Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BI32
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: HYBRID CONTROL SYSTEM (for PHEV Model): U01BD87; Lost Communication with DC/DC Converter Control Module "C" Missing Message; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	**U01BD87**	**Lost Communication with DC/DC Converter Control Module "C" Missing Message**

DESCRIPTION

The hybrid vehicle control ECU transmits and receives signals via CAN communication to and from the DC/DC converter assembly.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
U01BD87	Lost Communication with DC/DC Converter Control Module "C" Missing Message	A CAN communication error between the DC/DC converter and hybrid vehicle control ECU (CAN communication system malfunction) occurs (1 trip detection logic)	CAN communication system	Does not come on	Master Warning: Comes on	Hybrid Control	B	SAE Code: U01BD

CONFIRMATION DRIVING PATTERN

HINT:

After repairs have been completed, clear the DTCs and then check that the vehicle has returned to normal by performing the following All Readiness check procedure.

Click here INFO

1. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
2. Turn the ignition switch off and wait for 2 minutes or more.
3. Turn the ignition switch to ON (READY) and wait for 2 minutes or more.
4. Enter the following menus: Powertrain / Hybrid Control / Utility / All Readiness.
5. Check the DTC judgment result.

HINT:

- If the judgment result shows NORMAL, the system is normal.
- If the judgment result shows ABNORMAL, the system has a malfunction.
- If the judgment result shows INCOMPLETE or N/A, perform driving pattern again.

WIRING DIAGRAM

Refer to the wiring diagram for DTC P19E100.

Click here INFO

PROCEDURE

1.	**CHECK AMD TERMINAL CONNECTION CONDITION**

CAUTION:

Be sure to wear insulated gloves.

Pre-procedure1

(a) Check that the service plug grip is not installed.

NOTICE:

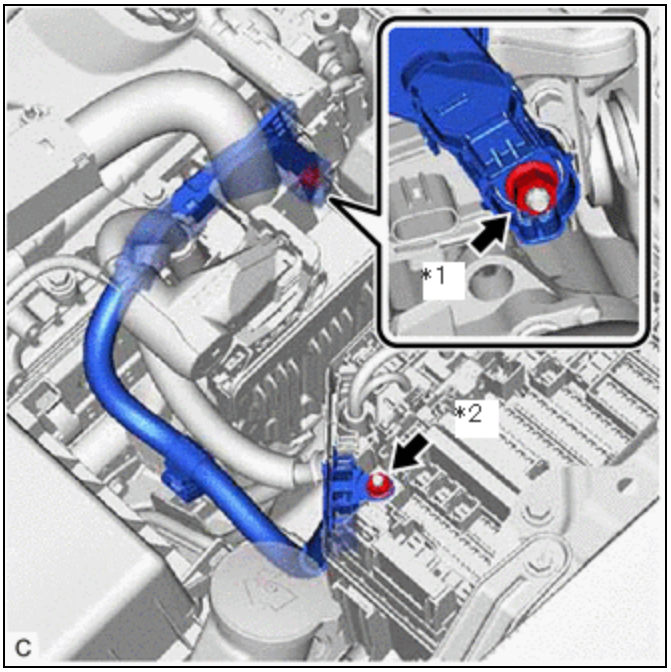
After removing the service plug grip, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

Procedure1

(b) Check that the nuts for the AMD terminal are tightened to the specified torque, the AMD terminal is connected securely, and there are no contact problems.

Result:

RESULT		PROCEED TO
There are no arc marks.	The terminal is connected securely and there are no contact problems.	A
There are no arc marks.	The terminal is not connected securely and there is a contact problem.	B
There are arc marks.	-	C



*1	AMD Terminal (Inverter with Converter Assembly Side)
*2	AMD Terminal (No. 1 Engine Room Relay Block and No. 1 Junction Block Assembly Side)

Post-procedure1

(c) None.

B ▶ **CONNECT SECURELY**

C ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

A

2.	**CHECK AMD TERMINAL VOLTAGE**

CAUTION:

Be sure to wear insulated gloves.

Pre-procedure1

(a) Check that the service plug grip is not installed.

NOTICE:

After removing the service plug grip, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

(b) Connect the cable to the negative (-) auxiliary battery terminal.

