Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BO8W
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: M20A-FXS (BATTERY / CHARGING): CHARGING SYSTEM: P162B87; Lost Communication with Battery Monitor Module Missing Message; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

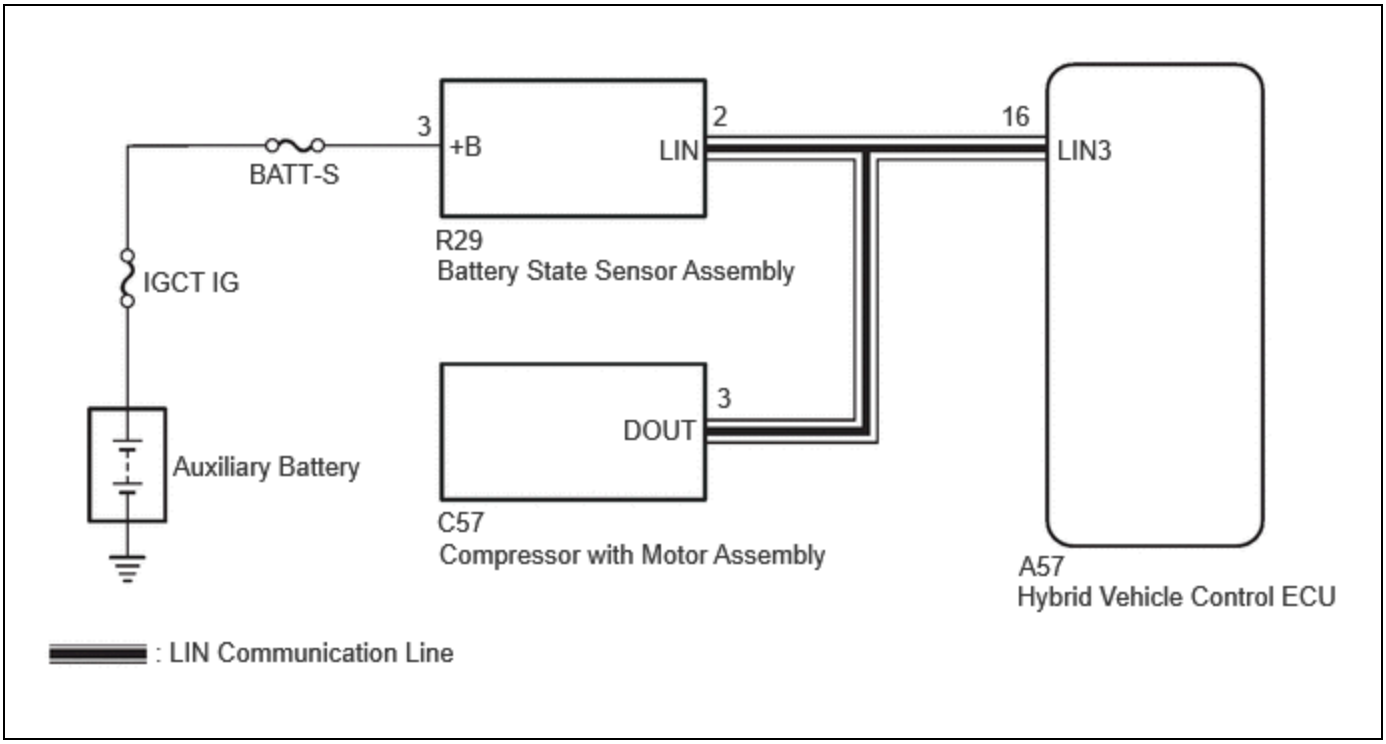
DTC	**P162B87**	**Lost Communication with Battery Monitor Module Missing Message**

DESCRIPTION

The hybrid vehicle control ECU communicates with the battery state sensor assembly via LIN communication. If a LIN communication error is detected, the hybrid vehicle control ECU stores this DTC.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P162B87	Lost Communication with Battery Monitor Module Missing Message	Hybrid vehicle control ECU, battery state sensor assembly or compressor with motor assembly communication stops for approximately 17 minutes or more with the ignition switch ON. (1 trip detection logic)	• Battery state sensor assembly • Hybrid vehicle control ECU assembly • Compressor with motor assembly • Wire harness or connector	Does not come on	Charge warning is not displayed	Hybrid Control	A	SAE Code: P162B

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- Inspect the fuses for circuits related to this system before performing the following procedure.
- Make sure to perform the necessary procedures (adjustment, calibration, initialization, or registration) after parts related to the charging system have been removed/installed or replaced.

