

<b>Last Modified:</b> 12-04-2024	6.11:8.1.0	<b>Doc ID:</b> RM1000000290CK
<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> THEFT DETERRENT / KEYLESS ENTRY: DIGITAL KEY SYSTEM: Digital Key cannot be Cleared; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

## Digital Key cannot be Cleared

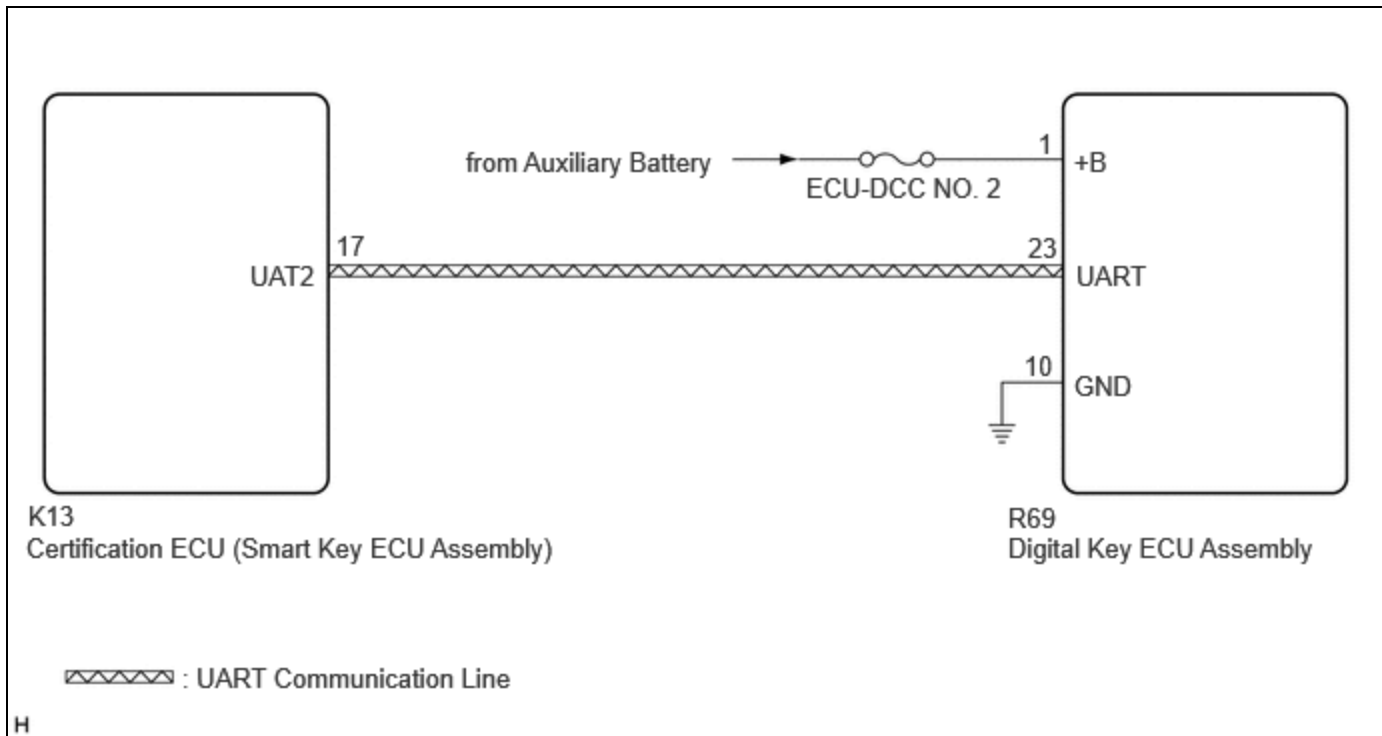
## DESCRIPTION

When the owner key cannot be cleared using the digital key but can be cleared using the GTS, there may be a malfunction somewhere other than the digital key and other vehicle components.

Also, when all digital keys cannot be cleared using the multi-display but can be cleared using the GTS, it is suspected that the multi-display is malfunctioning.

