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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> NETWORKING: LIN COMMUNICATION SYSTEM: B278987; ID-BOX Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

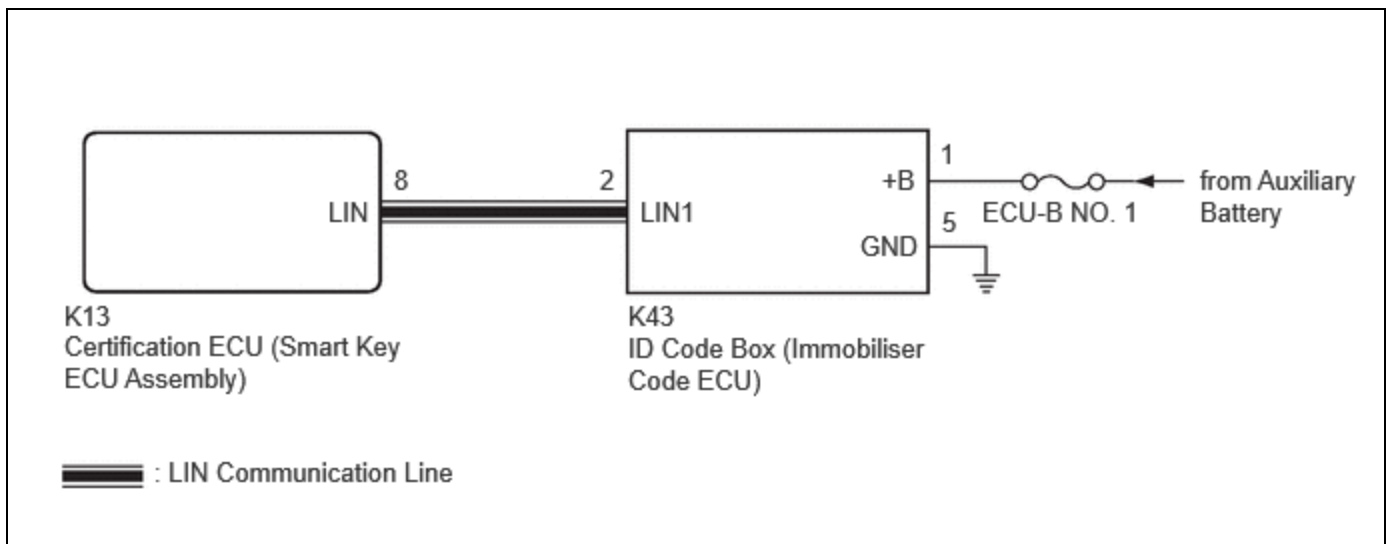
<b>DTC</b>	<b>B278987</b>	<b>ID-BOX Missing Message</b>
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## DESCRIPTION

This DTC is stored when LIN communication between the certification ECU (smart key ECU assembly) and ID code box (immobiliser code ECU) stops for 10 seconds or more.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
B278987	ID-BOX Missing Message	No communication between certification ECU (smart key ECU assembly) and ID code box (immobiliser code ECU) for 10 seconds or more.	<ul style="list-style-type: none"> <li>• Certification ECU (smart key ECU assembly)</li> <li>• ID code box (immobiliser code ECU)</li> <li>• Wire harness or connector</li> </ul>	Smart Key	A

## WIRING DIAGRAM



## CAUTION / NOTICE / HINT

### NOTICE:

- Inspect the fuses for circuits related to this system before performing the following procedure.
- When using the GTS with the ignition switch off, perform lock and unlock operations using the door control switch of the multiplex network master switch assembly at intervals of 1.5 seconds or less until communication between the GTS and the vehicle begins, and then select the vehicle model manually.

Then select Model Code "KEY REGIST" under manual mode and enter the following menus: Body Electrical / Smart Key (CAN). While using the GTS, periodically perform lock and unlock operations using the door control switch of the multiplex network master switch assembly at intervals of 1.5 seconds or less to maintain communication between the GTS and the vehicle.

- Before replacing the certification ECU (smart key ECU assembly) or ID code box (immobiliser code ECU), refer to Registration.

Click here 

## PROCEDURE

<b>1.</b>	<b>CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) - ID CODE BOX (IMMOBILISER CODE ECU))</b>
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Pre-procedure1

- (a) Disconnect the K13 certification ECU (smart key ECU assembly) connector.  
 (b) Disconnect the K43 ID code box (immobiliser code ECU) connector.

Procedure1

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

### NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:



[Click Location & Routing\(K13,K43\).](#)

[Click Connector\(K13\).](#)

[Click Connector\(K43\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K13-8 (LIN) - K43-2 (LIN1)	Ignition switch off	Below 1 Ω	Ω
K13-8 (LIN) or K43-2 (LIN1) - Body ground	Ignition switch off	10 kΩ or higher	kΩ

Post-procedure1

- (d) None

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

**OK**



<b>2.</b>	<b>CHECK HARNESS AND CONNECTOR (ID CODE BOX (IMMOBILISER CODE ECU) - AUXILIARY BATTERY AND BODY GROUND)</b>
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(a) Measure the voltage according to the value(s) in the table below.

Standard Voltage:



[Click Location & Routing\(K43\)](#)

[Click Connector\(K43\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K43-1 (+B) - Body ground	Ignition switch off	11 to 14 V	V

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

Standard Resistance:



[Click Location & Routing\(K43\)](#)

[Click Connector\(K43\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K43-5 (GND) - Body ground	Always	Below 1 $\Omega$	$\Omega$

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

**OK**



<b>3.</b>	<b>REPLACE ID CODE BOX (IMMOBILISER CODE ECU)</b>
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(a) Replace the ID code box (immobiliser code ECU).

**HINT:**

Click here

**NEXT**



<b>4.</b>	<b>REGISTER ECU CODE REGISTRATION</b>
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(a) Register the recognition codes in the ECUs.

**HINT:**

Click here

**NEXT**



<b>5.</b>	<b>CLEAR DTC</b>
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(a) Clear the DTCs.

**Body Electrical > Smart Key > Clear DTCs**

**NEXT**



<b>6.</b>	<b>CHECK FOR DTC</b>
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(a) Recheck for DTCs.

**Body Electrical > Smart Key > Trouble Codes**

RESULT	PROCEED TO
B278987 is not output	A
B278987 is output	B

**A ▶ END (ID CODE BOX (IMMOBILISER CODE ECU) WAS DEFECTIVE)**

**B ▶ REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)** INFO

