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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]

Title: HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for M20A-FXS): HOW TO PROCEED WITH TROUBLESHOOTING; 2023 - 2024 MY Prius Prius Prime [12/2022 -   ]

HOW TO PROCEED WITH TROUBLESHOOTING

PROCEDURE

1.	VEHICLE BROUGHT TO WORKSHOP

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2.	CUSTOMER PROBLEM ANALYSIS

HINT:

If the malfunction is not reproduced, perform a simulation test.

Click here [INFO]

1. For the simulation test, reproduce the driving conditions that were present when the problem occurred. These conditions should be based on the customer's comments and Freeze Frame Data that is recorded with DTCs, such as the opening angle of the accelerator pedal, SOC (stateof charge), engine coolant temperature, engine speed, and generator (MG1) / front motor (MG2) / rear motor (MGR) rpm and torque.
2. When inspecting electrical circuits, check the connection condition of the connector and the contact pressure of each terminal.

    Check the terminals for deformation, and check the connector for water ingress and foreign matter.

    Click here [INFO]

NEXT
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3.	CONDUCT BASIC INSPECTION

(a) Measure the auxiliary battery voltage with the ignition switch off.

    Standard Voltage:
    11 to 14 V

(b) Check the connection of the negative (-) and positive (+) auxiliary battery terminals.

    OK:

The terminals are connected securely and there is no contact problem.

(c) Check the connector connections and terminals to make sure that there are no abnormalities such as loose connections, deformation, etc.

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4.	READ VALUE USING GTS

(a) Perform the Health Check using the GTS.

(b) Perform the following steps when the data setting screen is displayed.

(1) Select the systems for which to perform Health Check and check for time stamp data.

Selectable items:

- Powertrain
- Chassis
- Body
- Store All Data

HINT:

The hybrid system performs control and intercommunication with other systems, so check and record the DTCs for all systems.

(c) Select "Yes" when "Do you want to store time stamp data?" is displayed.

HINT:

If "Yes" is not selected, time stamp data will not be stored.

(d) Check for DTC and Vehicle Control History (RoB) code output.

- If an abnormality judgment flag has not been output during the current trip, perform the inspection for simulation method.
- If the malfunction symptoms are not reproduced, it can be judged that the condition has returned to normal.

GTS Display

CURRENT / CONFIRMED	PENDING	HISTORY	TEST FAILED	5 DIGITS DTC	7 DIGITS DTC
x				Shows the malfunction judgment results during the current trip.	Shows the malfunction judgment results during the current trip.
		x		Shows the malfunction judgment results up to now.	-
	x			Shows the malfunction judgment results up to now.	Shows the malfunction judgment results up to now.

CURRENT / CONFIRMED	PENDING	HISTORY	TEST FAILED	5 DIGITS DTC	7 DIGITS DTC
x			x	-	Shows the malfunction judgment results during the current trip.

RESULT	PROCEED TO
DTCs are output.	A
Vehicle Control History (RoB) code is output, but DTC is not output.	B
DTC is not output and Vehicle Control History (RoB) code is not output, but malfunction symptoms are reproduced.	C

B ▶ **GO TO VEHICLE CONTROL HISTORY (RoB)**

C ▶ **GO TO PROBLEM SYMPTOMS TABLES**

A
▼

5.	**GO TO DTC CHART**

Referring to the DTC chart, perform troubleshooting according to the applicable code.

Hybrid control system

Click here INFO

Motor Generator control system

Click here INFO

Hybrid battery system

Click here INFO

NEXT
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6.	**ADJUST AND/OR REPAIR**

NEXT ▶ **CONDUCT CONFIRMATION TEST**

(a) Clear the DTCs.

(b) Then check that the vehicle has returned to normal by performing the following All Readiness check procedure.

For details, refer to the confirmation driving pattern for the relevant DTC diagnostic procedure.