When the owner key cannot be cleared even after removing the cause of the malfunction which is not related to vehicle settings and vehicle components, there may be a communication system malfunction between the certification ECU (smart key ECU assembly) and digital key ECU assembly.

## WIRING DIAGRAM



## CAUTION / NOTICE / HINT

### NOTICE:

- Before performing troubleshooting of the vehicle, refer to Precautions for Inspection or Registration to check for a cause of the malfunction which is not related to vehicle settings or vehicle components.

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- Make sure that no DTCs are output. If any DTCs are output, proceed to Diagnostic Trouble Code Chart.
- If the digital key system has been disabled, enable the system before performing troubleshooting.

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

[Click here](#) **INFO**

## PROCEDURE

### 1. CLEAR ALL REGISTERED DIGITAL KEYS

(a) Clear all registered digital keys using the GTS.

[Click here](#) **INFO**

OK:

All digital keys can be cleared

**NG**  **GO TO STEP 3**

**OK**




### 2. CHECK THE SYMPTOMS

(a) Check the problem symptoms.

RESULT	PROCEED TO
Digital key could not be cleared using the digital key	A
Digital key could not be cleared using the multi-display	B

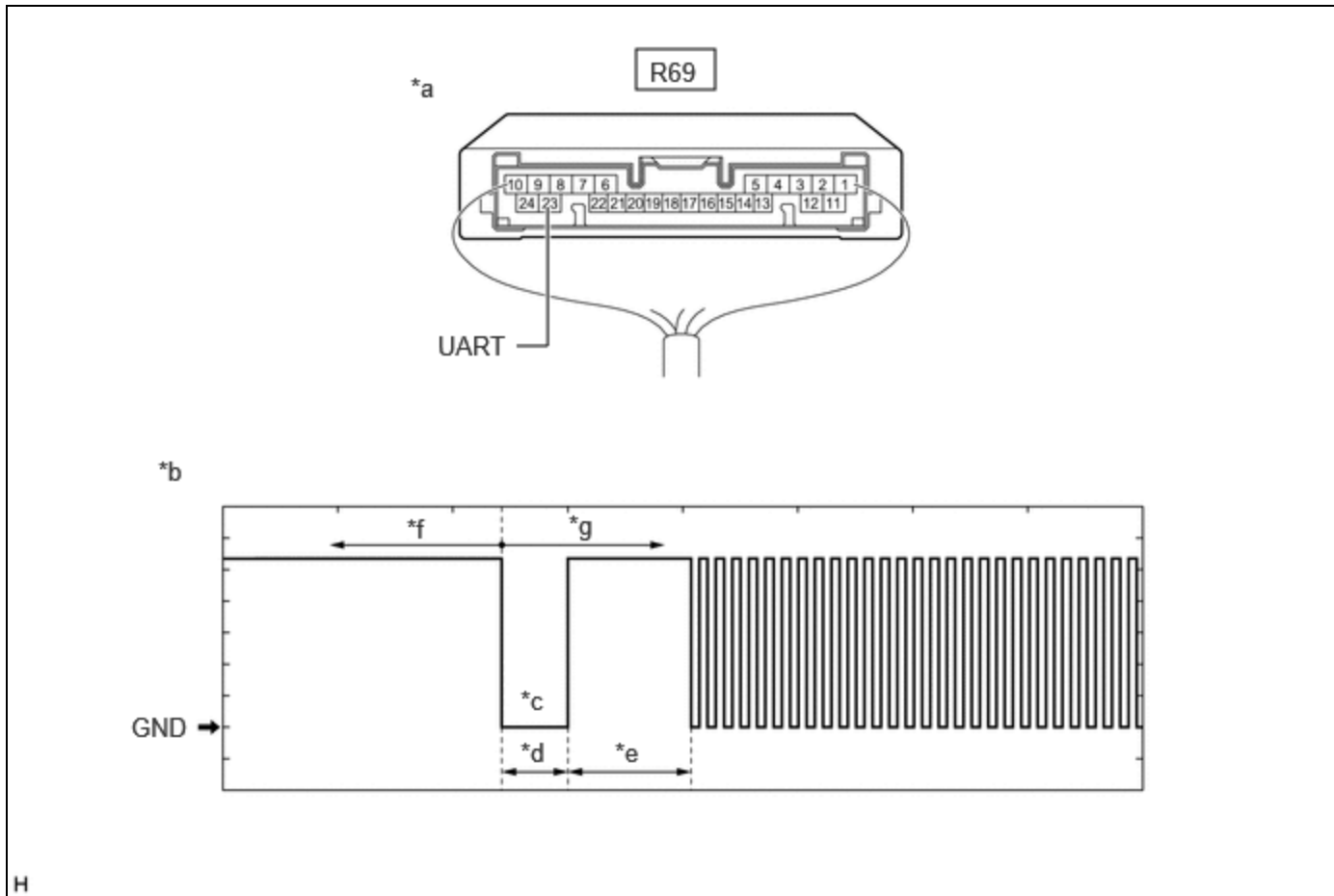
**A**  **END (PERFORM OWNER KEY REGISTRATION)**

