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<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> POWER DISTRIBUTION: SUB BATTERY SYSTEM: B230187; Lost Communication with Gear Shift Control Module "A" (Line) Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

<b>DTC</b>	<b>B230187</b>	<b>Lost Communication with Gear Shift Control Module "A" (Line) Missing Message</b>
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## DESCRIPTION

As backup control for when an auxiliary battery power source malfunction occurs, communication is performed with the transmission floor shift assembly (shift control ECU).

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY
B230187	Lost Communication with Gear Shift Control Module "A" (Line) Missing Message	The PWM communication status at the BR terminal is being monitored and the signal is outside of the specified value or the PWM duty cycle of the signal is 0% or 100% for 1 second or more	<ul style="list-style-type: none"> <li>Integrated capacitor (integration control supply)</li> <li>Transmission floor shift assembly (shift control ECU)</li> <li>Harness or connector</li> </ul>	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)

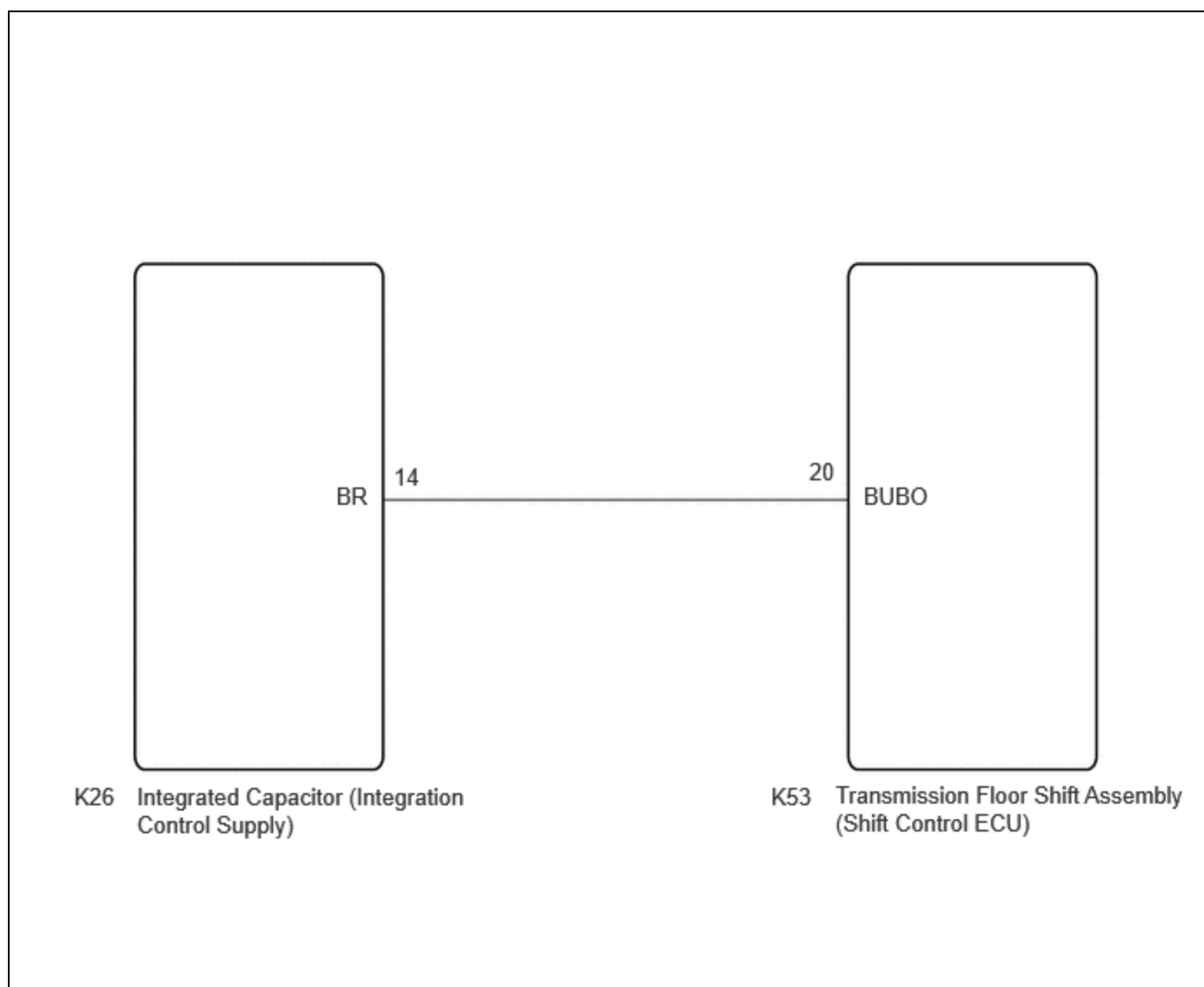
#### HINT:

