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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: POWER DISTRIBUTION: SUB BATTERY SYSTEM: B103211,....,B230562; Sub Battery Control Module Internal Temperature Sensor "A" Circuit Short to Ground; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	B103211	Sub Battery Control Module Internal Temperature Sensor "A" Circuit Short to Ground
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DTC	B103215	Sub Battery Control Module Internal Temperature Sensor "A" Circuit Short to Battery or Open
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DTC	B22937F	Sub Battery System Output Power Relay "F" Actuator Stuck Off
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DTC	B22AF00	Internal DC/DC Converter System Performance
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DTC	B22B017	Internal DC/DC Converter (Circuit 1) Circuit Voltage Above Threshold
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DTC	B22B117	Internal DC/DC Converter (Circuit 2) Circuit Voltage Above Threshold
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DTC	B22B419	Internal DC/DC Converter Input Current Circuit Current Above Threshold
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DTC	B22B519	Internal DC/DC Converter Current Circuit Current Above Threshold
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DTC	B22B911	Sub Battery Control Module Reset Prevention Circuit Circuit Short to Ground
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DTC	B22B915	Sub Battery Control Module Reset Prevention Circuit Circuit Short to Battery or Open
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DTC	B22C57F	Sub Battery System Output Power Relay "B" Actuator Stuck Off
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DTC	B22C67E	Sub Battery System Input Power Relay "A" Actuator Stuck On
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DTC	B22C67F	Sub Battery System Input Power Relay "A" Actuator Stuck Off
DTC	B22CA7F	Sub Battery System Output Power Relay "A" Actuator Stuck Off
DTC	B22D562	Sub Battery Control Module System Voltage Sensor Signal Compare Failure
DTC	B22D61C	Sub Battery Control Module Overcurrent/Overvoltage Detection Circuit Voltage Out of Range
DTC	B22E417	Sub Battery Circuit Voltage Above Threshold
DTC	B22E619	Sub Battery Circuit Current Above Threshold
DTC	B22EF7E	Sub Battery System Input Power Relay "B" Actuator Stuck On
DTC	B230562	Internal Control Module Sub Battery Monitor Voltage Signal Compare Failure

DESCRIPTION

Charging of the 2nd stage power source from the auxiliary battery is performed in preparation for when an auxiliary battery power source malfunction occurs.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY
B103211	Sub Battery Control Module Internal Temperature Sensor "A" Circuit Short to Ground	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B103215	Sub Battery Control Module Internal Temperature Sensor "A" Circuit Short to Battery or Open	An internal malfunction of the integrated capacitor (integration control supply) is detected	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY
		(1 trip detection logic)				
B22937F	Sub Battery System Output Power Relay "F" Actuator Stuck Off	The monitored CACT output voltage is at the threshold or less for 1 second or more (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22AF00	Internal DC/DC Converter System Performance	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22B017	Internal DC/DC Converter (Circuit 1) Circuit Voltage Above Threshold	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22B117	Internal DC/DC Converter (Circuit 2) Circuit Voltage Above Threshold	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22B419	Internal DC/DC Converter Input Current Circuit Current Above Threshold	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22B519	Internal DC/DC Converter Current Circuit Current Above Threshold	An internal malfunction of the integrated capacitor (integration control supply) is detected	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY
		(1 trip detection logic)				
B22B911	Sub Battery Control Module Reset Prevention Circuit Circuit Short to Ground	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22B915	Sub Battery Control Module Reset Prevention Circuit Circuit Short to Battery or Open	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22C57F	Sub Battery System Output Power Relay "B" Actuator Stuck Off	The monitored AACT output voltage is at the threshold or less for 10 seconds or more (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22C67E	Sub Battery System Input Power Relay "A" Actuator Stuck On	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22C67F	Sub Battery System Input Power Relay "A" Actuator Stuck Off	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22CA7F	Sub Battery System Output Power Relay "A" Actuator Stuck Off	The monitored AECU and A2ECU are at the output voltage	Integrated capacitor	User informed: Yes	Sub Battery System	A

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY
		threshold or less for 10 seconds or more (1 trip detection logic)	(integration control supply)			
B22D562	Sub Battery Control Module System Voltage Sensor Signal Compare Failure	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22D61C	Sub Battery Control Module Overcurrent/Overvoltage Detection Circuit Voltage Out of Range	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22E417	Sub Battery Circuit Voltage Above Threshold	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22E619	Sub Battery Circuit Current Above Threshold	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A
B22E77E	Sub Battery System Input Power Relay "B" Actuator Stuck On	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY
B230562	Internal Control Module Sub Battery Monitor Voltage Signal Compare Failure	An internal malfunction of the integrated capacitor (integration control supply) is detected (1 trip detection logic)	Integrated capacitor (integration control supply)	User informed: Yes	Sub Battery System	A

CHECK FOR DTCs

- (a) Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
- (b) Turn the ignition switch off and wait 6 minutes or more. (A)
- (c) Turn the ignition switch to ON. (B)
- (d) Turn the GTS on. (C)
- (e) Wait for 10 seconds or more. (D)
- (f) Read the DTCs. (E)

HINT:

- If a DTC is output, the system is malfunctioning.
- If a DTC is not output, perform the following procedure.

- (g) Enter the following menus: Body Electrical / Sub Battery System / Utility / All Readiness. (F)
- (h) Enter the DTC to be checked. (G)
- (i) Check the DTC judgment result. (H)

HINT:

- If the judgment result is NORMAL, the system is normal.
- If the judgment result is ABNORMAL, the system is malfunctioning.
- If the judgment result is INCOMPLETE, perform steps (A) through (H) again.

CAUTION / NOTICE / HINT

NOTICE:

- When removing/installing the transmission floor shift assembly (shift control ECU)/shift control actuator assembly (shift actuator ECU) or disconnecting/connecting connectors, make sure there is no power* supplied.
*: Auxiliary battery, sub battery, integrated capacitor (integration control supply), etc.
- Before removing and installing the integrated capacitor (integration control supply), make sure the cable is disconnected from the negative (-) auxiliary battery terminal after 5 minutes or more has elapsed since the ignition switched was turned off.
- Before performing troubleshooting, check the state of fuses and connectors of this circuit, and contact voltage of respective terminals.

PROCEDURE

1.	CHECK FOR DTC
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- (a) Check for DTCs.

Body Electrical > Sub Battery System > Trouble Codes

RESULT	PROCEED TO
B103211, B103215, B22937F, B22AF00, B22B017, B22B117, B22B419, B22B519, B22B911, B22B915, B22C57F, B22C67E, B22C67F, B22CA7F, B22D562, B22D61C, B22E417, B22E619, B22EF7E or B230562 is output	A
B103211, B103215, B22937F, B22AF00, B22B017, B22B117, B22B419, B22B519, B22B911, B22B915, B22C57F, B22C67E, B22C67F, B22CA7F, B22D562, B22D61C, B22E417, B22E619, B22EF7E or B230562 is not output	B

A ▶ **REPLACE INTEGRATED CAPACITOR (INTEGRATION CONTROL SUPPLY)** 

B ▶ **USE SIMULATION METHOD TO CHECK**

