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|---|---|---|
| **Last Modified:** 12-04-2024 | 6.11:8.1.0 | **Doc ID:** RM1000000028X48 |
| **Model Year Start:** 2023 | **Model:** Prius Prime | **Prod Date Range:** [12/2022 - ] |
| **Title:** BRAKE CONTROL / DYNAMIC CONTROL SYSTEMS: ELECTRONICALLY CONTROLLED BRAKE SYSTEM: C137BA3; Brake System Control Module "A" System Voltage System Voltage High; 2023 - 2024 MY Prius Prius Prime [12/2022 - ] | | |

| | | |
|---|---|---|
| **DTC** | **C137BA3** | **Brake System Control Module "A" System Voltage System Voltage High** |

# DESCRIPTION

If a malfunction is detected in the power supply circuit, the No. 2 skid control ECU (brake actuator assembly) stores this DTC and the fail-safe function prohibits operation of ABS, brake assist, regenerative brake cooperative control, etc.

This DTC is stored when the +BS terminal voltage deviates due to a malfunction in the power supply or charging circuit such as the auxiliary battery or DC/DC converter circuit, etc.

This DTC is cleared when the voltage at terminal +BS returns to normal.

| DTC NO. | DETECTION ITEM | DTC DETECTION CONDITION | TROUBLE AREA | MIL | DTC OUTPUT FROM | PRIORITY | NOTE |
|---|---|---|---|---|---|---|---|
| C137BA3 | Brake System Control Module "A" System Voltage System Voltage High | The +BS terminal voltage is higher than 17.4 V for 0.8 seconds or more. | • Wire harness and connector<br>• No. 2 skid control ECU (brake actuator assembly) | Comes on | Brake/EPB | A | • SAE Code: C137D<br>• Output ECU: No. 2 skid control ECU (brake actuator assembly) |

# MONITOR DESCRIPTION

When the voltage at terminal +BS of the No. 2 skid control ECU (brake actuator assembly) is more than a certain value, the No. 2 skid control ECU (brake actuator assembly) judges that the voltage is excessive, the MIL is illuminated and a DTC is stored.

# MONITOR STRATEGY

| | |
|---|---|
| Related DTCs | C137D: Brake system voltage circuit high |
| Required Sensors/Components(Main) | No. 2 skid control ECU (brake actuator assembly) |
| Required Sensors/Components(Related) | - |
| Frequency of Operation | Continuous |
| Duration | 0.8 seconds |
| MIL Operation | Immediately |

| | |
|---|---|
| Sequence of Operation | None |

## TYPICAL ENABLING CONDITIONS

| | |
|---|---|
| Monitor runs whenever the following DTCs are not stored | None |

## TYPICAL MALFUNCTION THRESHOLDS

| | |
|---|---|
| Following condition is met | More than 0.012 seconds |
| +BS voltage | More than 17.4 V |

## COMPONENT OPERATING RANGE

| | |
|---|---|
| Following condition is met | More than 0.012 seconds |
| +BS voltage | 17.4 V or less |

## 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. Wait for 2 seconds 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 C137BA2.

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

# PROCEDURE

| | |
|---|---|
| **1.** | **CHECK HARNESS AND CONNECTOR (+BS TERMINAL)** |

Procedure1

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

OK:
The connector is securely connected.

Pre-procedure1

(b) Disconnect the A4 No. 2 skid control ECU (brake actuator assembly) connector.

Procedure2

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

OK:
No deformation or corrosion.

Procedure3

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

Standard Voltage:

EWD INFO

**Click Location & Routing(A4)**
**Click Connector(A4)**

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---|---|---|---|
| A4-14 (+BS) - Body ground | Always | 11 to 14 V | V |
| A4-14 (+BS) - A4-1 (GND1) | Always | 11 to 14 V | V |

Post-procedure1

(e) None

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

**OK** ▼

| | |
|---|---|
| **2.** | **CLEAR DTC** |

Pre-procedure1

(a) Reconnect the A4 No. 2 skid control ECU (brake actuator assembly) connector.

Procedure1

(b) Clear the DTCs.

**Chassis > Brake/EPB > Clear DTCs**

Post-procedure1

(c) Turn the ignition switch off.

**NEXT**

| | |
|---|---|
| **3.** | **RECONFIRM DTC** |

Pre-procedure1

(a) Based on the Freeze Frame Data and interview with the customer, attempt to reproduce the conditions when the malfunction occurred.

Procedure1

(b) Check if the same DTC is output.

**Chassis > Brake/EPB > Trouble Codes**

| RESULT | PROCEED TO |
|---|---|
| C137BA3 is not output | A |
| C137BA3 is output | B |

Post-procedure1

(c) None

**A** **USE SIMULATION METHOD TO CHECK**

**B** **REPLACE BRAKE ACTUATOR ASSEMBLY** INFO