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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: PARK ASSIST / MONITORING: INTUITIVE PARKING ASSIST SYSTEM: C1AE587; Ultrasonic Sensor (Front Right Side) Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

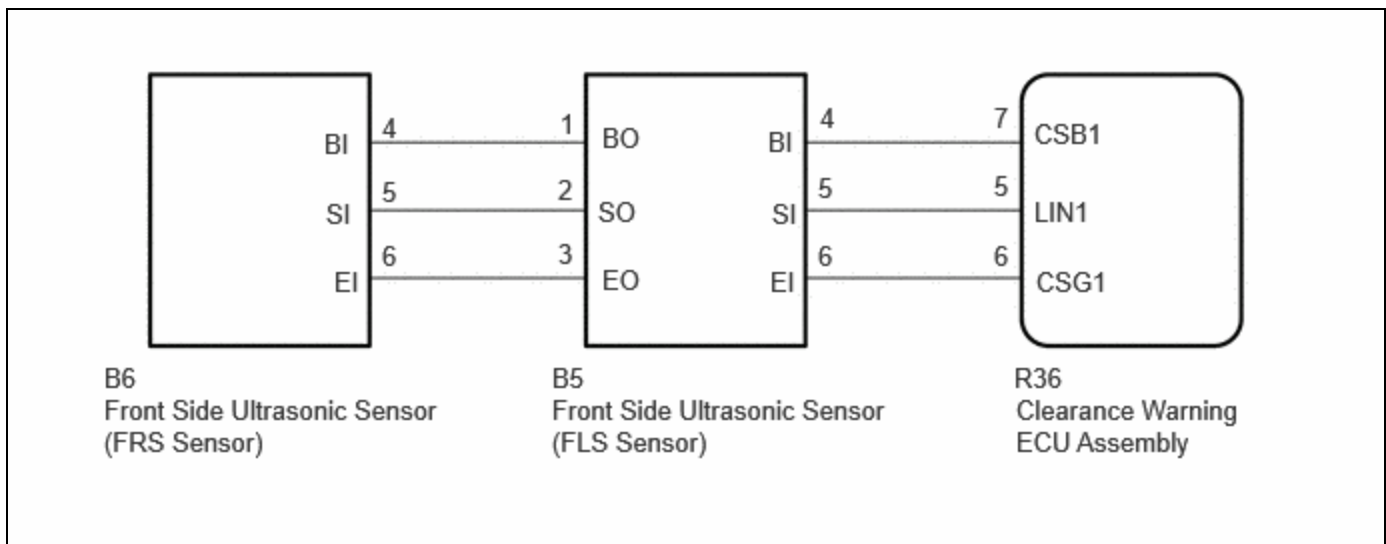
DTC	C1AE587	Ultrasonic Sensor (Front Right Side) Missing Message
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DESCRIPTION

This DTC is output when an open circuit or short occurs in the communication line between a front side ultrasonic sensor (FRS sensor) and the front side ultrasonic sensor (FLS sensor) or when a malfunction occurs in a front side ultrasonic sensor (FRS sensor) on the front.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
C1AE587	Ultrasonic Sensor (Front Right Side) Missing Message	Front side ultrasonic sensor (FRS sensor) lost communication	<ul style="list-style-type: none"> Front side ultrasonic sensor (FRS sensor) Harness or connector Clearance warning ECU assembly 	Clearance Warning	B

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- Perform registration after replacing and installing the ultrasonic sensor or clearance warning ECU assembly.

[Click here](#) INFO

- If a DTC is detected again after the repair, turn the ignition switch to ON and turn the intuitive parking assist system on, and then clear the DTC.
- If C1AE096 is output at the same time, check C1AE096 first.

Click here 

PROCEDURE

1. CHECK DTC

(a) If DTC C1AE096 is output, perform troubleshooting for DTC C1AE096 first.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
C1AE096 is not output	A
C1AE096 is output	B

B  **GO TO C1AE096**

A



2. VEHICLE CONDITION AND WORK DETAILS CHECK

(a) Check the vehicle condition and work details.

RESULT	PROCEED TO
The clearance warning ECU assembly or ultrasonic sensor has not been replaced	A
The clearance warning ECU assembly or ultrasonic sensor has been replaced	B

B  **GO TO CALIBRATION**

A



3. CHECK CONNECTOR CONNECTION CONDITION (ULTRASONIC SENSOR)

(a) Check that the connector is properly connected to the front side ultrasonic sensor.

NEXT



4.	CLEAR DTC
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(a) Clear the DTCs.

Body Electrical > Clearance Warning > Clear DTCs

NEXT



5.	CHECK FOR DTC
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(a) Check for DTCs.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
C1AE587 is output	B
None of the above conditions are met	C

A ▶ **END (CONNECTOR CONNECTION MALFUNCTION)**

C ▶ **GO TO DTC CHART**

Click here [INFO](#)

B



6.	CHECK CONNECTOR CONNECTION CONDITION (CLEARANCE WARNING ECU ASSEMBLY)
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(a) Check that the connector is properly connected to the clearance warning ECU assembly.

NEXT

7.	CLEAR DTC
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(a) Clear the DTCs.

Body Electrical > Clearance Warning > Clear DTCs**NEXT**

8.	CHECK FOR DTC
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(a) Check for DTCs.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
C1AE087 and C1AE587 are output	B
C1AE587 is output	C
None of the above conditions are met	D

A **USE SIMULATION METHOD TO CHECK****B** **GO TO DTC (C1AE087)****D** **GO TO DTC CHART**

Click here

C

9. CHECK HARNESS AND CONNECTOR (FRONT SIDE ULTRASONIC SENSOR [FRS SENSOR] - FRONT SIDE ULTRASONIC SENSOR [FLS SENSOR])

Pre-procedure1

- (a) Disconnect the B6 front side ultrasonic sensor (FRS sensor) connector.
- (b) Disconnect the B5 front side ultrasonic sensor (FLS sensor) connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(B6,B5\)](#)

[Click Connector\(B6\)](#)

[Click Connector\(B5\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
B6-4 (BI) - B5-1 (BO)	Always	Below 1 Ω	Ω
B6-5 (SI) - B5-2 (SO)	Always	Below 1 Ω	Ω
B6-6 (EI) - B5-3 (EO)	Always	Below 1 Ω	Ω
B6-4 (BI) or B5-1 (BO) - Body ground	Always	10 k Ω or higher	k Ω
B6-5 (SI) or B5-2 (SO) - Body ground	Always	10 k Ω or higher	k Ω
B6-6 (EI) or B5-3 (EO) - Body ground	Always	10 k Ω or higher	k Ω

Post-procedure1

- (d) None

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



10. REPLACE FRONT SIDE ULTRASONIC SENSOR (FRS SENSOR)

- (a) Replace the front side ultrasonic sensor (FRS sensor) with a known good one.

HINT:

- Click here [INFO](#)
- All of the sensors are interchangeable. To confirm whether a sensor is functioning normally, switch it with a known good sensor from the other end of the vehicle.

NEXT

11.	CLEAR DTC
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(a) Clear the DTCs.

Body Electrical > Clearance Warning > Clear DTCs**NEXT**

12.	CHECK FOR DTC
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(a) Check for DTCs.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
C1AE587 is output	B
None of the above conditions are met	C

A **END (FRONT SIDE ULTRASONIC SENSOR (FRS SENSOR) WAS DEFECTIVE)****B** **REPLACE CLEARANCE WARNING ECU ASSEMBLY****C** **GO TO DTC CHART**Click here [INFO](#)