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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: PARK ASSIST / MONITORING: INTUITIVE PARKING ASSIST SYSTEM: C1AE487; Ultrasonic Sensor (Front Right Corner) Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

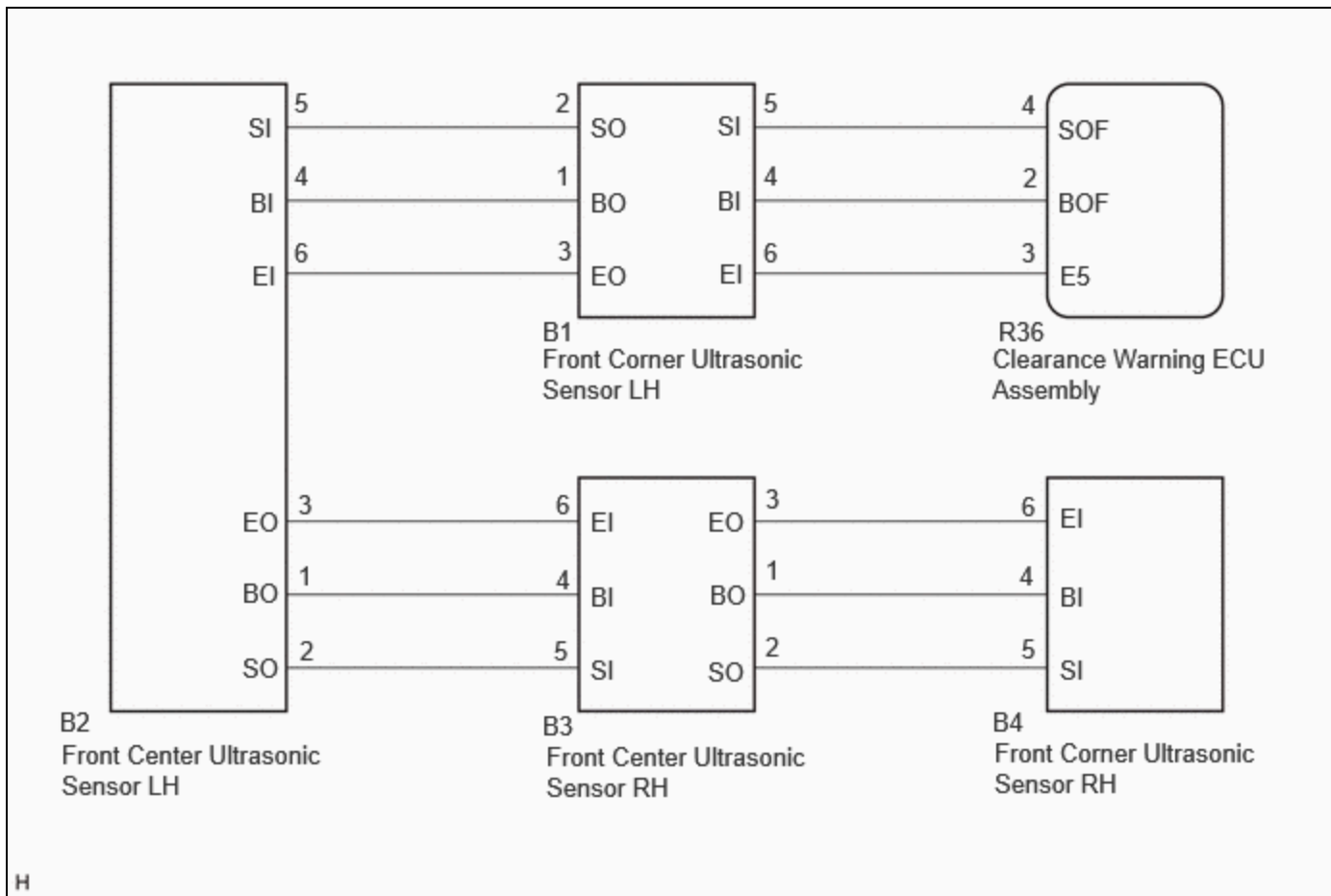
DTC	C1AE487	Ultrasonic Sensor (Front Right Corner) Missing Message
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DESCRIPTION

This DTC is stored when an open circuit or short occurs in the communication line between the front corner ultrasonic sensor RH and the front center ultrasonic sensor RH, or when a malfunction occurs in the front corner ultrasonic sensor RH.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
C1AE487	Ultrasonic Sensor (Front Right Corner) Missing Message	Front corner ultrasonic sensor RH lost communication	<ul style="list-style-type: none"> • Front corner ultrasonic sensor RH • 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 C1AE396 is output at the same time, check C1AE396 first.

