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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: PARK ASSIST / MONITORING: PANORAMIC VIEW MONITOR SYSTEM: U11B687; Lost Communication with Clearance Sonar Module (ch2) Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	U11B687	Lost Communication with Clearance Sonar Module (ch2) Missing Message
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DESCRIPTION

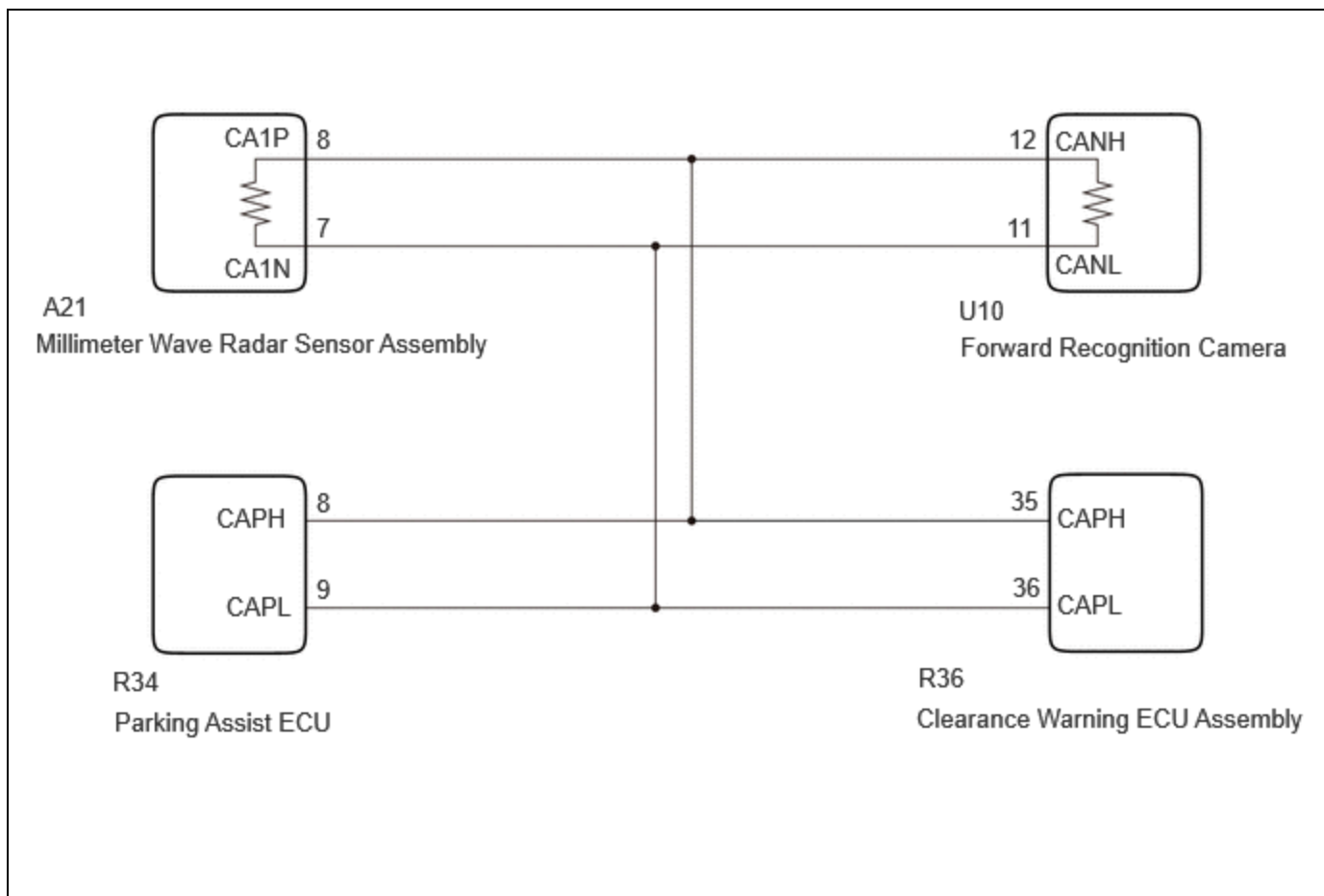
This DTC is output when the parking assist ECU detects lost communication with the clearance warning ECU assembly.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
U11B687	Lost Communication with Intuitive Parking Assist Module (ch2) Missing Message	The parking assist ECU is unable to receive communication from the clearance warning ECU assembly	<ul style="list-style-type: none"> • Harness or connector • Clearance warning ECU assembly • Parking assist ECU • Forward recognition camera • Millimeter wave radar sensor assembly 	Circumference Monitoring Camera Control Module	A

PATTERN	DTC OUTPUT PART NAME (DISPLAY ON GTS)				SUSPECTED AREA (MALFUNCTION STATUS)
	PARKING ASSIST ECU	CLEARANCE WARNING ECU ASSEMBLY	FORWARD RECOGNITION CAMERA	MILLIMETER WAVE RADAR SENSOR ASSEMBLY	
	CIRCUMFERENCE MONITORING CAMERA CONTROL MODULE	CLEARANCE WARNING ECU ASSEMBLY	FRONT RECOGNITION CAMERA		
	U11B687	U117987	U023587	U010487	
Pattern 1	○	○	○	○	Harness or connector (Open or short) Millimeter wave radar sensor assembly
○: DTC is output -: DTC is not output					

