Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM10000000290C0
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: THEFT DETERRENT / KEYLESS ENTRY: DIGITAL KEY SYSTEM: B27C087; Digital Key System Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**B27C087**	**Digital Key System Missing Message**

DESCRIPTION

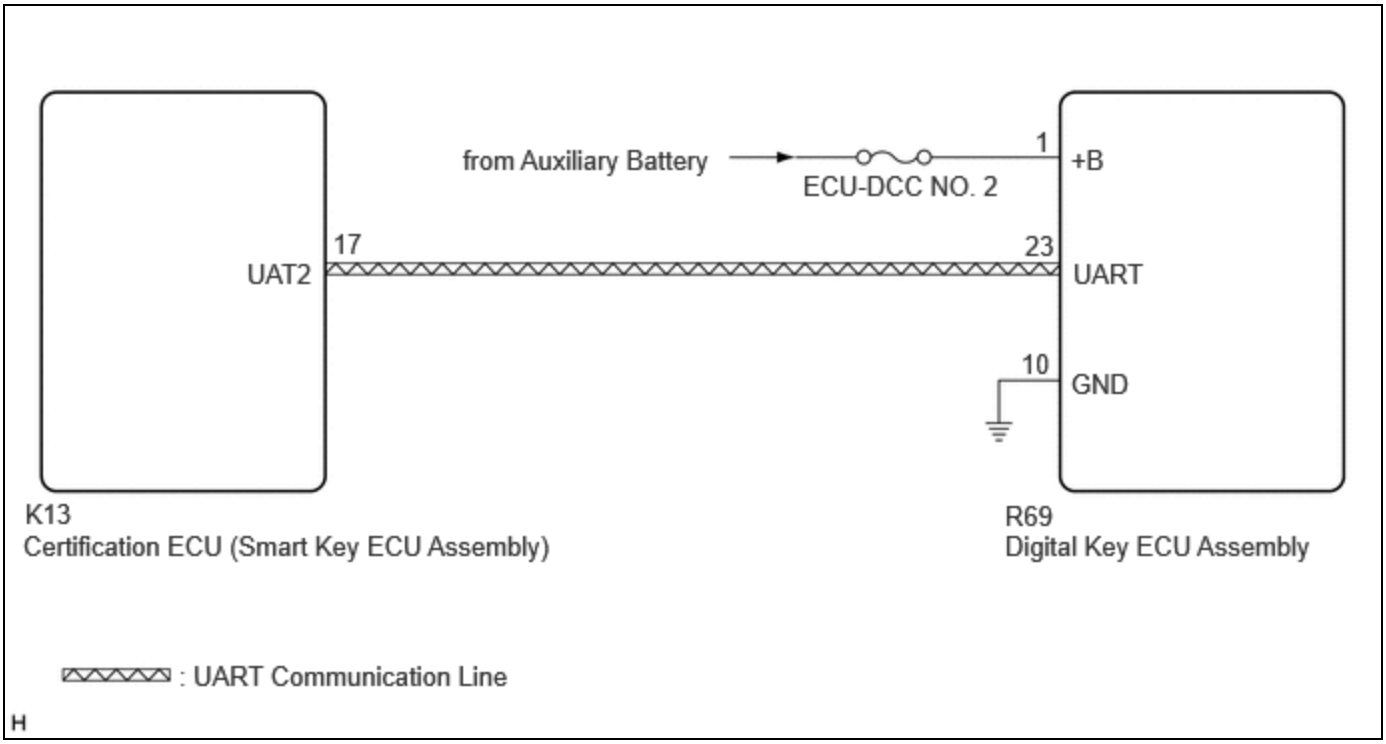
This DTC is output when response frames from the digital key ECU assembly were not received 7 times consecutively x 7 sets after UART communication was established.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY	NOTE
B27C087	Digital Key System Missing Message	Output when response frames from the digital key ECU assembly were not received 7 times consecutively x 7 sets after UART communication was established	• Certification ECU (smart key ECU assembly) • Digital key ECU assembly • Wire harness or connector	Smart Key	A	**DTC Output Confirmation Operation:** Any time

Vehicle Condition and Fail-safe Operation when Malfunction Detected

VEHICLE CONDITION WHEN MALFUNCTION DETECTED	FAIL-SAFE OPERATION WHEN MALFUNCTION DETECTED
Digital key system does not operate	-

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- Before replacing certification ECU (smart key ECU assembly) or digital key ECU assembly, refer to Registration.

  Click here INFO
- Inspect the fuses for circuits related to this system before performing the following procedure.

PROCEDURE

1.	**CHECK HARNESS AND CONNECTOR (DIGITAL KEY ECU ASSEMBLY - POWER SOURCE))**

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

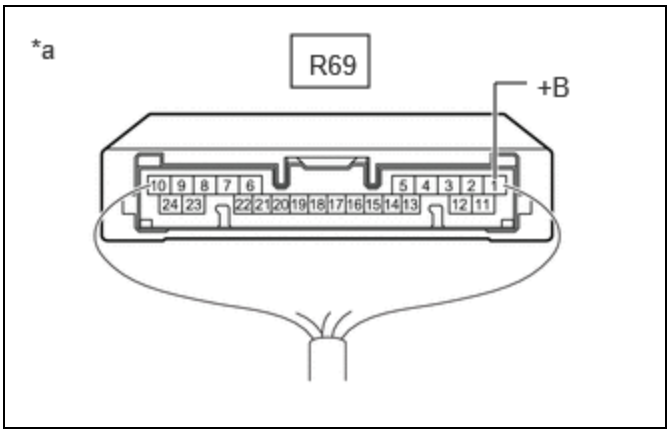
Standard Voltage:

EWD INFO

Click Location & Routing(R69)
Click Connector(R69)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R69-1 (+B) - Body ground	Ignition switch off	11 to 14 V	V

Result:



*a	Component with harness connected (Digital key ECU Assembly)

PROCEED TO
OK
NG

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

OK ▼

2.	**CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) - DIGITAL KEY ECU ASSEMBLY - BODY GROUND)**

Pre-procedure1

(a) Disconnect the K13 certification ECU (smart key ECU assembly) connector.

(b) Disconnect the R69 digital key ECU connector.

Procedure1

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

Standard Resistance:

EWD INFO

Click Location & Routing(K13,R69)
Click Connector(K13)
Click Connector(R69)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K13-17 (UAT2) - R69-23 (UART)	Always	Below 1 Ω	Ω
K13-17 (UAT2) or R69-23 (UART) - Other terminals and body ground	Always	10 kΩ or higher	kΩ
R69-10 (GND) - Body ground	Always	Below 1 Ω	Ω

Post-procedure1

(d) Connect the K13 certification ECU (smart key ECU assembly) connector.

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

OK

3.	**CLEAR DTC**

(a) Clear the DTCs.

Body Electrical > Smart Key > Clear DTCs

NEXT

4.	**CHECK DTC**

(a) Check for DTCs.

Body Electrical > Smart Key > Trouble Codes

RESULT	PROCEED TO
B27C087 is not output	A
B27C087 is output	B

A **REPLACE DIGITAL KEY ECU ASSEMBLY**

Click here INFO

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

Click here INFO