# DTC C1265/65 VACUUM SENSOR MALFUNCTION

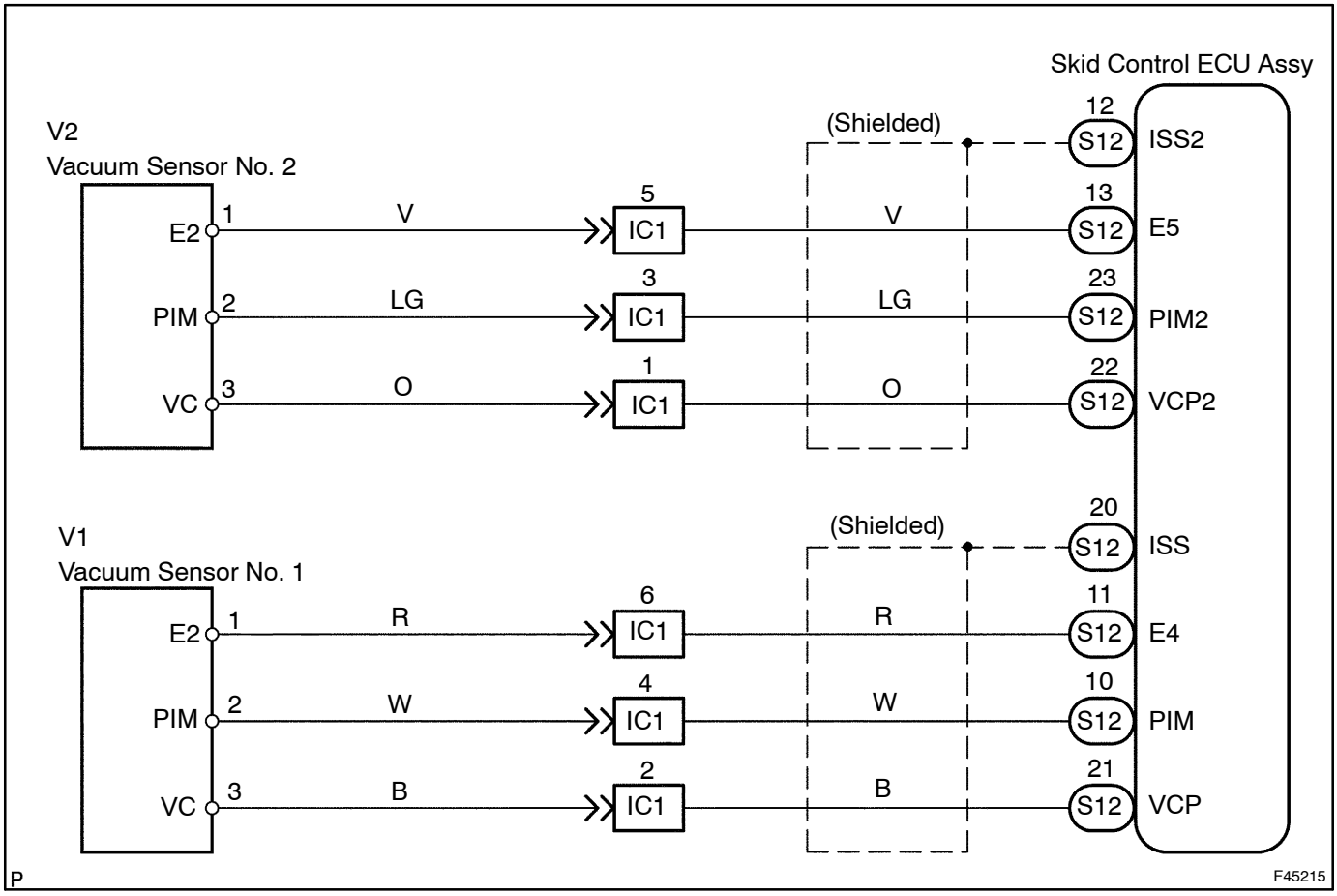
## CIRCUIT DESCRIPTION

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| C1265/65 | 1, 2, 3, 4 or 5 is detected:<br>1. When ignition switch is ON and VCP (VCP2) terminal voltage is within range of 4.3 to 5.8 V, PIM terminal voltage is 0.4 to 4.5 V (out of range) for 1.2 sec.<br>2. When VCP (VCP2) terminal voltage is within range of 4.3 to 5.8 V, PIM (PIM2) terminal voltage is 0.4 to 4.5 V (out of range) continues for 1.2 sec.<br>3. With engine running, depress brake pedal with 19 kgf and release it. In 1 sec., change amount of PIM (PIM2) terminal voltage becomes less than 0.01 V 5 times or more<br>4. PIM or PIM2 terminal receives noise 7 times or more within 5 sec.<br>5. When PIM (PIM2) terminal voltage is 1.46 V or more, condition that voltage difference between terminals PIM and PIM2 is 344 mV or more continues for 10 sec. or more | • Vacuum sensor<br>• Vacuum sensor circuit |

HINT:

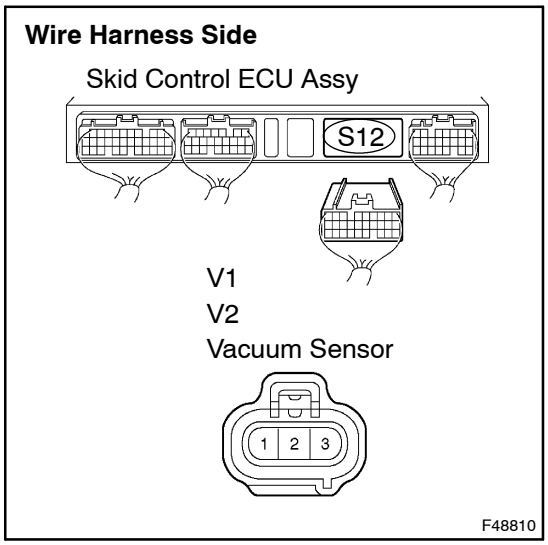
- If the brake pedal is depressed firmly, the brake force may be lowered.
- Fail safe function:
  If any trouble occurs in the vacuum sensor circuit, the ECU will prohibit BRAKE ASSIST.