Procedure1

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

Standard Voltage:

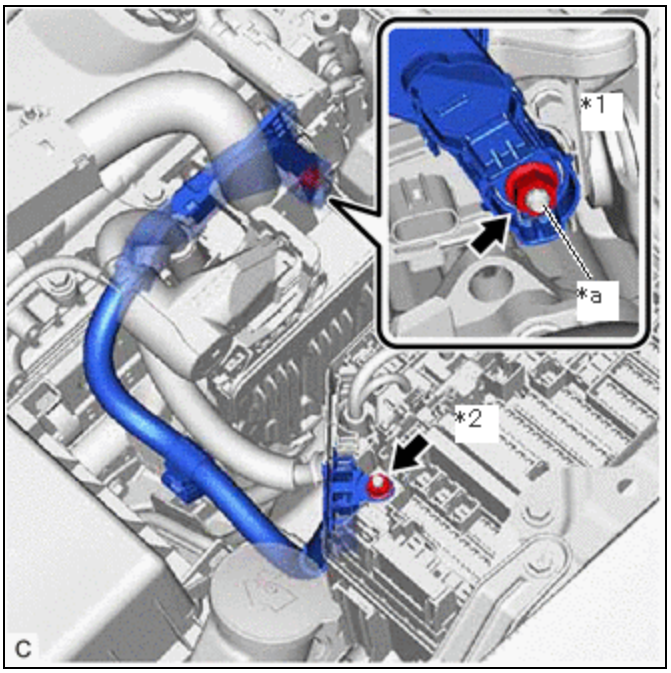
EWD INFO

Click Location & Routing(I1)
Click Connector(I1)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
I1-1 (AMD) - Body ground	Ignition switch off	Same as auxiliary battery voltage

Result:

PROCEED TO
OK
NG



*1	AMD Terminal (Inverter with Converter Assembly Side)
*2	AMD Terminal (No. 1 Engine Room Relay Block and No. 1 Junction Block Assembly Side)
*a	I1-1 (AMD)

Post-procedure1

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

NG ▶ **REPLACE MALFUNCTIONING PARTS**

OK ▼

3.	**CHECK CONNECTOR CONNECTION CONDITION (INVERTER WITH CONVERTER ASSEMBLY CONNECTOR)**

CAUTION:

Be sure to wear insulated gloves.

Pre-procedure1

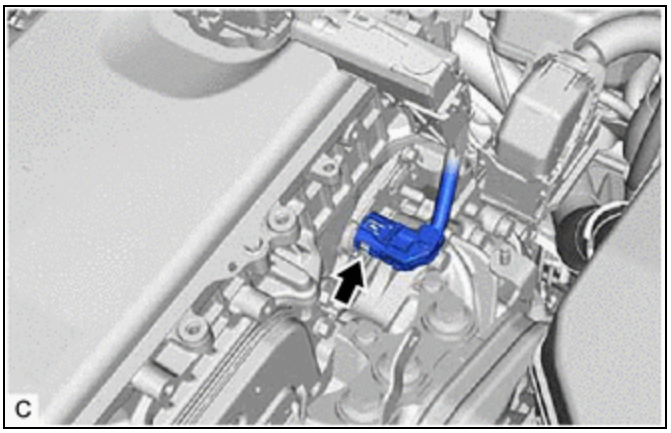
(a) Check that the service plug grip is not installed.

NOTICE:

After removing the service plug grip, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

Procedure1

(b) Check the connection condition of the low voltage connectors of the inverter with converter assembly and the contact pressure of each terminal. Check the terminals for deformation, and the connector for water and foreign matter.



Click here INFO

NOTICE:

Before disconnecting the connector, confirm that it is properly connected by checking that the claws of the lock levers are engaged and that the connector cannot be pulled off.

OK:

- The connector is connected securely.
- The terminals are not deformed and are connected securely.
- No water or foreign matter in the connector.

Result:

RESULT	PROCEED TO
OK	A
NG (The connector is not connected securely.)	B

RESULT	PROCEED TO
NG (The terminals are not making secure contact or are deformed, or water or foreign matter exists in the connector.)	C

HINT:

When connecting the connector, connect it with the lock levers raised. Rotate each lock lever downward and make sure that the connector is securely connected. When a lock lever is fully lowered, a click will be heard as its claw engages. After the click is heard, pull up on the connector to confirm that it is securely connected.

Post-procedure1

(c) None.

B ▶ **CONNECT SECURELY**

C ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

A ▼

4.	CHECK HARNESS AND CONNECTOR (DC/DC CONVERTER POWER SOURCE CIRCUIT)

CAUTION:

Be sure to wear insulated gloves.

Pre-procedure1

(a) Check that the service plug grip is not installed.

NOTICE:

After removing the service plug grip, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

(b) Disconnect the inverter with converter assembly connector.

(c) Connect the cable to the negative (-) auxiliary battery terminal.

(d) Turn the ignition switch to ON.

Procedure1

(e) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

EWD INFO

Click Location & Routing(A89)
Click Connector(A89)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A89-3 (IGCT) - Body ground	Ignition switch ON	Same as auxiliary battery voltage

NOTICE:

Turning the ignition switch to ON with the service plug grip removed causes other DTCs to be stored. Clear the DTCs after performing this inspection.

Post-procedure1

(f) Turn the ignition switch off.

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

(h) Reconnect the inverter with converter assembly connector.

OK ▶ **GO TO CAN COMMUNICATION SYSTEM**

NG ▶ **REPLACE MALFUNCTIONING PARTS**