| DTC | C1243/43 | Acceleration Sensor Stuck Malfunction |
|---|---|---|

| DTC | C1244/44 | Open or Short in Deceleration Sensor Circuit |
|---|---|---|

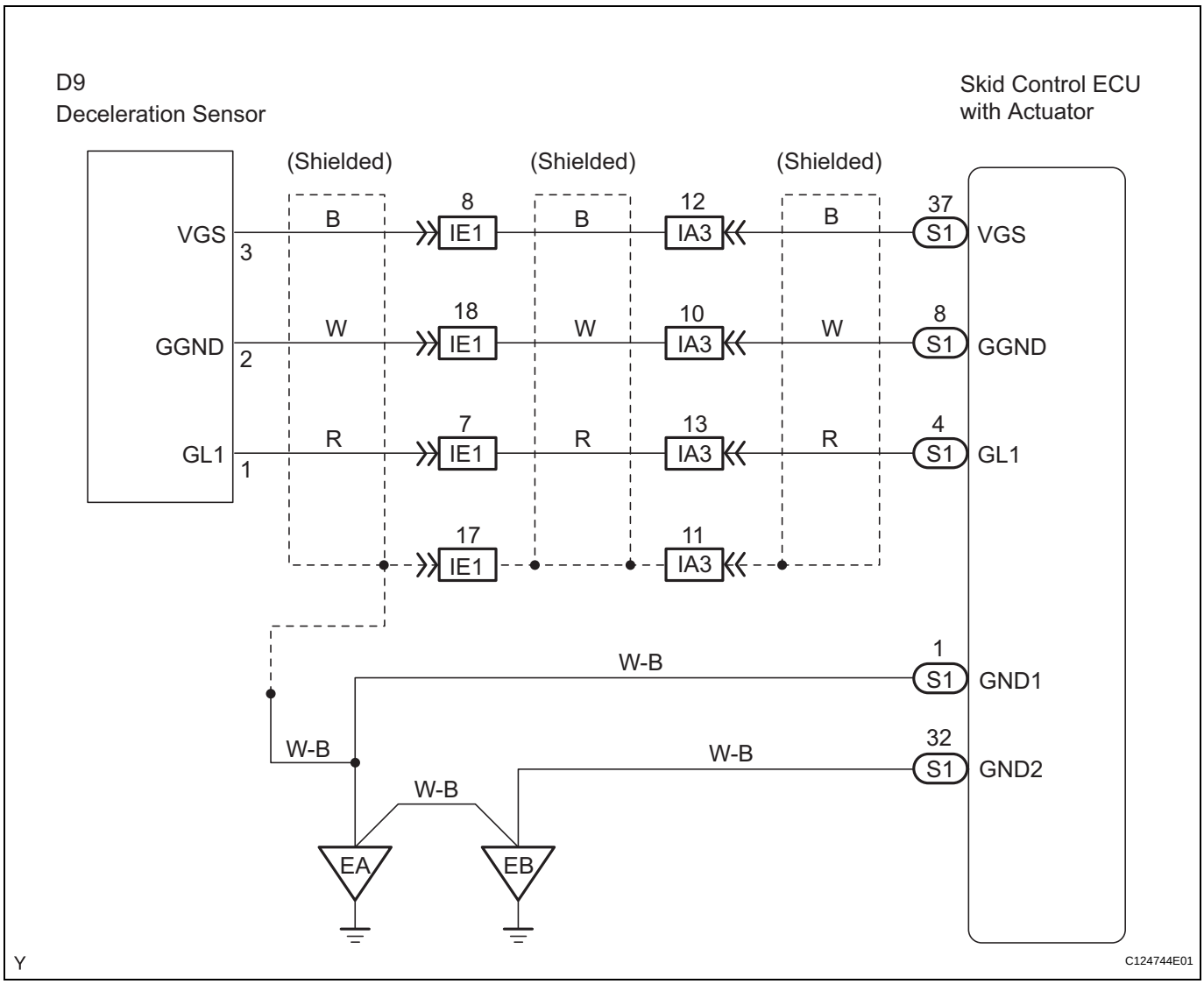
| DTC | C1245/45 | Acceleration Sensor Output Malfunction |
|---|---|---|

## DESCRIPTION

This sensor detects deceleration of the vehicle speed. The sensor signal is used in ABS control. If the sensor functions abnormally, the ABS warning light turns on.

| DTC No. | DTC Detecting Conditions | Trouble Areas |
|---|---|---|
| C1243/43 | While vehicle speed decreases from 18 mph (30 km/h) to 0 mph (0 km/h), sensor signal does not change 16 times or more. | • Deceleration sensor<br>• Deceleration sensor circuit<br>• Brake actuator (skid control ECU) |
| C1244/44 | When any of following 1 through 3 detected:<br>1. ECU terminal GL1 value of -1.5 G or less or 1.5 G or more continues for 1.2 seconds or more.<br>2. Deceleration sensor terminal VGS voltage of 4.4 V or less or 5.6 V or more continues for 1.2 seconds or more.<br>3. Deceleration sensor signal momentary open occurs 7 times or more. | • Deceleration sensor<br>• Deceleration sensor circuit<br>• Brake actuator (skid control ECU) |
| C1245/45 | At vehicle speed of 18 mph (30 km/h) or more, difference between back and forth G value calculated using G sensor signals and back and forth G value calculated using vehicle speed, exceeds 0.35 G for 60 seconds or more. | • Deceleration sensor<br>• Deceleration sensor circuit<br>• Brake actuator (skid control ECU) |

## WIRING DIAGRAM




BC

| 1 | READ VALUE OF DATA LIST (DECELERATION SENSOR) |
|---|---|

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position.
(c) Turn the intelligent tester ON.
(d) Select the DATA LIST mode on the intelligent tester.

| Item | Measurement Item / Range (Display) | Normal Condition | Diagnostic Note |
|---|---|---|---|
| DECELERAT SEN | Deceleration sensor 1 reading / min.: -1.869 G, max.: 1.869 G | Approximately 0 +-0.13G in still condition | Reading changes when vehicle bounced |

(e) Check that the deceleration value of the deceleration sensor displayed on the intelligent tester changes when the vehicle is tilted.
**OK:**
**Deceleration value must change.**

| NG | Go to step 3 |
|---|---|

OK

**2 RECONFIRM DTC**

(a) Clear the DTCs (See page BC-16).
(b) Check if the same DTCs are detected.

