

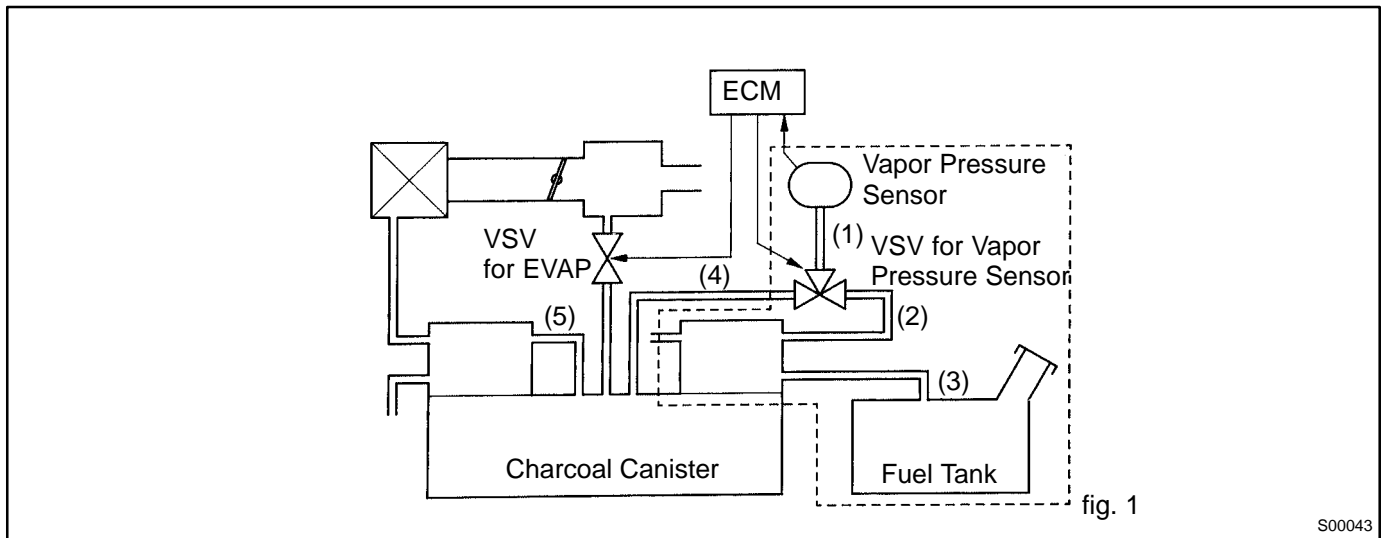
DTC	P0440	Evaporative Emission Control System Malfunction
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CIRCUIT DESCRIPTION

The vapor pressure sensor and VSV for vapor pressure sensor are used to detect abnormalities in the evaporative emission control system.

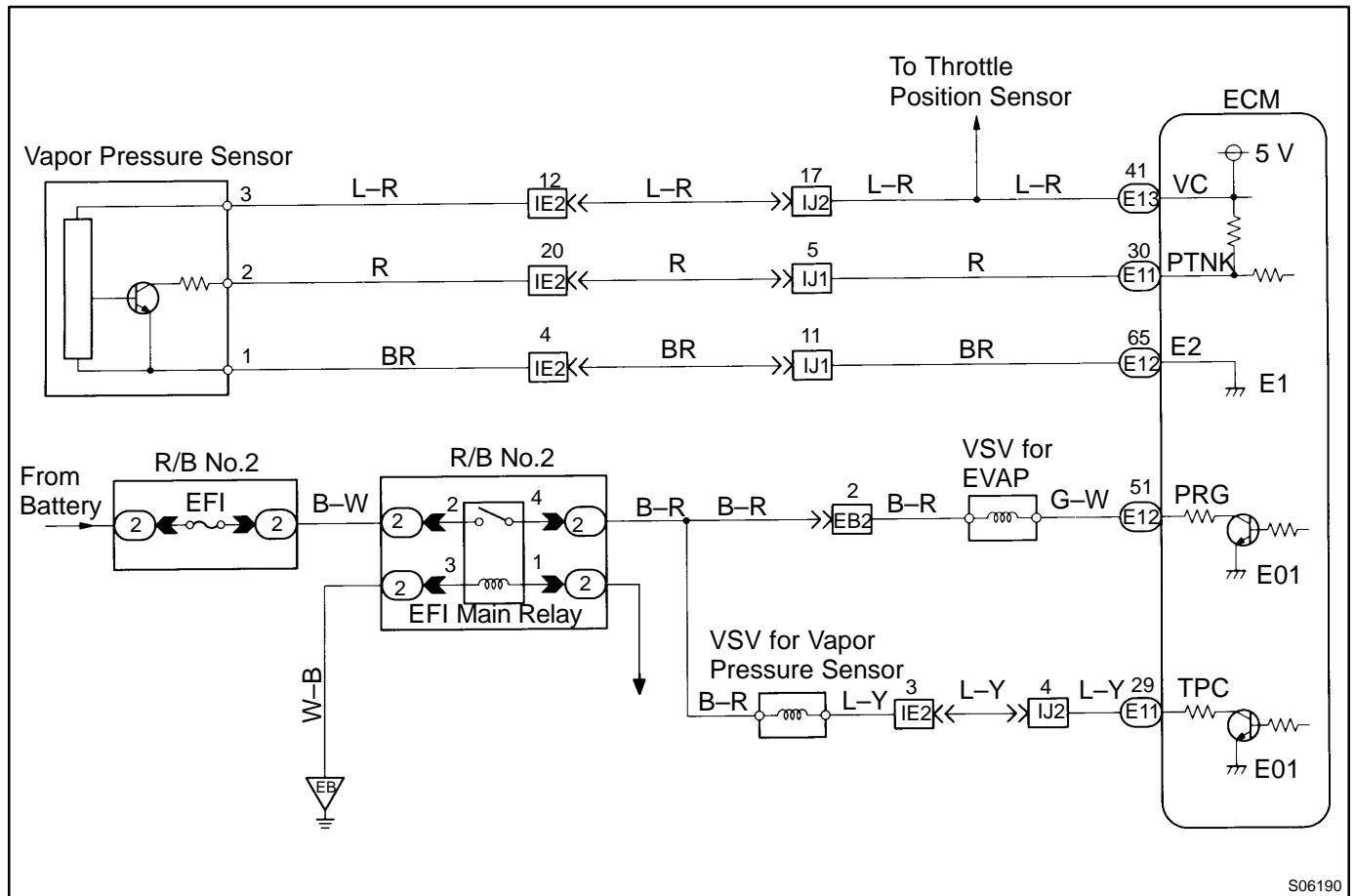
The ECM decides whether there is an abnormality in the evaporative emission control system based on the vapor pressure sensor signal.

