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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: C05C000; Brake Pedal Position Sensor "A"; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	C05C000	Brake Pedal Position Sensor "A"
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DESCRIPTION

When the No. 1 skid control ECU (brake booster with master cylinder assembly) judges that the zero point calibration of the brake pedal stroke sensor assembly is incomplete, this DTC is stored.

NOTICE:

DTCs output by the No. 1 skid control ECU that illuminate the MIL are stored in both the No. 1 and No. 2 skid control ECUs. However, permanent DTCs are stored only in the No. 2 skid control ECU.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
C05C000	Brake Pedal Position Sensor "A"	When the vehicle speed is 40 km/h (25 mph) or more, a valid brake pedal stroke sensor zero point is not memorized.	<ul style="list-style-type: none"> Valid brake pedal stroke sensor assembly zero point not memorized. (Calibration not performed or not completed) Wire harness and connector Brake pedal stroke sensor assembly 	Comes on	Brake/EPB	A	<ul style="list-style-type: none"> SAE Code: C05C0 Output ECU: Both skid control ECUs <p>HINT: During Dealer Mode, related DTCs are cleared (except SAE code).</p>

MONITOR DESCRIPTION

If brake pedal stroke sensor assembly zero point calibration is not performed after any of the following procedures are performed and the vehicle is driven at a certain speed or more, the No. 1 skid control ECU (brake booster with master cylinder assembly) judges that learning has not been completed, the MIL is illuminated and a DTC is stored.

- The No. 1 skid control ECU (brake booster with master cylinder assembly) has been replaced with a new one.
- After the brake pedal stroke sensor assembly, brake pedal, brake booster with master cylinder assembly, brake actuator assembly or yaw rate and acceleration sensor (airbag ECU assembly) has been removed and installed or replaced, the zero point is cleared.

MONITOR STRATEGY

Related DTCs	C05C0: Brake pedal position sensor learning not complete
Required Sensors/Components(Main)	No. 1 skid control ECU (brake booster with master cylinder assembly)
Required Sensors/Components(Related)	Speed sensor
Frequency of Operation	Continuous
Duration	-
MIL Operation	Immediately
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Monitor runs whenever the following DTCs are not stored	U0129: Lost communication with BSCM (CH1)
Vehicle speed	40 km/h (24.85 mph) or more

TYPICAL MALFUNCTION THRESHOLDS

Either of the following conditions is met	-
Brake pedal position sensor 1: Zero position learning value	Not stored
Brake pedal position sensor 2: Zero position learning value	Not stored

COMPONENT OPERATING RANGE

All of the following conditions are met	-
CAN communication fail (U0129, U025E)	Not detected
Brake pedal position sensor 1: Zero position learning value	Stored
Brake pedal position sensor 2: Zero position learning value	Stored

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. Drive the vehicle at a speed of 40 km/h (25 mph) or more for 1 minute. [*]

HINT:

[*]: Normal judgment procedure.

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

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

*: Electric Parking Brake System

8. 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 BRAKE PEDAL

(a) Check that the brake pedal and the brake pedal stroke sensor assembly are properly installed and that the pedal can be depressed normally.

(b) Check and adjust the brake pedal height.

HINT:

Click here [INFO](#)

(c) Adjust the brake pedal stroke sensor assembly.

HINT:

Click here [INFO](#)

NEXT



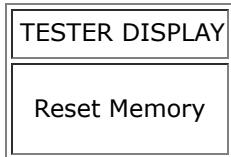
2. CLEAR ZERO POINT VALUE FOR BRAKE PEDAL STROKE SENSOR ASSEMBLY

(a) Clear the zero point value for the brake pedal stroke sensor assembly.

HINT:

Click here [INFO](#)

Chassis > Brake/EPB > Utility

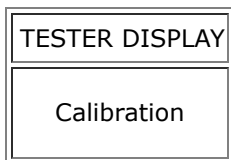
**NEXT****3. PERFORM BRAKE PEDAL STROKE SENSOR ASSEMBLY ZERO POINT CALIBRATION**

(a) Perform brake pedal stroke sensor assembly zero point calibration.

HINT:

[Click here](#) **INFO**

Chassis > Brake/EPB > Utility

**NEXT****4. CLEAR DTC**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Chassis > Brake Booster > Clear DTCs

Chassis > Brake/EPB > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off.

NEXT

5. RECONFIRM DTC

Pre-procedure1

- (a) Based on the Freeze Frame Data and interview with the customer, attempt to reproduce the conditions when the malfunction occurred.

Procedure1

- (b) Check if the same DTC is output.

Chassis > Brake Booster > Trouble Codes

RESULT	PROCEED TO
Only C05C000 is output	A
DTCs are not output	B
C05C000 and other DTCs are output	C

Post-procedure1

- (c) None

B ▶ **END****C** ▶ **REPAIR CIRCUITS INDICATED BY OUTPUT DTCS****A**
▼**6. RECONFIRM DTC**

- (a) Check the DTCs that are output.

Chassis > Brake/EPB > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
DTCs are output	B

B ▶ **REPAIR CIRCUITS INDICATED BY OUTPUT DTCS**



7. INSPECT BRAKE BOOSTER WITH MASTER CYLINDER ASSEMBLY (SENSOR OUTPUT)

Pre-procedure1

(a) Turn the ignition switch off.

Procedure1

(b) 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-procedure2

(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.

Pre-procedure3

(e) Turn the ignition switch to ON.

Procedure3

(f) Measure the voltage according to the value(s) in the table below.

Standard Voltage:



[Click Location & Routing\(A5\).](#)

[Click Connector\(A5\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A5-4 (VCSK) -A5-5 (SKG)	Ignition switch ON	4.84 to 5.16 V	V

Post-procedure1

(g) None

OK **REPLACE BRAKE PEDAL STROKE SENSOR ASSEMBLY**

Click here

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