## WIRING DIAGRAM



# INSPECTION PROCEDURE

| 1 | CHECK WIRE HARNESS (VACUUM SENSOR – SKID CONTROL ECU ASSY) |
|---|---|




(a) Disconnect the S12 ECU connector.
(b) Disconnect the V1 and V2 sensor connectors.
(c) Measure the resistance according to the table below.

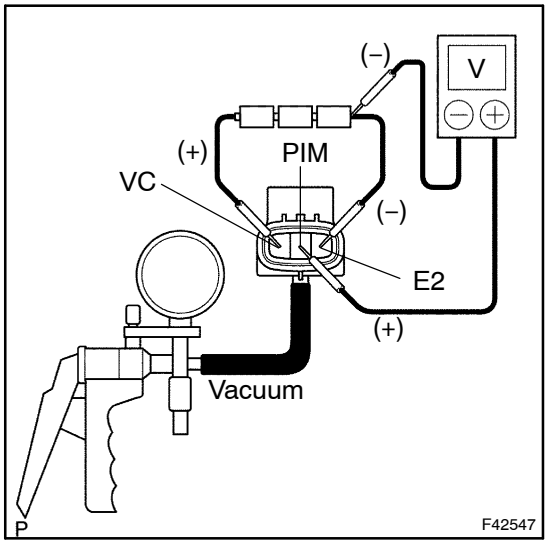
**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| V1–1 (E2) – S12–11 (E4) | Below 1 Ω |
| V1–2 (PIM) – S12–10 (PIM) | Below 1 Ω |
| V1–3 (VC) – S12–21 (VCP) | Below 1 Ω |
| V2–1 (E5) – S12–13 (E5) | Below 1 Ω |
| V2–2 (PIM) – S12–23 (PIM2) | Below 1 Ω |
| V2–3 (VC) – S12–22 (VCP2) | Below 1 Ω |
| V1–1 (E2) – Body ground | 10 kΩ or higher |
| V1–2 (PIM) – Body ground | 10 kΩ or higher |
| V1–3 (VC) – Body ground | 10 kΩ or higher |
| V2–1 (E5) – Body ground | 10 kΩ or higher |
| V2–2 (PIM) – Body ground | 10 kΩ or higher |
| V2–3 (VC) – Body ground | 10 kΩ or higher |

**NG** → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK**

| 2 | INSPECT VACUUM SENSOR (NO. 1, NO. 2) |
|---|---|




(a) Check the vacuum sensor No. 1 and No. 2.

HINT:

Before checking vacuum sensor, check for cracks or damage on the vacuum hoses.

(1) Connect 3 dry batteries of 1.5 V in series.

(2) Connect the VC terminal to the battery's positive (+) terminal and the E2 terminal to the battery's negative (–) terminal. Then apply about 4.5 V between the VC and E2 terminals.

**NOTICE:**

**Do not apply 6 V or more to terminals VC and E2.**

(3) Connect a voltmeter to terminals PIM and E2 of the ECU, and measure the output voltage at atmospheric pressure.

(4) Apply a vacuum to the vacuum sensor in 20 kPa (150 mmHg, 5.91 in.Hg) increments to 100 kPa (750 mmHg, 29.53 in.Hg).

(5) Measure the voltage drop and check the results in the table below.

**Standard:**

| Front Brake Caliper Fluid Pressure | Voltage |
|---|---|
| 80 kPa (150 mmHg, 5.91 in.Hg) | 1.2 V |
| 40 kPa (450 mmHg, 17.71 in.Hg) | 2.4 V |
| 0 kPa (750 mmHg, 29.53 in.Hg) | 3.6 V |

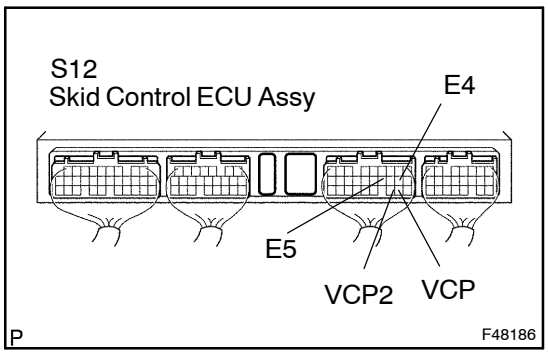
(6) Check the difference of voltage between the vacuum sensors.

**Standard: Difference is 340 mV or more**

**NG** → **REPLACE VACUUM SENSOR**

**OK**

## 3 CHECK SKID CONTROL ECU ASSY (VCP, VCP2 VOLTAGE)




(a) Remove the ECU but not disconnect the connectors.
(b) Turn the ignition switch ON.
(c) Measure the voltage according to the table below.

**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| S12–21 (VCP) – S12–11 (E4) | 4.75 to 5.25 V |
| S12–22 (VCP2) – S12–13 (E5) | 4.75 to 5.25 V |

**NG** → **REPLACE SKID CONTROL ECU ASSY**
**(See page 01–27)**

**OK**

**NO PROBLEM**