DTC P0440 is recorded by the ECM when evaporative emissions leak from the components within the dotted line in fig. 1 below, or when the vapor pressure sensor malfunctions.



DTC No.	DTC Detecting Condition	Trouble Area
P0440	The fuel tank pressure is atmospheric pressure after vehicle is driven for 20 min. (2 trip detection logic)	<ul style="list-style-type: none"> • Vapor pressure sensor • Fuel tank cap incorrectly installed • Fuel tank cap cracked or damaged • Vacuum hose cracked, holed, blocked, damaged or disconnected ((1) or (2) in fig. 1) • Hose or tube cracked, holed, damaged or loose ((3) in fig. 1) • Fuel tank cracked, holed or damaged • Charcoal canister cracked, holed or damaged

WIRING DIAGRAM



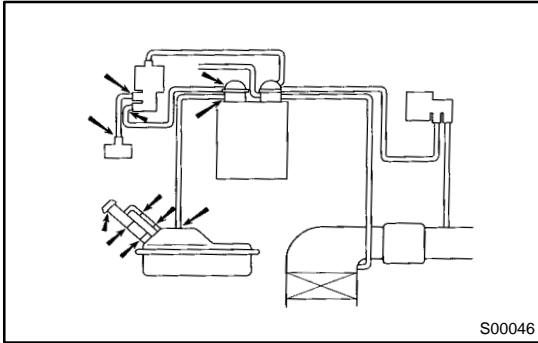
S06190

INSPECTION PROCEDURE

HINT:

- If DTC P0441, P0446 or P0450 is output after DTC P0440, first troubleshoot DTC P0441, P0446 or P0450. If no malfunction is detected, troubleshoot DTC P0440 next.
- Ask customer whether, after MIL came on, customer found fuel tank cap loose and tightened it. Also ask customer whether fuel tank cap was loose when refueling. If fuel tank cap was loose, it was cause of DTC. If fuel tank cap was not loose or if customer was not sure if it was loose, troubleshoot according to following procedure.

- 1 Check whether hoses close to fuel tank have been modified, and check whether there are signs accident near fuel tank or charcoal canister.**

**CHECK:**

Check for cracks, deformation, and loose connection of following parts:

- Fuel tank
- Charcoal canister
- Fuel tank filler pipe
- Hose and tubes around fuel tank and charcoal canister

NG**Repair or replace.****OK**

- 2 Check that fuel tank cap is LEXUS genuine parts.**

NG**Replace to LEXUS genuine parts.****OK**

- 3 Check that fuel tank cap is correctly installed.**

NG**Correctly install fuel tank cap.****OK**

- 4 Check fuel tank cap (See page SF-31).**

NG**Replace fuel tank cap.****OK**

5 Check filler neck for damage.**PREPARATION:**

Remove fuel tank cap.

CHECK:

Visually inspect filler neck for damage.

