Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2010 LEXUS GX OEM Service and Repair Workshop Manual

Go to manual page

HINT:

- For replacement.

  Click here INFO
- For registration.

  Click here INFO

OK:
All of the electrical key transmitter sub-assemblies could be registered to the new main body ECU (multiplex network body ECU) successfully.

OK ▶ **END (MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) WAS DEFECTIVE)**

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

OK

2.	READ VALUE USING GTS (VEHICLE ID DIFFERENCE (KEY REGISTRATION))

(a) Read the Data List according to the display on the GTS.

Body Electrical > Smart Access > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Vehicle ID Difference (Key Registration)	Status of vehicle ID (key registration)	No or Yes	No: Vehicle ID normal (key registration) Yes: Vehicle ID malfunction (key registration)	-

Body Electrical > Smart Access > Data List

TESTER DISPLAY
Vehicle ID Difference (Key Registration)

RESULT	PROCEED TO
"No" is displayed	A
"Yes" is displayed	B

B ▶ **GO TO STEP 5**

A

3.	READ VALUE USING GTS (VEHICLE CONTROL HISTORY (ROB))

(a) Read the Vehicle Control History (RoB) according to the display on the GTS.

Body Electrical > Smart Access > Utility

TESTER DISPLAY
Vehicle Control History (RoB)

(b) Check the freeze frame data.

Registration Function (Reason for Non-operation):

PARAMETER NAME	DETECTION CONDITION	TROUBLE AREA
New Key ID Registration Stopped (Conditions Other than Vehicle ID not Met)	The key ID information of the certification ECU (smart key ECU assembly) and unregistered key transmitter sub-assembly did not match due to wave interference around the vehicle or depletion of the battery of the key transmitter sub-assembly.	• Certification ECU (smart key ECU assembly) • Electrical key transmitter sub-

PARAMETER NAME	DETECTION CONDITION	TROUBLE AREA
New Key ID Registration Failed (Immobilizer Certification Failed)	An unregistered electrical key transmitter sub-assembly was incorrectly held near the engine switch and the certification ECU (smart key ECU assembly) could not complete verification.	• Certification ECU (smart key ECU assembly) • Electrical key transmitter sub-assembly
New Key ID Registration Failed (Conditions Other than Vehicle ID not Met)	The key ID information of the certification ECU (smart key ECU assembly) and unregistered key transmitter sub-assembly did not match due to wave interference around the vehicle or depletion of the battery of the key transmitter sub-assembly.	• Certification ECU (smart key ECU assembly) • Electrical key transmitter sub-assembly
New Key ID Registration Failed (Key Already Registered)	A registered electrical key transmitter sub-assembly was used.	Certification ECU (smart key ECU assembly)
New Key ID Registration Failed (ID Code Writing Failed)	An unregistered electrical key transmitter sub-assembly was held near the engine switch, but key ID information was not stored by the certification ECU (smart key ECU assembly).	Certification ECU (smart key ECU assembly)
New Key ID Registration Failed (Key Information Malfunction)	An unregistered electrical key transmitter sub-assembly was held near the engine switch, but key ID information was not stored by the certification ECU (smart key ECU assembly).	Incorrect registration procedure is used
No Response from Connected ECUs when Registering L/S/F Codes	There is no response from the ID code box (immobiliser code ECU) at registration of L code or S code.	• Certification ECU (smart key ECU assembly) • ID code box (immobiliser code ECU)
L Code Registration Failed (ID Code Box, Steering Lock ECU)	The authentication code (L code) is not registered by the ID code box (immobiliser code ECU).	• Certification ECU (smart key ECU assembly) • ID code box (immobiliser code ECU)
S Code Registration Failed (Certification ECU, ID Code Box)	The authentication code (S code) is not registered by the certification ECU (smart key ECU assembly) and ID code box (immobiliser code ECU).	ID code box (immobiliser code ECU)
ECU ID Verification Error	The certification ECU (smart key ECU assembly) did not receive S code registration response from the ID code box (immobiliser code ECU).	• Certification ECU (smart key ECU assembly) • ID code box (immobiliser code ECU)
Key Number Write Error	The number of the electrical key transmitter sub-assemblies are not stored by the certification ECU (smart	Certification ECU (smart key ECU assembly)

RESULT	PROCEED TO
[New Key ID Registration Stopped (Security Access Malfunction)] is displayed on the GTS	O
[New Key ID Registration Stopped (Key Type Malfunction)] is displayed on the GTS	P

B ▶ **GO TO STEP 7**

C ▶ **PERFORM REREGISTRATION**

D ▶ **GO TO STEP 8**

E ▶ (a) If another electrical key transmitter sub-assembly needs to be registered, perform "UNDESIGNATED KEY PERMANENT ERASURE" before performing the registration procedure.

Click here END (REGISTRATION NOT FINISHED DUE TO MAXIMUM NUMBER OF REGISTERED ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLIES BEING EXCEEDED)

F ▶ **GO TO STEP 9**

G ▶ **GO TO STEP 10**

H ▶ **GO TO STEP 14**

I ▶ **GO TO STEP 15**

J ▶ **GO TO STEP 16**

K ▶ **REPLACE ID CODE BOX (IMMOBILISER CODE ECU)**

L ▶ **NEW KEY REGISTRATION FAILED, CHECK THE KEY**

(a) Check if a registered electrical key transmitter sub-assembly was held near the engine switch instead of an unregistered electrical key transmitter sub-assembly by mistake.

