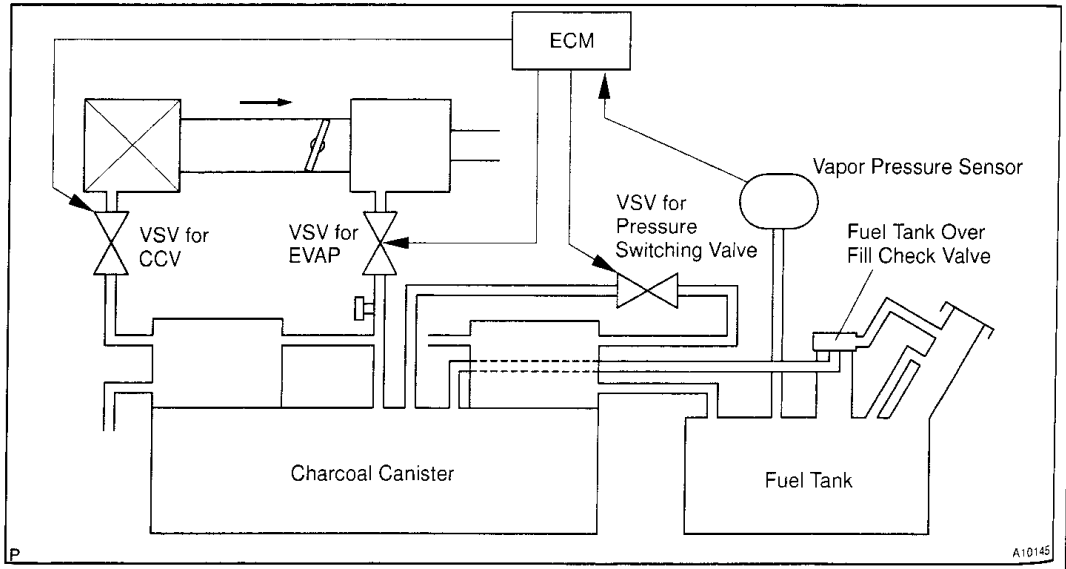
DI09X-05

DTC	P0450	Evaporative Emission Control System Pressure Sensor Malfunction

DTC	P0451	Evaporative Emission Control System Pressure Sensor Range/Performance

CIRCUIT DESCRIPTION

The vapor pressure sensor, VSV for canister closed valve (CCV) and VSV for pressure switching valve are used to detect abnormalities in the evaporative emission control system.
The ECM decides whether there is an abnormality in the evaporative emission control system based on the vapor pressure sensor signal.
DTC P0450 or P0451 is recorded by the ECM when the vapor pressure sensor malfunction.



DTC No.	DTC Detecting Condition	Trouble Area
P0450	10 seconds or less after engine starting condition vapor pressure sensor fixed value continues for fixed value or more: (2 trip detection logic)	• Open or short in vapor pressure sensor circuit • Vapor pressure sensor • ECM
P0451	Vapor pressure sensor output extremely changes under conditions of (a) and (b): (2 trip detection logic) (a) Vehicle speed: 0 km/h (0mph), Engine speed: Idling and VSV for pressure switching valve is OFF (b) vavor pressure sensor value ≧ opening pressure valve of charcoal canister	

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WIRING DIAGRAM

Refer to DTC P0440 on page DI–71.

INSPECTION PROCEDURE

HINT:

- If DTC P0441, P0446, P0450 or P0451 is output after DTC P0440 first trouble shoot DTC P0441, P0446 P0450 or P0451. If no malfunction is detected, troubleshoot DTC P0440 next.
- Read freeze frame data using LEXUS hand–held tester or OBD II scan tool. Because freeze frame records the engine conditions when the malfunction is detected. When troubleshooting, it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, the air–fuel ratio was lean or rich, etc. at the time of the malfunction.
- When the ENGINE RUN TIME in the freeze frame data is less than 200 seconds, carefully check the vapor pressure sensor.

1	**Check voltage between terminals VC and E2 of ECM connector (See page DI–71, step 9).**

NG → **Check and replace ECM (See page IN–28).**

OK

2	**Check voltage between terminals PTNK and E2 of ECM connectors (See page DI–71, step 10).**

OK → **Check and replace ECM (See page IN–28).**

NG

3	**Check for open and short in harness and connector between vapor pressure sensor and ECM (See page IN–28).**

NG → **Repair or replace harness or connector.**

OK

Replace vapor pressure sensor.