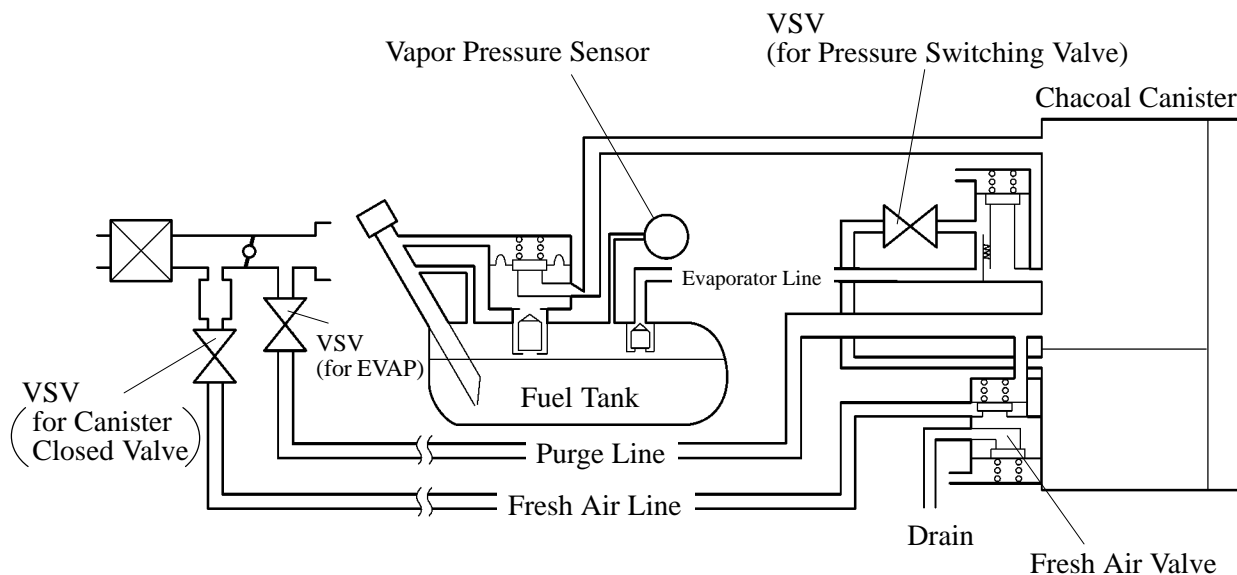
Evaporative Emission Control System

1) General

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A vacuum system has been adopted to detect leaks in the evaporative emission control system. This vacuum system detects leaks by forcefully introducing the purge vacuum into the entire system and monitoring the changes in the pressure. It consists of the following main components:

- A VSV (for canister closed valve) that closes the fresh air line from the air cleaner to the charcoal canister has been adopted.
- A VSV (for pressure switching valve) that opens the evaporator line between the fuel tank and the charcoal canister has been adopted.
- Function to close the purge line from the air intake chamber to the charcoal canister for this system is added to the original functions of VSV (for EVAP).
- A vapor pressure sensor that measures the pressure in the fuel tank while checking for evaporative emission leaks and sends signals to the ECM has been adopted.



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2) Operation

Initially, when the VSV (for canister closed valve) is closed, and the VSV (for pressure switching valve) and the VSV (for EVAP) are opened, a vacuum is applied to the purge line from the air intake to the charcoal canister and to the evaporator line from the charcoal canister to the fuel tank. Next, the VSV (for EVAP) is closed in order to maintain a vacuum from the VSV (for EVAP) to the inside of the fuel tank. Then, any subsequent changes in the pressure are monitored by the vapor pressure sensor in order to check for evaporative emission leaks.

If a leak is detected, the malfunction indicator lamp (MIL) illuminates to inform the driver. Also, the diagnostic trouble code (DTC) can be accessed through the use of a LEXUS hand-held tester. For details on the DTCs, refer to the 2001 GS430/300 Repair Manual (Pub. No. RM791U).