**B**  **GO TO AUDIO AND VISUAL SYSTEM (HOW TO PROCEED WITH TROUBLESHOOTING)**

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### 3. CHECK DIGITAL KEY ECU ASSEMBLY (TERMINAL UART)

(a) Using an oscilloscope, check the waveform.



*a	Component with harness connected (Digital Key ECU Assembly)	*b	Waveform
*c	Wakeup signal from digital key ECU assembly	*d	Approximately 15 ms.
*e	15 to 50 ms.	*f	Before door lock/unlock operation using digital key
*g	After door lock/unlock operation using digital key	-	-

**NOTICE:**

The waveform shown in the illustration is an example for reference only. Noise, chattering, etc. are not shown.

OK:



[Click Location & Routing\(R69\).](#)

[Click Connector\(R69\).](#)

TESTER CONNECTION	CONDITION	TOOL SETTING	SPECIFIED CONDITION
R69-23 (UART) - Body ground	All of the following conditions are met: <ul style="list-style-type: none"> <li>Ignition switch off</li> <li>Door lock/unlock operation has been not performed via digital key → performed</li> </ul>	2 V/DIV., 20 ms./DIV.	Pulse generation (See waveform)

RESULT	PROCEED TO
OK (Normal Waveform)	A
NG (No Wakeup Signal)	B
NG (Normal Waveform Not Output)	C
NG (Stuck Low)	D

**B ▶ REPLACE DIGITAL KEY ECU ASSEMBLY**

Click here [INFO](#)

**C ▶ REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)**

Click here [INFO](#)

**D ▶ GO TO STEP 8**

**A**



**4. REPLACE DIGITAL KEY ECU ASSEMBLY**

(a) Replace the digital key ECU assembly with a new one.

Click here [INFO](#)

**NEXT**



**5. REGISTER DIGITAL KEY CODE**

(a) Register the digital key code to the digital key ECU assembly.

Click here [INFO](#)

**NEXT**



**6. REGISTER NEW OWNER KEY**

(a) Register the owner key using the original digital key.

**HINT:**

Refer to the digital key application.

**NEXT****7. CLEAR ALL REGISTERED DIGITAL KEYS**

(a) Clear all registered digital keys using the digital key application.

**HINT:**

Refer to the digital key application.

OK:

All digital keys can be cleared

**OK** ► END (DIGITAL KEY ECU ASSEMBLY WAS DEFECTIVE)

**NG** ► REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

Click here [INFO](#)

**8. INSPECT CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)**

(a) Disconnect the R69 digital key ECU assembly connector.

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

Standard Voltage:



[Click Location & Routing\(R69\)](#)

[Click Connector\(R69\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R69-23 (UART) - Body ground	Ignition switch off	11 to 14 V

**OK** ► REPLACE DIGITAL KEY ECU ASSEMBLY

Click here [INFO](#)

**NG ▶ REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)**

Click here [INFO](#)