- 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.

## WIRING DIAGRAM



## 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 switch was turned off.
- Before performing troubleshooting, check the state of fuses and connectors of this circuit, and contact voltage of respective terminals.

## PROCEDURE

<b>1.</b>	<b>CHECK FOR DTC</b>
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(a) Check for DTCs.

### Body Electrical > Sub Battery System > Trouble Codes

RESULT	PROCEED TO
B230187 is output	A
B230187 is not output	B

**B** ► **USE SIMULATION METHOD TO CHECK**

**A**



<b>2.</b>	<b>CHECK HARNESS AND CONNECTOR (TRANSMISSION FLOOR SHIFT ASSEMBLY (SHIFT CONTROL ECU) - INTEGRATED CAPACITOR (INTEGRATION CONTROL SUPPLY))</b>
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Pre-procedure1

(a) Disconnect the K53 transmission floor shift assembly (shift control ECU) connector.

Procedure1

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

Standard Voltage:



[Click Location & Routing\(K53\).](#)

[Click Connector\(K53\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K53-20 (BUBO) - Body ground	Ignition switch ON	5 V or higher	V
K53-20 (BUBO) - Body ground	After the ignition switch is left off for 5 minutes	Below 1 V	V

Post-procedure1

(c) None

**OK** ► **REPLACE TRANSMISSION FLOOR SHIFT ASSEMBLY (SHIFT CONTROL ECU)**

**NG**



### 3. CHECK HARNESS AND CONNECTOR (INTEGRATED CAPACITOR (INTEGRATION CONTROL SUPPLY) - TRANSMISSION FLOOR SHIFT ASSEMBLY (SHIFT CONTROL ECU))

Pre-procedure1

- (a) Disconnect the cable from the negative (-) auxiliary battery terminal.
- (b) Disconnect the K26 integrated capacitor (integration control supply) connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(K26,K53\).](#)

[Click Connector\(K26\).](#)

[Click Connector\(K53\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K26-14 (BR) - K53-20 (BUBO)	Ignition switch off	Below 10 $\Omega$	$\Omega$
K26-14 (BR) - Body ground	Ignition switch off	10 k $\Omega$ or higher	k $\Omega$

Post-procedure1

- (d) None

**NG** ► REPAIR OR REPLACE HARNESS OR CONNECTOR

**OK**



### 4. CHECK HARNESS AND CONNECTOR (INTEGRATED CAPACITOR (INTEGRATION CONTROL SUPPLY) - TRANSMISSION FLOOR SHIFT ASSEMBLY (SHIFT CONTROL ECU))

Pre-procedure1

- (a) Reconnect the cable to the negative (-) auxiliary battery terminal.

Procedure1

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

Standard Voltage:



[Click Location & Routing\(K26\).](#)

[Click Connector\(K26\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K26-14 (BR) - Body ground	Ignition switch off	Below 1 V	V

Post-procedure1

(c) None

**OK** ▶ **REPLACE INTEGRATED CAPACITOR (INTEGRATION CONTROL SUPPLY)** [INFO](#)

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

