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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [03/2023 -]
Title: HEATING / AIR CONDITIONING: AIR CONDITIONING SYSTEM (for PHEV Model): B14721C; A/C Inverter High Voltage Output Circuit Voltage Out of Range; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	B14721C	A/C Inverter High Voltage Output Circuit Voltage Out of Range
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DESCRIPTION

The inverter in the compressor with motor assembly outputs high voltage to operate the motor. If there is an open or short in the output circuit, the hybrid vehicle control ECU will stop compressor operation and store this DTC. This DTC will be stored as a history DTC. The compressor operation remains stopped until both the history and current DTCs are cleared.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	MEMORY	DTC OUTPUT FROM	PRIORITY	NOTE
B14721C	A/C Inverter High Voltage Output Circuit Voltage Out of Range	Diagnosis Condition: There is a compressor operation request. Malfunction: Open or short in A/C inverter high voltage output circuit Detection Time: -	Compressor with motor assembly	Does not come on	Memorized	Air Conditioner	A	-

DTC Detection Condition Combination Table

		VEHICLE CONDITION	
		PATTERN 1	PATTERN 2
Diagnosis Condition	There is a compressor operation request.	○	○
Malfunction	Open in A/C inverter high voltage output circuit	○	-
	Short in A/C inverter high voltage output circuit	-	○
Detection Time		-	-
Trip Count		1 trip	1 trip

HINT:

If the conditions of either of these patterns are detected, a DTC will be stored.

CAUTION / NOTICE / HINT

CAUTION:

- Before inspecting the high-voltage system, take safety precautions such as wearing insulated gloves and removing the service plug grip to prevent electrical shocks. After removing the service plug grip, put it in your pocket to prevent other technicians from accidentally reconnecting it while you are working on the high-voltage system.

[Click here](#) 

- Do not touch the high-voltage connectors or terminals for 10 minutes after the service plug grip is removed.

[Click here](#) 

NOTICE:

- After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) auxiliary battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) auxiliary battery terminal notices before proceeding with work.

- Before disconnecting battery:

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- Automatic learning chart:

[Click here](#) 

- The hybrid control system and air conditioning system output DTCs separately. Perform troubleshooting for the hybrid control system first if DTCs for both systems are output simultaneously.

[Click here](#) 

- The air conditioning system uses the CAN communication system. Inspect the communication functions by following How to Proceed with Troubleshooting. Troubleshoot the air conditioning system after confirming that the communication systems are functioning properly.

[Click here](#) 

PROCEDURE

1. REPLACE COMPRESSOR WITH MOTOR ASSEMBLY

(a) Replace the compressor with motor assembly.

NOTICE:

If this DTC is output even once, replace the compressor with motor assembly as an internal malfunction has occurred.

HINT:

[Click here](#) 

NEXT  **END**