NG**Replace filler neck.****OK****6 Check vacuum hoses between vapor pressure sensor and VSV for vapor pressure sensor, and VSV for vapor pressure sensor and charcoal canister.****CHECK:**

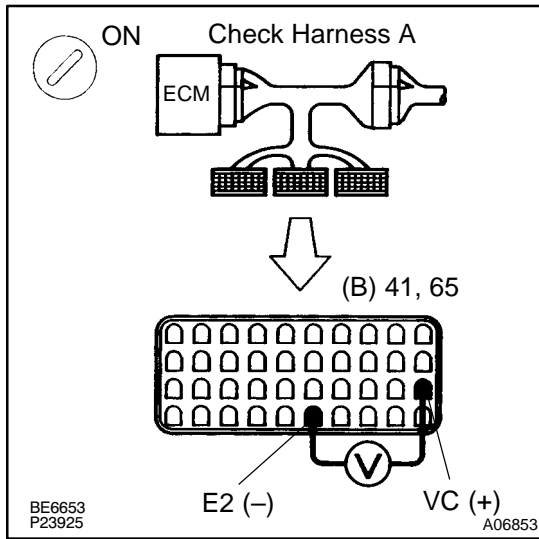
- (a) Check that vacuum hose is connected correctly.
- (b) Check the vacuum hose for looseness and disconnection.
- (c) Check the vacuum hose for cracks, hole and damage.

NG**Repair or replace.****OK****7 Check hose and tube between fuel tank and charcoal canister.****CHECK:**

- (a) Check for proper connection of fuel tank and fuel EVAP pipe, fuel EVAP pipe and fuel tube under floor, fuel tube under floor and charcoal canister.
- (b) Check hose and tube for cracks, hole and damage.

NG**Repair or replace.****OK****8 Check charcoal canister for cracks, hole and damage (See page SF-15).****NG****Replace charcoal canister.****OK**

9 Check voltage between terminals VC and E2 of ECM connector.



PREPARATION:

- (a) Connect check harness A.
- (b) Turn ignition switch ON.

CHECK:

Measure voltage between terminals VC and E2 of ECM connector.

OK:

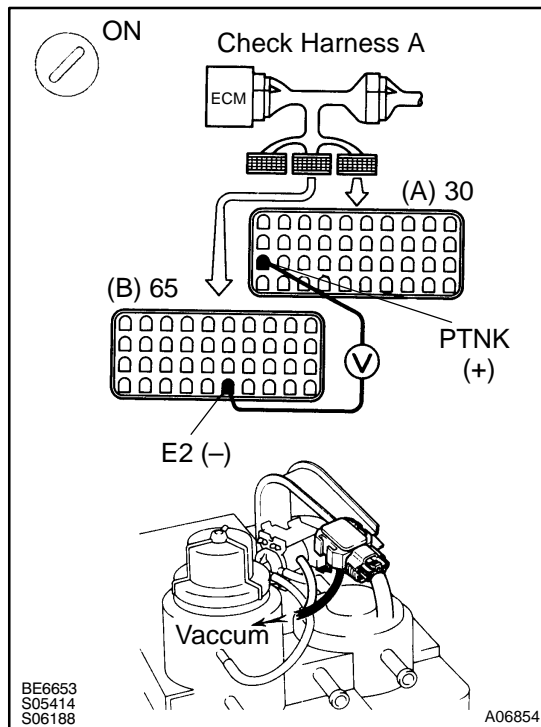
Voltage: 4.5 – 5.5 V

NG

Check and replace ECM (See page [IN-29](#)).

OK

10 Check voltage between terminals PTNK and E2 of ECM connectors.



PREPARATION:

- Connect the check harness A.
- Turn ignition switch ON.

CHECK:

Measure voltage between terminals PTNK and E2 of ECM connectors.

- Disconnect the vacuum hose from the vapor pressure sensor.
- Using MITYVAC (Hand-Held Vacuum Pump), apply a vacuum of 4.0 kPa(30 mmHg, 1.2 in. Hg) to vapor pressure sensor.

NOTICE:

Vacuum applied to vapor pressure sensor must be less than 66.7 kPa (500 mmHg, 19.7 in.Hg).

OK:

- Voltage: 2.9 – 3.7 V
- Voltage: 0.5 V or less

OK

Go to step 12.

NG

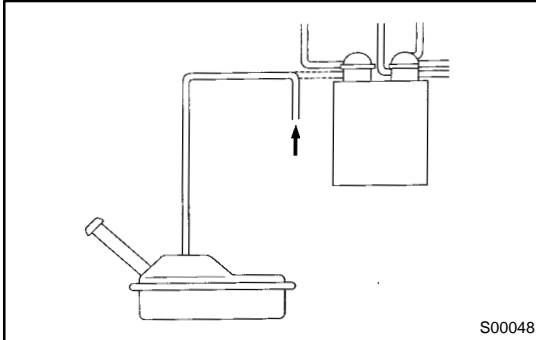
11 Check for open and short in harness and connector between vapor pressure sensor and ECM (See page IN-29).

NG

Repair or replace harness or connector.

OK

Replace vapor pressure sensor.

12 Check fuel tank for cracks and damage.**PREPARATION:**

- (a) Disconnect vacuum hose from charcoal canister.
- (b) Correctly install fuel tank cap.
- (c) Apply a pressure of 5 kPa (0.05 kgf/cm², 0.71 psi) to fuel tank.

CHECK:

Check whether pressure is maintained after 1 minute.

OK:

Pressure applied to fuel tank is maintained.

NG**Replace fuel tank.****OK**

It is likely that vehicle user did not properly close fuel tank cap. Please explain to customer how to properly install fuel tank cap.