Click here INFO

PROCEDURE

1.	**CHECK BATTERY STATE SENSOR ASSEMBLY INSTALLATION CONDITION**

HINT:

Click here INFO

NG ▶ **INSTALL BATTERY STATE SENSOR ASSEMBLY CORRECTLY**

OK ▼

2.	**CHECK HARNESS AND CONNECTOR (POWER SOURCE CIRCUIT)**

HINT:

Refer to the electronic circuit inspection procedure.

Click here INFO

Pre-procedure1

(a) Turn the ignition switch off.

(b) Check that the battery state sensor assembly connector is securely connected.

OK:
The connector is securely connected.

(c) Disconnect the R29 battery state sensor assembly connector.

(d) Check the connector case and terminals for deformation or corrosion.

OK:
No deformation or corrosion.

Procedure1

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

Standard Voltage:

EWD INFO

Click Location & Routing(R29)
Click Connector(R29)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R29-3 (+B) - Body ground	Always	11 to 14 V	V

Post-procedure1

(f) None

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (BATTERY STATE SENSOR ASSEMBLY - AUXILIARY BATTERY)**

OK ▼

3.	**CHECK HARNESS AND CONNECTOR (HYBRID VEHICLE CONTROL ECU - BATTERY STATE SENSOR ASSEMBLY)**

HINT:

Refer to the electronic circuit inspection procedure.

Click here INFO

Pre-procedure1

(a) Disconnect the A57 hybrid vehicle control ECU connector.

(b) Disconnect the R29 battery state sensor assembly connector.

(c) Disconnect the C57 compressor with motor assembly connector.

Procedure1

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

Standard Resistance:

EWD INFO

Click Location & Routing(A57,R29,C57)
Click Connector(A57)
Click Connector(R29)
Click Connector(C57)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A57-16 (LIN3) - R29-2 (LIN)	Always	Below 1 Ω	Ω
A57-16 (LIN3), R29-2 (LIN) or C57-3 (DOUT) - Body ground	Always	10 kΩ or higher	kΩ

Post-procedure1

(e) None

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (HYBRID VEHICLE CONTROL ECU - BATTERY STATE SENSOR ASSEMBLY)**

OK ▼

4.	**CHECK FOR DTCS**

(a) Check for DTCs, and note down any DTCs that are output.

Powertrain > Hybrid Control > Trouble Codes

NEXT ▼

5.	**CLEAR DTCS**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Powertrain > Hybrid Control > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off and wait for 30 seconds or more.

NEXT

6.	**CHECK FOR DTCS (AIR CONDITIONING SYSTEM)**

(a) Check for DTCs, and note down any DTCs that are output.

Body Electrical > Air Conditioner > Trouble Codes

NEXT

7.	**CLEAR DTCS (AIR CONDITIONING SYSTEM)**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Body Electrical > Air Conditioner > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off and wait for 30 seconds or more.

NEXT

8.	**CHECK FOR DTCS**

Pre-procedure1

(a) Turn the ignition switch to ON (READY) and wait for 17 minutes or more.

Procedure1

(b) Check for DTCs.

Powertrain > Hybrid Control > Trouble Codes

RESULT	PROCEED TO
P162B87 is output	A
DTCs are not output	B

Post-procedure1

(c) None

B ▶ **CHECK FOR INTERMITTENT PROBLEMS**

A

9.	**CHECK FOR DTCS (AIR CONDITIONING SYSTEM)**

(a) Check for DTCs.

Body Electrical > Air Conditioner > Trouble Codes

RESULT	PROCEED TO
B149887 is output	A
DTCs are not output	B

A ▶ **REPLACE HYBRID VEHICLE CONTROL ECU**

B ▶ **REPLACE BATTERY STATE SENSOR ASSEMBLY**