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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: BRAKE CONTROL / DYNAMIC CONTROL SYSTEMS: ELECTRONICALLY CONTROLLED BRAKE SYSTEM: C14C617; Electronic Brake Booster Control Module "A" Supply Voltage Circuit Voltage Above Threshold; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**C14C617**	**Electronic Brake Booster Control Module "A" Supply Voltage Circuit Voltage Above Threshold**

DESCRIPTION

When there is a power supply circuit malfunction, the power supply voltage of the No. 1 skid control ECU (brake booster with master cylinder assembly) is excessively high, or the main relay operation voltage is excessively high, the No. 1 skid control ECU (brake booster with master cylinder assembly) stores this DTC.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
C14C617	Electronic Brake Booster Control Module "A" Supply Voltage Circuit Voltage Above Threshold	**Either of the following is detected:** • The vehicle speed is more than 3 km/h (2 mph) and the voltage at terminal IGR is 18.8 V or more for 0.8 seconds or more. • The BS voltage is 16.6 V or more for 0.8 seconds or more.	• Improperly connected connector, deformation or corrosion of terminals • Wire harness and connector • No. 1 skid control ECU (brake booster with master cylinder assembly)	Comes on	Brake/EPB	B	• SAE Code: C14C8 • Output ECU: Both skid control ECUs

MONITOR DESCRIPTION

When the vehicle is being driven, the voltage at VM1 or IG1 of the No. 1 skid control ECU (brake booster with master cylinder assembly) is a certain value or more, the No. 2 skid control ECU (brake actuator assembly) judges that the voltage at VM1 or IG1 is excessively high, the MIL is illuminated and a DTC is stored.

MONITOR STRATEGY

Related DTCs	C14C8: Brake system voltage circuit high
Required Sensors/Components(Main)	No. 2 skid control ECU (brake actuator assembly)
Required Sensors/Components(Related)	Speed sensor No. 2 skid control ECU (brake actuator assembly)
Frequency of Operation	Continuous
Duration	0.768 seconds
MIL Operation	Immediately
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Monitor runs whenever the following DTCs are not stored	None

TYPICAL MALFUNCTION THRESHOLDS

Both of the following conditions are met	More than 0.012 seconds
+BS cut MOS	Valid
+BS cut MOS voltage	16.6 V or higher

COMPONENT OPERATING RANGE

Both of the following conditions are met	More than 0.198 seconds
+BS cut MOS	Valid
+BS cut MOS voltage	Below 16.6 V

CONFIRMATION DRIVING PATTERN

NOTICE:

When performing the normal judgment procedure, make sure that the driver door is closed and is not opened at any time during the procedure.

HINT:

- After repair has been completed, clear the DTC and then check that the vehicle has returned to normal by performing the following All Readiness check procedure.
- When clearing the permanent DTCs, refer to the "CLEAR PERMANENT DTC" procedure.

1. Connect the GTS to the DLC3.
2. Turn the ignition switch to ON and turn the GTS on.
3. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
4. Turn the ignition switch off.

5. Turn the ignition switch to ON (READY) and turn the GTS on.
6. Drive the vehicle at 10 km/h (6 mph) or more for 1 second or more. [*]

HINT:

[*]: Normal judgment procedure.

The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.

7. Enter the following menus: Chassis / Brake/EPB* / Utility / All Readiness.

*: Electric Parking Brake System

8. 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, perform driving pattern again.

WIRING DIAGRAM

Refer to DTC C117514.

Click here INFO

CAUTION / NOTICE / HINT

NOTICE:

- Inspect the fuses for circuits related to this system before performing the following procedure.
- Before performing troubleshooting, make sure to confirm that the auxiliary battery voltage is normal.

  Click here INFO
- Make sure to wait 5 minutes or more with the ignition switch turned off before removing the integration control supply or disconnecting any supply power circuit from the integration control supply, in order for the voltage to be discharged and self-diagnosis to run.

PROCEDURE

1.	**CHECK DTC**

(a) Check the DTCs that are output.

Chassis > Brake Booster > Trouble Codes

RESULT	PROCEED TO
Only C14C617 is output	A
C14C617 and other DTCs are output	B

B ▶ **REPAIR CIRCUITS INDICATED BY OUTPUT DTCS**

A

2.	**CHECK DTC**

(a) Check the DTCs that are output.

Chassis > Brake/EPB > Trouble Codes

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

B **REPAIR CIRCUITS INDICATED BY OUTPUT DTCS**

A

3.	**CHECK HARNESS AND CONNECTOR (IGR TERMINAL)**

Pre-procedure1

(a) Turn the ignition switch off.

Procedure1

(b) Make sure that there is no looseness at the locking part and the connecting part of the connector.

OK:
The connector is securely connected.

Pre-procedure2

(c) Disconnect the A3 No. 1 skid control ECU (brake booster with master cylinder assembly) connector.

Procedure2

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

OK:
No deformation or corrosion.

Procedure3

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

Standard Voltage:

EWD INFO

Click Location & Routing(A3)
Click Connector(A3)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A3-30 (IGR) - Body ground	Ignition switch ON	11 to 14 V	V

Post-procedure1

(f) None

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

4.	**CHECK HARNESS AND CONNECTOR (BS TERMINAL)**

Pre-procedure1

(a) Turn the ignition switch off.

Procedure1

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

Standard Voltage:

EWD INFO

Click Location & Routing(A3)
Click Connector(A3)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A3-11 (BS) - Body ground	Always	11 to 14 V	V

Post-procedure1

(c) None

OK ▶ **REPLACE BRAKE BOOSTER WITH MASTER CYLINDER ASSEMBLY**

Click here INFO

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**