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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: THEFT DETERRENT / KEYLESS ENTRY: SMART KEY SYSTEM (for Start Function): HOW TO PROCEED WITH TROUBLESHOOTING; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

HOW TO PROCEED WITH TROUBLESHOOTING

CAUTION / NOTICE / HINT

NOTICE:

- Do not perform "Smart Code Reset" (all key ID erasure) until all malfunctions and symptoms have been confirmed and resolved. If all key ID erasure is performed without confirming or resolving malfunctions, key registration will be unable to be performed, resulting in unnecessary part replacement.
- Make sure that the smart key system has not been disabled by a customize setting.

HINT:

- Replace parts related to the wireless door lock control system and smart key system according to the inspection procedure.
- If the wireless door lock control system and smart key system do not operate, check the customize settings and make sure that the wireless door lock control system and smart key system are not disabled.
- The wireless door lock control system and smart key system primarily use the following systems.
 - Power door lock system
 - Wireless door lock control system
 - Smart key system (for Entry Function)
 - Smart key system (for Start Function)
 - Immobiliser function
- If 2 or more electrical key transmitter sub-assemblies are registered to the system, make sure to perform troubleshooting with all of them.

PROCEDURE

1. VEHICLE BROUGHT TO WORKSHOP

(a) Confirm how the vehicle was brought to the workshop.

- Vehicle was driven.
- Vehicle was towed.

HINT:

The cause of the malfunction may be narrowed down by confirming whether the vehicle was driven or towed.


NEXT



2. CUSTOMER PROBLEM ANALYSIS

HINT:

- In troubleshooting, confirm that the problem symptoms have been accurately identified. Preconceptions should be discarded in order to make an accurate judgment. To clearly understand what the problem symptoms are, it is extremely important to ask the customer about the problem and the conditions at the time the malfunction occurred.
- Gather as much information as possible for reference. Past malfunctions that seem unrelated may also help in some cases.
- The following 5 items are important points for problem analysis:

What	Vehicle model, system name
When	Date and time, frequency, whether the problem occurred recently or has been occurring for a long time
Where	Whether the problem occurs at specified location
Under what conditions?	Whether the doors were locked or unlocked, whether the ignition switch was ON, whether the hybrid control system was starting
How did it happen?	Ask the customer for details about the vehicle operating conditions, environment and malfunction. 

NEXT



3. BASIC CHECK

(a) Measure the auxiliary battery voltage with the ignition switch off.

Standard Voltage:

11 to 14 V

HINT:

- A simple method to determine whether the auxiliary battery is depleted is to operate the horn.
- If the auxiliary battery voltage is below 11 V, recharge or replace the auxiliary battery.

(b) Check for blown fuses, open or shorted wire harnesses, improperly connected connectors and other problems in areas that can be visually inspected.

(c) Check the connection of each connector and check them for deformation or damage.

NEXT



4. CHECK DTCs AND SAVE OPERATION HISTORY

(a) Using the GTS, enter the following menus: System Select / Health Check

HINT:

- If DTCs are output, perform troubleshooting for the DTCs.
- Save all output DTCs and operation history.
- Operation history can also be checked using the Utility menu of the GTS.

[Click here](#) 

RESULT	PROCEED TO
No DTCs are output	A
Wireless door lock system and smart key system DTCs are output	B
DTCs other than wireless door lock system and smart key system DTCs are output	C

B  **GO TO DIAGNOSTIC TROUBLE CODE CHART**

C  **GO TO DIAGNOSTIC TROUBLE CODE CHART**

A



5.	CHECK PROBLEM SYMPTOMS
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(a) Based on the customer problem analysis, check the problem symptoms.

[Click here](#) 

RESULT	PROCEED TO
The problem symptom can be confirmed	A
The problem symptom cannot be confirmed	B

B  **GO TO CHECK FOR INTERMITTENT PROBLEMS**

A



6.	CHECK CUSTOMIZE ITEMS
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(a) Use the following customize setting methods to confirm that the smart key system is enabled.