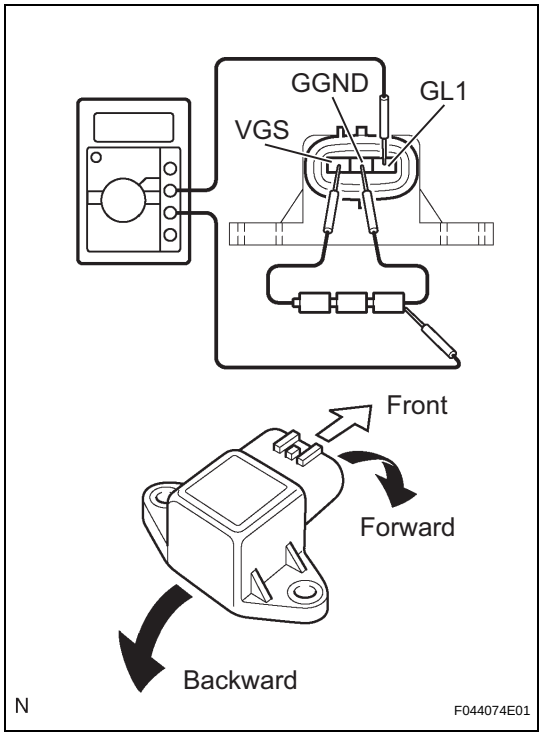
| Result | Proceed to |
|---|---|
| DTC output | A |
| DTC not output | B |

B → **END**

A

**REPLACE BRAKE ACTUATOR**

**3 INSPECT DECELERATION SENSOR**




(a) Remove the deceleration sensor.
(b) Connect the 3 dry batteries of 1.5 V in series.
(c) Connect the VGS terminal to the batteries' positive (+) terminal and the GGND terminal to the batteries' negative (-) terminal.
(d) Apply about 4.5 V between the VGS and GGND terminals.
**NOTICE:**
**Do not apply voltage of 6 V or more to terminals VGS and GGND.**
(e) Check the output voltage of the GL1 terminal when the sensor is tilted forward and backward.
**Standard Voltage**

| Sensor Condition | Specified Condition |
|---|---|
| Horizontal | About 2.3 V |
| Lean forward | 0.4 to 2.3 V |
| Lean backward | 2.3 to 4.0 V |

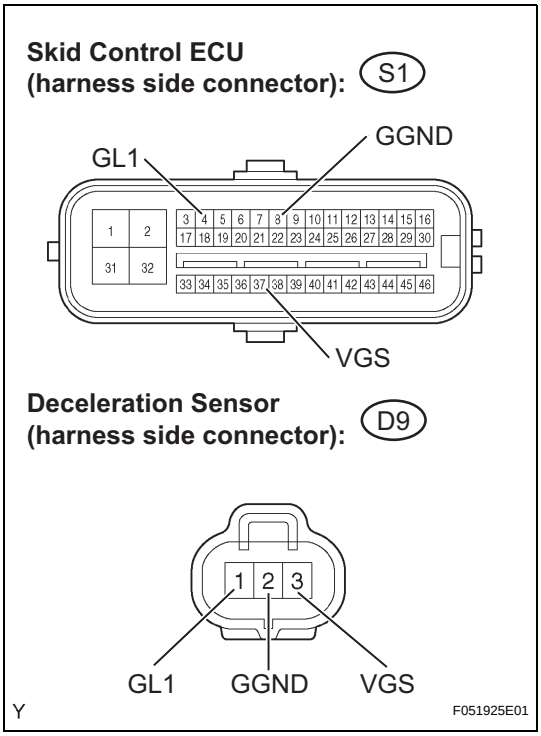
HINT:
- If the sensor is tilted too much it may show the wrong value.
- If dropped, the sensor should be replaced with a new one.
- Check and ensure the correct installation direction of the deceleration sensor.

NG → **REPLACE DECELERATION SENSOR**

OK

BC

| 4 | CHECK HARNESS AND CONNECTOR (SKID CONTROL ECU - DECELERATION SENSOR) |
|---|---|




(a) Disconnect the skid control ECU connector.
(b) Disconnect the deceleration sensor connector.
(c) Measure the resistance.
**Standard Resistance**

| Tester Connection | Specified Condition |
|---|---|
| S1-37 (VGS) - D9-3 (VGS) | Below 1 Ω |
| S1-8 (GGND) - D9-2 (GGND) | Below 1 Ω |
| S1-4 (GL1) - D9-1 (GL1) | Below 1 Ω |

(d) Measure the resistance.
**Standard Resistance**

| Tester Connection | Specified Condition |
|---|---|
| S1-37 (VGS) - Body ground | 10 kΩ or higher |
| S1-8 (GGND) - Body ground | 10 kΩ or higher |
| S1-4 (GL1) - Body ground | 10 kΩ or higher |

(e) Reconnect the deceleration sensor connector.
(f) Reconnect the skid control ECU connector.

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

**OK**

**REPLACE BRAKE ACTUATOR**