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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------|
| Last Modified: 12-04-2024 | 6.11:8.1.0 | Doc ID: RM100000028VR1 |
| Model Year Start: 2023 | Model: Prius Prime | Prod Date Range: [12/2022 -] |
| Title: PARK ASSIST / MONITORING: INTUITIVE PARKING ASSIST SYSTEM: C1AE387; Ultrasonic Sensor (Front Right Center) Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -] | | |

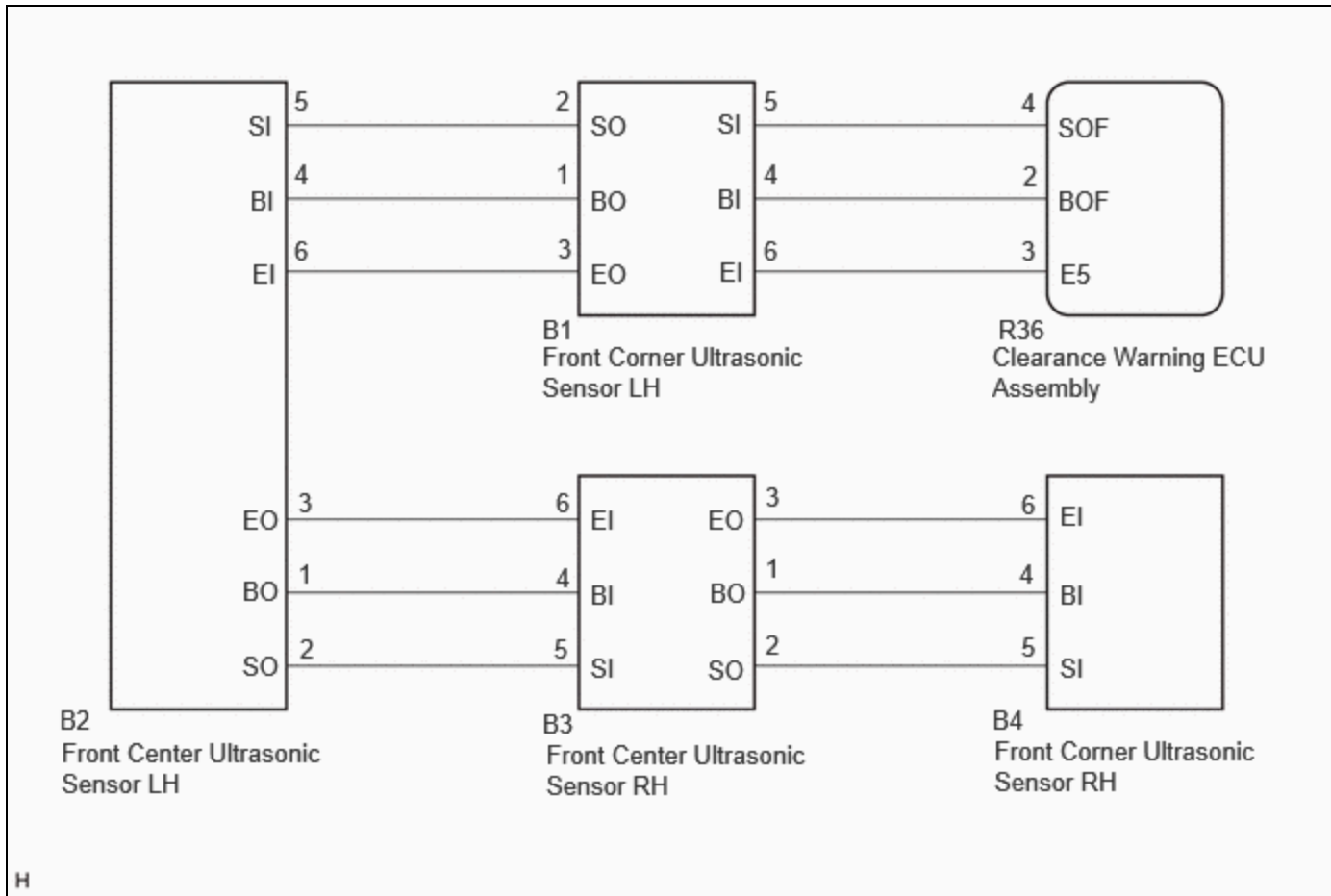
| | | |
|------------|----------------|---------------------------------------------------------------|
| DTC | C1AE387 | Ultrasonic Sensor (Front Right Center) Missing Message |
|------------|----------------|---------------------------------------------------------------|

DESCRIPTION

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

| DTC NO. | DETECTION ITEM | DTC DETECTION CONDITION | TROUBLE AREA | DTC OUTPUT FROM | PRIORITY |
|---------|--------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------|
| C1AE387 | Ultrasonic Sensor (Front Right Center) Missing Message | Front center ultrasonic sensor RH lost communication | <ul style="list-style-type: none"> • Front center 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 C1AE296 is output at the same time, check C1AE296 first.

[Click here](#) INFO

PROCEDURE

| | |
|-----------|------------------|
| 1. | CHECK DTC |
|-----------|------------------|

(a) If DTC C1AE296 is output, perform troubleshooting for DTC C1AE296 first.

Body Electrical > Clearance Warning > Trouble Codes

| RESULT | PROCEED TO |
|-----------------------|------------|
| C1AE296 is not output | A |
| C1AE296 is output | B |

B ▶ [GO TO C1AE296](#)

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 |
|-----------------------|------------|
| C1AE387 is not output | A |
| C1AE387 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 |
| Only C1AE387 is output | F |

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))**

E ► **GO TO CORRESPONDING FLOWCHART (INTUITIVE PARKING ASSIST SYSTEM (C1AE487))**

F ► **GO TO STEP 10**

D



| | |
|-----------|-----------------------------------------------------------------------------------------------------------------|
| 9. | CHECK WIRE HARNESS AND CONNECTOR (FRONT CENTER ULTRASONIC SENSOR LH - FRONT CENTER ULTRASONIC SENSOR RH) |
|-----------|-----------------------------------------------------------------------------------------------------------------|

Pre-procedure1

- (a) Disconnect the B2 front center ultrasonic sensor LH connector.
- (b) Disconnect the B3 front center ultrasonic sensor RH connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(B2,B3\)](#)

[Click Connector\(B2\)](#)

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

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|--------------------------------------|-----------|-------------------------|------------|
| B2-1 (BO) - B3-4 (BI) | Always | Below 1 Ω | Ω |
| B2-2 (SO) - B3-5 (SI) | Always | Below 1 Ω | Ω |
| B2-3 (EO) - B3-6 (EI) | Always | Below 1 Ω | Ω |
| B2-1 (BO) or B3-4 (BI) - Body ground | Always | 10 k Ω or higher | k Ω |
| B2-2 (SO) or B3-5 (SI) - Body ground | Always | 10 k Ω or higher | k Ω |
| B2-3 (EO) or B3-6 (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 CENTER ULTRASONIC SENSOR RH

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

HINT:

- Click here [INFO](#)
- 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 |
| C1AE387 is output | B |

A ▶ **END (FRONT CENTER ULTRASONIC SENSOR RH WAS DEFECTIVE)**

B ▶ **REPLACE CLEARANCE WARNING ECU ASSEMBLY**