PATTERN	DTC OUTPUT PART NAME (DISPLAY ON GTS)				SUSPECTED AREA (MALFUNCTION STATUS)
	PARKING ASSIST ECU	CLEARANCE WARNING ECU ASSEMBLY	FORWARD RECOGNITION CAMERA	MILLIMETER WAVE RADAR SENSOR ASSEMBLY	
	CIRCUMFERENCE MONITORING CAMERA CONTROL MODULE	CLEARANCE WARNING ECU ASSEMBLY	FRONT RECOGNITION CAMERA		
	U11B687	U117987	U023587	U010487	
					(Internal malfunction)
					Clearance warning ECU assembly (Internal malfunction)
					Parking assist ECU (Internal malfunction)
					Forward recognition camera (Internal malfunction)
Pattern 2	○	○	-	-	Harness or connector (Open or short)
					Parking assist ECU (Internal malfunction)
					Clearance warning ECU assembly (Internal malfunction)
Pattern 3	○	-	-	-	Clearance warning ECU assembly (Internal malfunction)
					Parking assist ECU (Internal malfunction)
○: DTC is output -: DTC is not output					

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- Before measuring the resistance of the CAN bus, turn the ignition switch off and leave the vehicle for 1 minute or more without operating the key or any switches, or opening or closing the doors. After that, disconnect the cable from the negative (-) auxiliary battery terminal and leave the vehicle for 1 minute or more before measuring the resistance.
- After the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) auxiliary battery terminal.

[Click here](#) INFO

HINT:

When disconnecting and reconnecting the auxiliary battery, there is an automatic learning function that completes learning when the respective system is used.

[Click here](#) INFO

HINT:

- Operating the ignition switch, any other switches or a door triggers related ECU and sensor communication on the CAN. This communication will cause the resistance value to change.
- Even after DTCs are cleared, if a DTC is stored again after driving the vehicle for a while, the malfunction may be occurring due to vibration of the vehicle. In such a case, wiggling the ECUs or wire harness while performing the inspection below may help determine the cause of the malfunction.

PROCEDURE

1. CHECK FOR DTCs

(a) Read each DTC and check the diagnosis pattern using the table below.

Chassis > Circumference Monitoring Camera Control Module > Trouble Codes

Body Electrical > Clearance Warning > Trouble Codes

Chassis > Front Recognition Camera > Trouble Codes

Body Electrical > Front Radar Sensor > Trouble Codes

PATTERN	DTC OUTPUT PART NAME (DISPLAY ON GTS)			
	CIRCUMFERENCE MONITORING CAMERA CONTROL MODULE	CLEARANCE WARNING	FRONT RECOGNITION CAMERA	FRONT RADAR SENSOR
Pattern 1	U11B687	U117987	U023587	U010487
Pattern 2	U11B687	U117987	-	-
Pattern 3	U11B687	-	-	-

RESULT	PROCEED TO
Pattern 1	A
Pattern 2	B
Pattern 3	C

A  **GO TO FRONT CAMERA SYSTEM**

C  **GO TO STEP 5**

B



2.	CHECK CAN BUS MAIN WIRE (PARKING ASSIST ECU)
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Pre-procedure1

(a) Disconnect the cable from the negative (-) auxiliary battery terminal.

(b) Disconnect the parking assist ECU connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(R34\)](#)

[Click Connector\(R34\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R34-8 (CAPH) - R34-9 (CAPL)	Cable disconnected from negative (-) auxiliary battery terminal	54 to 69 Ω	Ω

Post-procedure1

(d) None

NG **REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR**

OK



3.	CHECK CAN BUS MAIN WIRE (CLEARANCE WARNING ECU ASSEMBLY)
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Pre-procedure1

- (a) Reconnect the parking assist ECU connector.
- (b) Disconnect the clearance warning ECU connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(R36\)](#)

[Click Connector\(R36\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R36-35 (CAPH) - R36-36 (CAPL)	Cable disconnected from negative (-) auxiliary battery terminal	54 to 69 Ω	Ω

Post-procedure1

(d) None

NG **REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR**

OK**4. CHECK PARKING ASSIST ECU**

Pre-procedure1

- (a) Disconnect the U10 forward recognition camera connector.
- (b) Disconnect the A21 millimeter wave radar sensor assembly connector.
- (c) Disconnect the R36 clearance warning ECU assembly connector.

Procedure1

- (d) Using an oscilloscope, check the waveform.

OK:

[Click Location & Routing\(R36\)](#)[Click Connector\(R36\)](#)

TESTER CONNECTION	CONDITION	TOOL SETTING	SPECIFIED CONDITION
R36-35(CAPH) - Body ground	Ignition switch ON	1V/DIV., 100μs./DIV.	Pulse generation
R36-36(CAPL) - Body ground	Ignition switch ON	1V/DIV., 100μs./DIV.	Pulse generation

Post-procedure1

- (e) None

OK ► **REPLACE CLEARANCE WARNING ECU ASSEMBLY****NG** ► **REPLACE PARKING ASSIST ECU****5. CHECK CLEARANCE WARNING ECU ASSEMBLY**

Pre-procedure1

- (a) Disconnect the U10 forward recognition camera connector.
- (b) Disconnect the A21 millimeter wave radar sensor assembly connector.
- (c) Disconnect the R34 parking assist ECU connector.

Procedure1

- (d) Using an oscilloscope, check the waveform.

OK:



[Click Location & Routing\(R34\)](#)

[Click Connector\(R34\)](#)

TESTER CONNECTION	CONDITION	TOOL SETTING	SPECIFIED CONDITION
R34-8(CAPH) - Body ground	Ignition switch ON	1V/DIV., 100μs./DIV.	Pulse generation
R34-9(CAPL) - Body ground	Ignition switch ON	1V/DIV., 100μs./DIV.	Pulse generation

Post-procedure1

(e) None

OK ► REPLACE PARKING ASSIST ECU

NG ► REPLACE CLEARANCE WARNING ECU ASSEMBLY