- Using the GTS
- Using the multi-display
- Using manual operation

Check the customize settings.

Click here [INFO](#)

(b) Use the following customize setting methods to confirm that the wireless door lock system is enabled.

- Using the GTS
- Using the multi-display

Check the customize settings.

Click here [INFO](#)

HINT:

- Even when the smart key system is disabled by a customize setting, the hybrid control system can be started by an emergency key operation.
- If the smart key system or wireless door lock control system is disabled, all entry and start functions or wireless functions will not operate.

RESULT	PROCEED TO
Wireless door lock control system and smart key system are enabled	A
Smart key system is disabled	B
Wireless door lock system is disabled	C

B  **GO TO CUSTOMIZE PARAMETERS**

C  **GO TO CUSTOMIZE PARAMETERS**

A



7.	CHECK POWER DOOR LOCK SYSTEM
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(a) Check the power door lock system.

Click here [INFO](#)

RESULT	PROCEED TO
Power door lock system operates properly	A
Power door lock system does not operate properly	B

B  **GO TO POWER DOOR LOCK SYSTEM (HOW TO PROCEED WITH TROUBLESHOOTING)**

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A

8.	CHECK WIRELESS DOOR LOCK CONTROL SYSTEM
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(a) Check the wireless door lock control system.

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RESULT	PROCEED TO
All functions operate properly	A
Wireless lock/unlock functions do not operate (entry and start functions also do not operate)	
Wireless lock/unlock functions do not operate (entry and start functions operate)	B
Door ajar warning does not operate	C
Answer-back (buzzer sounds and hazard lights flash) function does not operate	D

B ▶ **REPLACE ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLY**

C ▶ **GO TO LIGHTING SYSTEM (Door Courtesy Switch Circuit)**

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D ▶ **GO TO WIRELESS DOOR LOCK CONTROL SYSTEM (No Answer-Back)**

A


9.	CHECK SMART KEY SYSTEM (for Entry Function)
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(a) Check the smart key system (for Entry Function).

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RESULT	PROCEED TO
All functions operate properly	A
Entry lock/unlock functions do not operate for all doors (wireless function also does not operate) (Having just performed new/additional key ID registration operation)	B
Entry lock/unlock functions do not operate for all doors (wireless function also does not operate) (Having not just performed new/additional key ID registration operation)	C
Entry lock/unlock functions do not operate for all doors (wireless function operates)	D
Entry lock/unlock functions do not operate only for driver side door	E
Entry lock/unlock functions do not operate only for front passenger side door	F
Entry lock/unlock functions do not operate only for back door	G
Entry lock function does not operate only for driver side door (unlock function operates)	H
Entry lock function does not operate only for passenger side door (unlock function operates)	I
Entry lock function does not operate only for back door (unlock function operates)	J
Entry unlock function does not operate only for driver side door (lock function operates)	K
Entry unlock function does not operate only for passenger side door (lock function operates)	L
Entry unlock function does not operate only from back door (lock function operates)	M
Smart key system exterior warning and answer-back buzzer do not sound	N
Smart key system interior warning does not sound	O
Touching unlock sensor for certain period of time does not unlock all doors	P
Entry lock function does not operate using close and lock Function*	Q

*: w/ Power Back Door System

B  **GO TO SMART KEY SYSTEM (for Entry Function) (Entry Lock/Unlock Functions and Wireless Functions do not Operate After New/Additional Key ID Registration)**