[Click here](#) INFO

PROCEDURE

1.	CHECK DTC
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(a) If DTC C1AE396 is output, perform troubleshooting for DTC C1AE396 first.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
C1AE396 is not output	A
C1AE396 is output	B

B ▶ [GO TO C1AE396](#)**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 corner ultrasonic sensor and front center ultrasonic sensor.

NEXT**4. CLEAR DTC**

(a) Clear the DTCs.

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

5. CHECK FOR DTC

(a) Check for DTCs.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
C1AE487 is not output	A
C1AE487 is output	B

A ▶ END (CONNECTOR CONNECTION MALFUNCTION)**B****6. CHECK CONNECTOR CONNECTION CONDITION (CLEARANCE WARNING ECU ASSEMBLY)**

(a) Check that the connector is properly connected to the clearance warning ECU assembly.

NEXT**7. CLEAR DTC**

(a) Clear the DTCs.

Body Electrical > Clearance Warning > Clear DTCs**NEXT****8. CHECK FOR DTC**

(a) Check for DTCs.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
C1AE187, C1AE287, C1AE387 and C1AE487 are output	B
C1AE287, C1AE387 and C1AE487 are output	C
C1AE387 and C1AE487 are output	D
C1AE487 is output	E

A ► **USE SIMULATION METHOD TO CHECK**

B ► **GO TO CORRESPONDING FLOWCHART (INTUITIVE PARKING ASSIST SYSTEM (C1AE187))**

C ► **GO TO CORRESPONDING FLOWCHART (INTUITIVE PARKING ASSIST SYSTEM (C1AE287))**

D ► **GO TO CORRESPONDING FLOWCHART (INTUITIVE PARKING ASSIST SYSTEM (C1AE387))**

E



9.	CHECK WIRE HARNESS AND CONNECTOR (FRONT CENTER ULTRASONIC SENSOR RH - FRONT CORNER ULTRASONIC SENSOR RH)
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Pre-procedure1

- (a) Disconnect the B3 front center ultrasonic sensor RH connector.
- (b) Disconnect the B4 front corner ultrasonic sensor RH connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(B3,B4\)](#)

[Click Connector\(B3\)](#)

[Click Connector\(B4\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
B3-1 (BO) - B4-4 (BI)	Always	Below 1 Ω	Ω
B3-2 (SO) - B4-5 (SI)	Always	Below 1 Ω	Ω
B3-3 (EO) - B4-6 (EI)	Always	Below 1 Ω	Ω
B3-1 (BO) or B4-4 (BI) - Body ground	Always	10 k Ω or higher	k Ω
B3-2 (SO) or B4-5 (SI) - Body ground	Always	10 k Ω or higher	k Ω
B3-3 (EO) or B4-6 (EI) - Body ground	Always	10 k Ω or higher	k Ω

Post-procedure1

(d) None

NG  **REPAIR OR REPLACE WIRE HARNESS OR CONNECTOR**

OK



10. REPLACE FRONT CORNER ULTRASONIC SENSOR RH

(a) Replace the front corner ultrasonic sensor RH with a new or normally functioning one.

HINT:

- Click here 
- To check if the ultrasonic sensor is functioning correctly, replace it with another ultrasonic sensor.

NEXT



11. CLEAR DTC

(a) Clear the DTCs.

Body Electrical > Clearance Warning > Clear DTCs

NEXT



12. CHECK FOR DTC

(a) Check for DTCs.

Body Electrical > Clearance Warning > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
C1AE487 is output	B

A ▶ END (FRONT CORNER ULTRASONIC SENSOR RH WAS DEFECTIVE)

B ▶ REPLACE CLEARANCE WARNING ECU ASSEMBLY

