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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: C055795; Left Rear Wheel Speed Sensor Incorrect Component Installed; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**C055795**	**Left Rear Wheel Speed Sensor Incorrect Component Installed**

DESCRIPTION

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
C055795	Left Rear Wheel Speed Sensor Incorrect Component Installed	The rear speed sensor LH is installed incorrectly.	• Rear speed sensor LH*1 • Rear speed sensor LH (rear axle hub and bearing assembly LH)*2	Comes on	Brake/EPB	A	• SAE Code: C0557 • Output ECU: No. 2 skid control ECU (brake actuator assembly)

*1: for AWD
*2: for 2WD

MONITOR DESCRIPTION

The No. 2 skid control ECU (brake actuator assembly) monitors the output current of each speed sensor.

If the output current of the speed sensor is a certain value or more when the power supply voltage of the No. 2 skid control ECU (brake actuator assembly) is normal, the supply voltage of the speed sensor is a certain value or more, and the speed sensor outputs the vehicle speed pulse, the No. 2 skid control ECU (brake actuator assembly) judges that the speed sensor is installed incorrectly, and illuminates the MIL and stores a DTC.

MONITOR STRATEGY

Related DTCs	C0557: Wheel speed sensor (RL) range/performance
Required Sensors/Components(Main)	Speed sensor
Required Sensors/Components(Related)	Speed sensor No. 2 skid control ECU (brake actuator assembly)
Frequency of Operation	Continuous
Duration	5 times
MIL Operation	Immediately
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Monitor runs whenever the following DTCs are not stored	C0501 (Case 4): Wheel speed sensor (FL) range/performance (pulse output high) C0502: Wheel speed sensor (FL) voltage circuit open C0503: Wheel speed sensor (FL) voltage circuit high C0507 (Case 4): Wheel speed sensor (FR) range/performance (pulse output high) C0508: Wheel speed sensor (FR) voltage circuit open C0509: Wheel speed sensor (FR) voltage circuit high C050D (Case 4): Wheel speed sensor (RL) range/performance (pulse output high) C050E: Wheel speed sensor (RL) voltage circuit open C050F: Wheel speed sensor (RL) voltage circuit high C0513 (Case 4): Wheel speed sensor (RR) range/performance (pulse output high) C0514: Wheel speed sensor (RR) voltage circuit open C0515: Wheel speed sensor (RR) voltage circuit high C137D: Brake system voltage circuit high C14E1 (Case 1): Wheel speed sensor (FL) voltage circuit low C14E1 (Case 2): Wheel speed sensor (FL) voltage circuit low (continuation) C14E4 (Case 1): Wheel speed sensor (FR) voltage circuit low C14E4 (Case 2): Wheel speed sensor (FR) voltage circuit low (continuation) C14E7 (Case 1): Wheel speed sensor (RL) voltage circuit low C14E7 (Case 2): Wheel speed sensor (RL) voltage circuit low (continuation) C14EA (Case 1): Wheel speed sensor (RR) voltage circuit low C14EA (Case 2): Wheel speed sensor (RR) voltage circuit low (continuation)
All of the following conditions are met	A, B, C, D, E, F and G
A. Wheel speed sensor open circuit signal (IC Data)	Off
B. Wheel speed sensor power supply voltage low signal (IC Data)	Off
C. Following condition is met	More than 0.22 seconds
+BS voltage	9.5 V or higher
D. Following condition is met	More than 0.22 seconds
+BS voltage	17.4 V or less
E. Wheel speed sensor pulse	Exist
F. IGR voltage	Higher than 10 V
G. IGP voltage	Higher than 10 V

TYPICAL MALFUNCTION THRESHOLDS

Wheel speed sensor overcurrent state (IC Data)	On

COMPONENT OPERATING RANGE

All of the following conditions are met	A, B, C, D, E, F, G, H and I
A. Wheel speed sensor open circuit signal (IC Data)	Off
B. Wheel speed sensor power supply voltage low signal (IC Data)	Off
C. Following condition is met	More than 0.22 seconds
+BS voltage	9.5 V or higher
D. Following condition is met	More than 0.22 seconds
+BS voltage	17.4 V or less
E. Wheel speed sensor pulse	Exist
F. Wheel speed sensor fail (C0502, C0503, C0508, C0509, C050E, C050F, C0514, C0515, C14E1, C14E4, C14E7, C14EA)	Not detected
G. Wheel speed sensor range/performance (pulse output high) fail (C0501, C0507, C050D, C0513)	Not detected
H. Speed sensor output value	10 km/h (6.21 mph) or more
I. Wheel speed sensor overcurrent state (IC Data)	Off

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. Repeat the following step 5 times. [*]
    - Drive the vehicle at a speed of 10 km/h (6 mph) or more.

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.

PROCEDURE

1.	**CHECK VEHICLE**

RESULT	PROCEED TO
for 2WD	A
for AWD	B

B ▶ **GO TO STEP 5**

A ▼

2.	**CHECK PART NUMBER (REAR AXLE HUB AND BEARING ASSEMBLY LH)**

(a) Check that the rear speed sensor LH (rear axle hub and bearing assembly LH) is installed.

OK:

Proper rear speed sensor LH (rear axle hub and bearing assembly LH) is installed.

NOTICE:

If it is necessary to remove components in order to check the rear speed sensor LH (rear axle hub and bearing assembly LH), follow the relevant installation and removal procedures and precautions for those components.

HINT:

The rear speed sensor LH and rear speed sensor rotor LH are incorporated into the rear axle hub and bearing assembly LH.

If the rear speed sensor LH and rear speed sensor rotor LH need to be replaced, replace the rear axle hub and bearing assembly LH.

NG ▶ **REPLACE REAR AXLE HUB AND BEARING ASSEMBLY LH** INFO

OK ▼

3.	**CLEAR DTC**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Chassis > Brake/EPB > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off.

NEXT

4.	**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/EPB > Trouble Codes

HINT:

The rear speed sensor LH and rear speed sensor rotor LH are incorporated into the rear axle hub and bearing assembly LH.

If the rear speed sensor LH and rear speed sensor rotor LH need to be replaced, replace the rear axle hub and bearing assembly LH.

RESULT	PROCEED TO
C055795 is not output	A
C055795 is output	B

Post-procedure1

(c) None

A **USE SIMULATION METHOD TO CHECK**

B ▶ **REPLACE REAR AXLE HUB AND BEARING ASSEMBLY LH**

INFO

5.	**CHECK PART NUMBER (REAR SPEED SENSOR LH)**

(a) Check that the rear speed sensor LH is installed.

OK:

Proper rear speed sensor LH is installed.

NOTICE:

If it is necessary to remove components in order to check the rear speed sensor LH, follow the relevant installation and removal procedures and precautions for those components.

NG ▶ **REPLACE REAR SPEED SENSOR LH**

OK

▼

6.	**CLEAR DTC**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Chassis > Brake/EPB > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off.

NEXT

▼

7.	**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/EPB > Trouble Codes

RESULT	PROCEED TO
C055795 is not output	A
C055795 is output	B

Post-procedure1

(c) None

A ▶ **USE SIMULATION METHOD TO CHECK**

B ▶ **REPLACE REAR SPEED SENSOR LH**