- C ▶ GO TO SMART KEY SYSTEM (for Entry Function) (All Door Entry Lock/Unlock Functions and Wireless Functions do not Operate)**
- D ▶ GO TO SMART KEY SYSTEM (for Entry Function) (All Door Entry Lock/Unlock Functions do not Operate, but Wireless Functions Operate)**
- E ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Driver Side Door Entry Lock and Unlock Functions do not Operate)**
- F ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Front Passenger Side Door Entry Lock and Unlock Functions do not Operate)**
- G ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Back Door Entry Lock and Unlock Functions do not Operate)**
- H ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Driver Side Door Entry Lock Function does not Operate)**
- I ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Front Passenger Side Door Entry Lock Function does not Operate)**
- J ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Back Door Entry Lock Function does not Operate)**
- K ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Driver Side Door Entry Unlock Function does not Operate)**
- L ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Front Passenger Side Door Entry Unlock Function does not Operate)**
- M ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Back Door Entry Unlock Function does not Operate)**
- N ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Entry Exterior Alarm and Answer-back Buzzer do not Sound)**
- O ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Entry Interior Alarm does not Sound)**

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**P ▶ GO TO SMART KEY SYSTEM (for Entry Function)
(Touching Unlock Sensor for Certain Period of Time
does not Unlock All Doors)**

**Q ▶ GO TO SMART KEY SYSTEM (for Entry Function) (Entry
Lock Function does not Operate Using Close & Lock
Function)**

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▼

10. CHECK SMART KEY SYSTEM (for Start Function)

(a) Check the smart key system (for Start Function).

Click here [INFO](#)

Hybrid control system was started

RESULT	PROCEED TO
All functions operate properly	A
Power source mode changing function does not operate correctly (power source mode cannot be changed to ACC, but can be changed to ON)	B
Only +BA power source mode does not operate correctly	C
Security indicator light does not blink	D
System malfunction message is displayed on the multi-information display	E

Hybrid control system was not start

RESULT	PROCEED TO
Push-button start function does not operate	F
Immobiliser function does not operate	G
Power source mode changing function does not operate (power source mode cannot be changed to ACC or ON)	H
Power source mode changing function does not operate correctly (power source mode can be changed to on ACC, but not ON)	I

RESULT	PROCEED TO
Immobiliser function does not operate (security indicator light does not turn off)	J

- B** ► **GO TO SMART KEY SYSTEM (for Start Function) (Power Source Mode does not Change to ON (ACC))**
- C** ► **GO TO PROBLEM SYMPTOMS TABLE (Only +BA Power Source Mode Changing Function does not Operate correctly)**
- D** ► **GO TO SMART KEY SYSTEM (for Start Function) (Security Indicator Light Does not Blink)**
- E** ► **GO TO SMART KEY SYSTEM (for Start Function) (System Malfunction Message is Displayed on the Multi-information Display)**
- F** ► **GO TO SMART KEY SYSTEM (for Start Function) (Power Source Mode does not Change to ON (READY))**
- G** ► **GO TO SMART KEY SYSTEM (for Start Function) (Immobiliser System does not Operate Properly)**
- H** ► **GO TO SMART KEY SYSTEM (for Start Function) (Power Source Mode does not Change to ON (IG and ACC))**
- I** ► **GO TO SMART KEY SYSTEM (for Start Function) (Power Source Mode does not Change to ON (IG))**
- J** ► **GO TO SMART KEY SYSTEM (for Start Function) (Immobiliser System does not Operate Properly)**

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11.	CHECK ELECTRICAL KEY REGISTRATION FUNCTION
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(a) Check the electrical key registration function.

Click here [INFO](#)

RESULT	PROCEED TO
Electrical key registration function operates properly	A
Cannot register new keys	B
Cannot register additional keys	C
Additional key registration display is not displayed	D

- A ► USE SIMULATION METHOD TO CHECK**
- B ► GO TO SMART KEY SYSTEM (for Start Function) (New Key cannot be Registered)**
- C ► GO TO SMART KEY SYSTEM (for Start Function) (Additional Key cannot be Registered)**
- D ► GO TO SMART KEY SYSTEM (for Start Function) (New Key Registration Warning Message is not Displayed)**

