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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: BRAKE CONTROL / DYNAMIC CONTROL SYSTEMS: ELECTRONICALLY CONTROLLED BRAKE SYSTEM: C110300; Brake Pedal Position Sensor "B" Supply Voltage Malfunction; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**C110300**	**Brake Pedal Position Sensor "B" Supply Voltage Malfunction**

DESCRIPTION

Refer to DTC C110000.

Click here INFO

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
C110300	Brake Pedal Position Sensor "B" Supply Voltage Malfunction	When the voltage at terminal +BS is more than 8.5 V, the value of brake pedal stroke sensor 2 is invalid for 0.2 seconds or more.	• Wire harness and connector • Brake pedal stroke sensor assembly	Comes on	Brake/EPB	A	• SAE Code: C1103 (Case 2) • Output ECU: No. 2 skid control ECU (brake actuator assembly)

MONITOR DESCRIPTION

When the No. 2 skid control ECU (brake actuator assembly) detects that the value of brake pedal stroke sensor 2 is invalid, the MIL is illuminated and a DTC is stored.

MONITOR STRATEGY

Related DTCs	C1103 (Case 2): Brake pedal position sensor invalid data
Required Sensors/Components(Main)	Brake pedal stroke sensor assembly
Required Sensors/Components(Related)	No. 2 skid control ECU (brake actuator assembly) Brake pedal stroke sensor assembly
Frequency of Operation	Continuous
Duration	0.198 seconds
MIL Operation	Immediately
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Monitor runs whenever the following DTCs are not stored	C1103 (Case 2): Brake pedal position sensor invalid data P05DB: Brake pedal position sensor invalid data P05DD: Brake pedal position sensor circuit open P05DE: Brake pedal position sensor circuit high P05DF: Brake pedal position sensor intermittent/erratic P05E0: Brake pedal position sensor "A"/"B" correlation
All of the following conditions are met	A, B, C and D
A. Following condition is met	More than 0.22 seconds
+BS voltage	8.5 V or higher
B. +BS voltage	9.5 V or higher
C. IGR voltage	Higher than 10 V
D. IGP voltage	Higher than 10 V

TYPICAL MALFUNCTION THRESHOLDS

Either of the following conditions A, B, C or D is met	More than 0.018 seconds
A. Brake pedal position sensor2 power supply	Below 4.8 V, or higher than 5.2 V
B. Following condition is met	More than 0.018 seconds
Brake pedal position sensor2 power supply voltage ratio (SKS2/VSK2)	Less than 0.06
C. Following condition is met	More than 0.018 seconds
Brake pedal position sensor2 power supply voltage ratio (SKS2/VSK2)	Less than 0.94
D. Both of the following conditions are met	-
Absolute value of the change in (SKS2/VSK2) during 6millisec	Less than 0.0848
Brake pedal position sensor2 power supply	4.8 V or higher, and 5.2 V or less

COMPONENT OPERATING RANGE

All of the following conditions are met	A, B, C and D
A. Following condition is met	More than 0.22 seconds
+BS voltage	8.5 V or higher
B. Brake pedal position sensor2 power supply	4.8 V or higher, and 5.2 V or less
C. All of the following conditions a, b and c are met	More than 0.24 seconds
a. Following condition is met	More than 0.18 seconds
Brake pedal position sensor2 power supply voltage ratio (SKS2/VSK2)	0.06 or more
b. Following condition is met	More than 0.18 seconds
Brake pedal position sensor2 power supply voltage ratio (SKS2/VSK2)	0.94 or less
c. Absolute value of the change in (SKS2/VSK2) during 6millisec	0.0848 or less

CONFIRMATION DRIVING PATTERN

NOTICE:

When performing the normal judgment procedure, make sure that the driver door is closed and is not opened at any time during the procedure.

HINT:

- After repair has been completed, clear the DTC and then check that the vehicle has returned to normal by performing the following All Readiness check procedure.
- When clearing the permanent DTCs, refer to the "CLEAR PERMANENT DTC" procedure.

1. Connect the GTS to the DLC3.
2. Turn the ignition switch to ON and turn the GTS on.
3. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
4. Turn the ignition switch off.
5. Turn the ignition switch to ON (READY) and turn the GTS on.
6. Fully depress the brake pedal. [*1]
7. Wait for 1 second or more. [*2]

HINT:

[*1] to [*2]: Normal judgment procedure.

The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.

8. Enter the following menus: Chassis / Brake/EPB* / Utility / All Readiness.

*: Electric Parking Brake System

9. Check the DTC judgment result.

HINT:

- If the judgment result shows NORMAL, the system is normal.
- If the judgment result shows ABNORMAL, the system has a malfunction.
- If the judgment result shows INCOMPLETE, perform driving pattern again.

WIRING DIAGRAM

Refer to DTC C110000.

Click here INFO

PROCEDURE

1.	**CHECK HARNESS AND CONNECTOR (BRAKE ACTUATOR ASSEMBLY - BRAKE PEDAL STROKE SENSOR ASSEMBLY)**

Procedure1

(a) Make sure that there is no looseness at the locking part and the connecting part of the connectors.

OK:

The connector is securely connected.

Pre-procedure1

(b) Disconnect the A4 No. 2 skid control ECU (brake actuator assembly) connector.

(c) Disconnect the A5 brake pedal stroke sensor assembly connector.

Procedure2

(d) Check both the connector case and the terminals for deformation and corrosion.

OK:

No deformation or corrosion.

Procedure3

(e) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(A4,A5)
Click Connector(A4)
Click Connector(A5)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A4-10 (SKS2) - A5-1 (SKS2)	Always	Below 1 Ω	Ω
A4-10 (SKS2) or A5-1 (SKS2) - Body ground	Always	10 kΩ or higher	kΩ

Post-procedure1

(f) None

OK ▶ **REPLACE BRAKE PEDAL STROKE SENSOR ASSEMBLY**
INFO

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**