

DTC	P0450	Evaporative Emission Control System Pressure Sensor Malfunction
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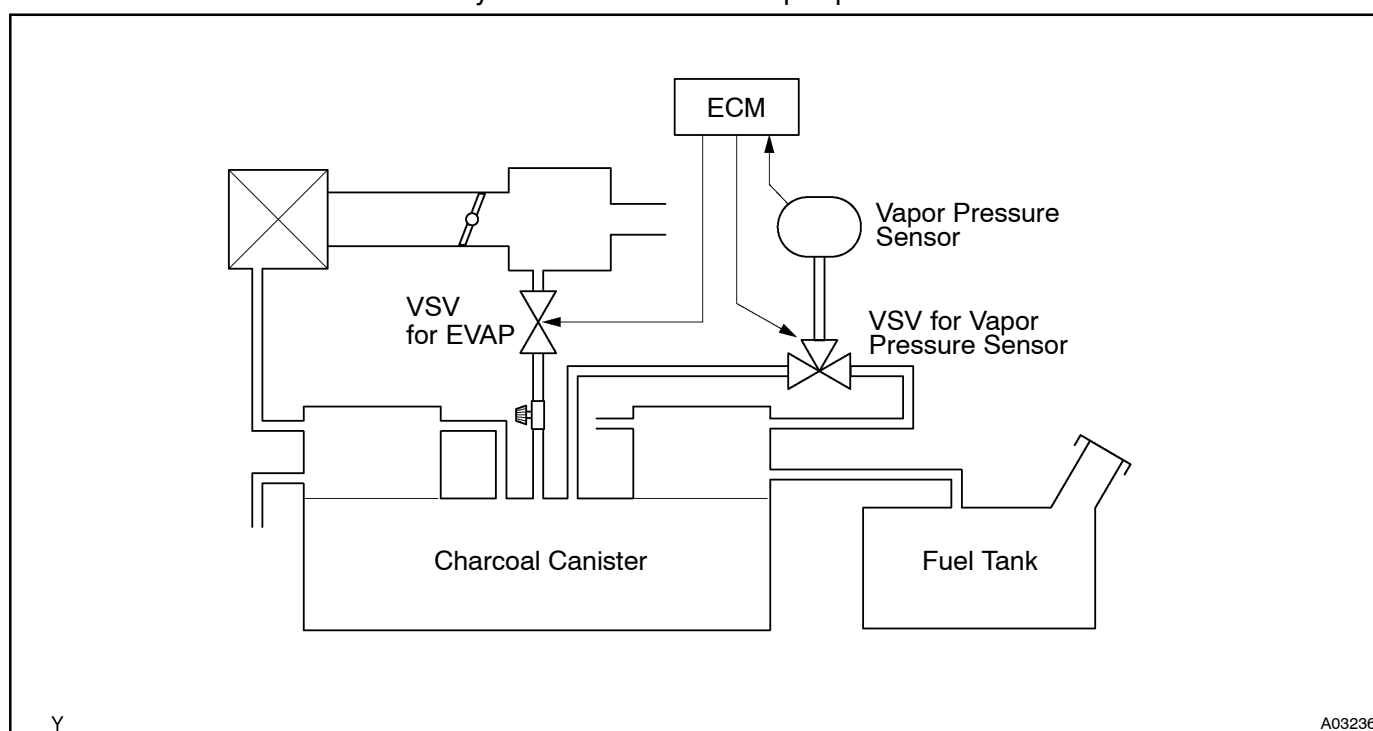
DTC	P0451	Evaporative Emission Control System Pressure Sensor Range/Performance
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CIRCUIT DESCRIPTION

The vapor pressure sensor and VSV for vapor pressure sensor 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 (a) or (b) continues for 7 seconds or more: (2 trip detection logic) (a) Vapor pressure sensor value > -3.5 kPa (-26 mmHg, -1.0 in.Hg) (b) Vapor pressure sensor value $\geq$ 2.0 kPa (15 mmHg, 0.6 in.Hg)	• Open or short in vapor pressure sensor circuit • Vapor pressure sensor • ECM
	10 seconds or more after engine starting condition (a) or (b) continues for 7 seconds or more: (2 trip detection logic) (a) Vapor pressure sensor value < -4.0 kPa (-30 mmHg, -1.2 in.Hg) (b) Vapor pressure sensor value $\leq$ 2.0 kPa (15 mmHg, 0.6 in.Hg)	
P0451	Vapor pressure sensor output extremely changes under conditions of (a), (b) and (c): (2 trip detection logic) (a) Vehicle speed: 0 km/h (0mph) (b) Engine speed: Idling (c) VSV for vapor pressure sensor is ON	

WIRING DIAGRAM

Refer to DTC P0440 (Evaporative Emission Control System Malfunction) on page [DI-90](#).

INSPECTION PROCEDURE

HINT:

- If DTCs P0110 (Intake Air Temp. Circuit Malfunction), P0115 (Engine Coolant Temp. Circuit Malfunction), P0120 (Throttle/Pedal Position Sensor/Switch "A" Circuit Malfunction), P0450 (Evaporative Emission Control System Pressure Sensor Malfunction) and P1120 (Accelerator Pedal Position Sensor Circuit Malfunction) are output simultaneously, E2 (Sensor Ground) may be open.
- 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 warmed up or not, the air-fuel ratio 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 VSV for EVAP, charcoal canister and vapor pressure sensor.

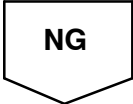
1	Check voltage between terminals VC and E2 of ECM connector (See page DI-90 , step 9).
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Check and replace ECM (See page [IN-33](#)).

OK

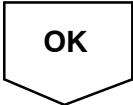
2	Check voltage between terminals PTNK and E2 of ECM connectors (See page DI-90 , step 10).
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OKCheck and replace ECM (See page [IN-33](#)).NG

3	Check for open and short in harness and connector between vapor pressure sensor and ECM (See page IN-33).
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Repair or replace harness or connector.

OKReplace vapor pressure sensor.