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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: ADVANCED DRIVER ASSISTANCE SYSTEM: FRONT SIDE RADAR SENSOR SYSTEM: U123687; Lost Communication with Cruise Control Front Distance Range Sensor Front Side "B" Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

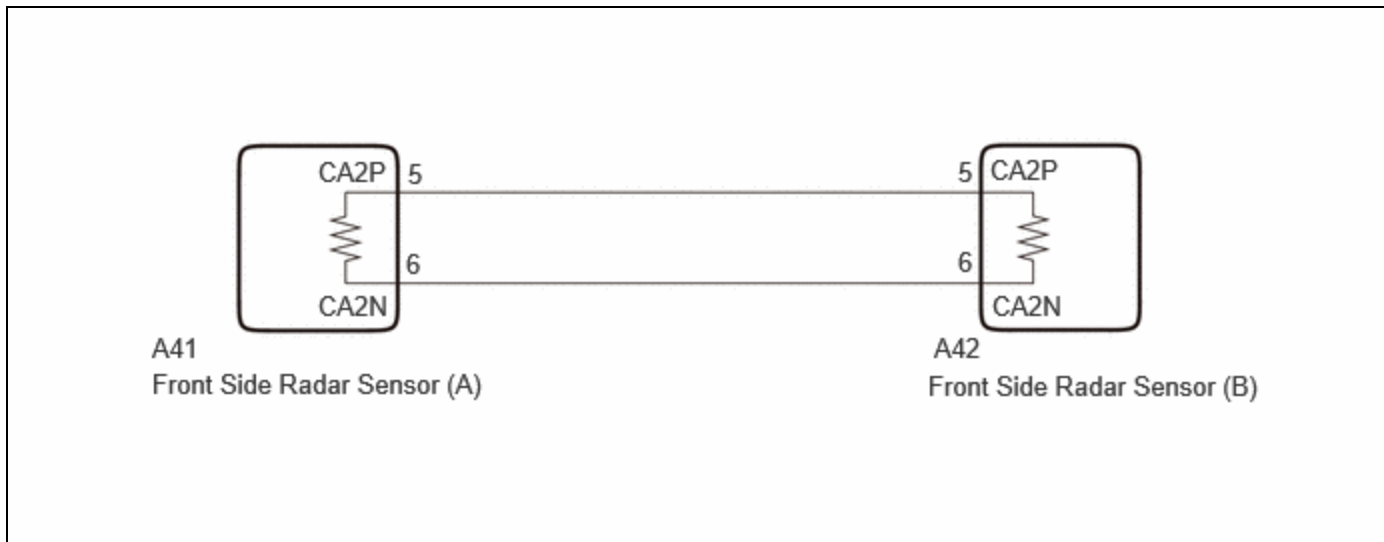
DTC	U123687	Lost Communication with Cruise Control Front Distance Range Sensor Front Side "B" Missing Message
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DESCRIPTION

When the front side radar sensor (A) detects a communication malfunction with the front side radar sensor (B), this DTC is stored.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
U123687	Lost Communication with Cruise Control Front Distance Range Sensor Front Side "B" Missing Message	The front side radar sensor (A) does not receive communication from the front side radar sensor (B)	<ul style="list-style-type: none"> • Front side radar sensor (A) • Front side radar sensor (B) • Harness or connector 	Front Side Radar "A"	A

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- When checking for DTCs, make sure that the pre-collision system is turned on.
- After replacing the front side radar sensor, make sure to perform ECU writing.

[Click here](#) INFO

- After replacing the front side radar sensor, make sure to perform front side radar sensor beam axis alignment and clear all stored vehicle control history of each system.

HINT:

Front side radar sensor beam axis alignment can be performed by using "Triangle Target", "Driving Adjustment" or "ECU DATA SAVE/WRITE".

Triangle Target: INFO

Driving Adjustment: INFO

ECU DATA SAVE/WRITE: INFO

- 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:

- Before disconnecting each connector for inspection, push in on the connector case to check that each connector is not loose or disconnected.
- When a connector is disconnected, check that the terminals and connector case are not cracked, deformed or corroded.
- If a DTC is stored again after being cleared, the malfunction may be occurring due to vibration of the vehicle. In this case, wiggle an ECU or wire harness to check if a malfunction occurs.

PROCEDURE

1.	CHECK CAN MAIN WIRE (FRONT SIDE RADAR SENSOR (B))
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Pre-procedure1

- (a) Disconnect the cable from the negative (-) auxiliary battery terminal.
- (b) Disconnect the A42 front side radar sensor (B) connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(A42\)](#)

[Click Connector\(A42\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A42-5 (CA2P) - A42-6 (CA2N)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω	Ω

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A42-5 (CA2P) - Body ground	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher	Ω
A42-6 (CA2N) - Body ground	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher	Ω
A42-5 (CA2P) - +B	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher	kΩ
A42-6 (CA2N) - +B	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher	kΩ

Post-procedure1

(d) None

NG  **GO TO STEP 3**

OK



2.	CHECK FRONT SIDE RADAR SENSOR (B)
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Pre-procedure1

- (a) Connect the A42 front side radar sensor (B) connector.
- (b) Disconnect the A41 front side radar sensor (A) connector.

Procedure1

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

Standard:



[Click Location & Routing\(A41\)](#)

[Click Connector\(A41\)](#)

TESTER CONNECTION	CONDITION	TOOL SETTING	SPECIFIED CONDITION
A41-5 (CA2P) - A41-6 (CA2N)	Ignition switch ON	1 V/DIV., 100 μs./DIV.	Pulse generation

Post-procedure1

(d) None

OK  **REPLACE FRONT SIDE RADAR SENSOR (A)** 

NG  **REPLACE FRONT SIDE RADAR SENSOR (B)** 

3. CHECK CAN MAIN WIRE (FRONT SIDE RADAR SENSOR (A))

Pre-procedure1

- (a) Connect the A42 front side radar sensor (B) connector.
- (b) Disconnect the A41 front side radar sensor (A) connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(A41\)](#)

[Click Connector\(A41\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A41-5 (CA2P) - A41-6 (CA2N)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω	Ω
A41-5 (CA2P) - Body ground	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher	Ω
A41-6 (CA2N) - Body ground	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher	Ω
A41-5 (CA2P) - +B	Cable disconnected from negative (-) auxiliary battery terminal	6 k Ω or higher	k Ω
A41-6 (CA2N) - +B	Cable disconnected from negative (-) auxiliary battery terminal	6 k Ω or higher	k Ω

Post-procedure1

- (d) None

OK **REPLACE FRONT SIDE RADAR SENSOR (A)**

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