(b) Perform registration again using an unregistered electrical key transmitter sub-assembly. If the same problem occurs again, replace the certification ECU (smart key ECU assembly).

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

N ▶ **GO TO STEP 17**

O ▶ **CHECK GTS**

(a) Check communication between the GTS and the key registration server.

P ▶

OK ▶ **REPLACE ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLY (FIRST REGISTERED KEY WAS DEFECTIVE)**

NG ▼

6.	REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

(a) Temporarily replace the certification ECU (smart key ECU assembly) with a new one and register the electrical key transmitter sub-assemblies.

HINT:

- For replacement.

  Click here INFO
- For registration.

  Click here INFO

OK:
All of the electrical key transmitter sub-assemblies could be registered to the new certification ECU (smart key ECU assembly) successfully.

OK ▶ **END (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) WAS DEFECTIVE)**

NG ▶ **GO TO OTHER PROBLEM (New Key cannot be Registered)**

7.	REREGISTRATION

(a) Using an unregistered electrical key transmitter sub-assembly, register the ID.

Click here INFO

OK:
The key ID can be registered.

OK ▶ **END (ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLY WAS DEFECTIVE)**

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

8.	READ VALUE USING GTS (VEHICLE OPERATION HISTORY (ROB))

(a) Register the key ID.

Click here INFO

(b) Read the Vehicle Control History (RoB) according to the display on the GTS.

Body Electrical > Smart Access > Utility

TESTER DISPLAY
Vehicle Control History (RoB)

(c) Check the freeze frame data.

RESULT	PROCEED TO
Only one electrical key transmitter sub-assembly is registered	A
2 or more electrical key transmitter sub-assemblies are registered	B

A ▶ **GO TO STEP 13**

B ▼

12.	REREGISTRATION

(a) Reregister the electrical key transmitter sub-assemblies using different order combinations.

Click here INFO

HINT:

If there are 2 or more electrical key transmitter sub-assemblies, make sure that the number of order combinations is the same as the number of electrical key transmitter sub-assemblies so that each transmitter can be checked first.

Example: When there are 3 registered electrical key transmitter sub-assemblies (A, B and C).

COMBINATION	ORDER*
1	A → B → C
2	B → C→ A
3	C → A → B

*: Except for the first electrical key transmitter sub-assembly, the remaining electrical key transmitter sub-assemblies can be checked in any order.

OK:
"Key Verification: Read Error" is not displayed.

OK ▶ **REPLACE ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLY (ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLY HELD WHEN "Key Verification: Read Error" WAS DETECTED WAS DEFECTIVE)**

NG ▼

13.	REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

(a) Temporarily replace the certification ECU (smart key ECU assembly) with a new one and register the electrical key transmitter sub-assemblies.

HINT:

- For replacement.

  Click here INFO
- For registration.

- For registration.

Click here INFO

OK:
All of the electrical key transmitter sub-assemblies could be registered to the new certification ECU (smart key ECU assembly) successfully.

OK ▶ **END (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) WAS DEFECTIVE)**

NG ▶ **REPLACE ID CODE BOX (IMMOBILISER CODE ECU)**

17.	REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

(a) Temporarily replace the main body ECU (multiplex network body ECU) with a new one and register the electrical key transmitter sub-assemblies.

HINT:

- For replacement.

Click here INFO

- For registration.

Click here INFO

OK:
All of the electrical key transmitter sub-assemblies could be registered to the new main body ECU (multiplex network body ECU) successfully.

OK ▶ **END (MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) WAS DEFECTIVE)**

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

2.	READ VALUE USING GTS (FL DOOR COURTESY SWITCH STATUS)

(a) Read the Data List according to the display on the GTS.

Body Electrical > Main Body > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
FL Door Courtesy Switch Status	Front door LH courtesy light switch signal	OFF or ON	OFF: Front door LH closed ON: Front door LH open	-

Body Electrical > Main Body > Data List

TESTER DISPLAY
FL Door Courtesy Switch Status

RESULT	PROCEED TO
On the GTS screen, ON or OFF is displayed accordingly.	A
On the GTS screen, ON or OFF is not displayed accordingly.	B

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

A ▼

3.	CHECK METER / GAUGE SYSTEM

(a) With the electrical key transmitter sub-assembly in the vehicle and all of the doors closed, lock the doors using the entry lock function and check that the warning message is displayed on the multi-information display.

NOTICE:

In order to prevent the electrical key transmitter sub-assembly from being locked inside the vehicle, perform this inspection with the window of a door open.

HINT:

Key lock-in prevention function (vehicle interior).

Click here INFO

RESULT	PROCEED TO
The warning message is displayed on the multi-information display.	A
The warning message is not displayed on the multi-information display.	B

B ▶ **REPLACE COMBINATION METER ASSEMBLY**

Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HB2I
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: THEFT DETERRENT / KEYLESS ENTRY: SMART ACCESS SYSTEM WITH PUSH-BUTTON START (for Start Function): System Malfunction Message is Displayed on the Multi-information Display; 2024 MY GX550 [12/2023 -]		

System Malfunction Message is Displayed on the Multi-information Display

SYSTEM DESCRIPTION

If an abnormal vehicle speed information is detected by the certification ECU (smart key ECU assembly), a system malfunction message is displayed on the multi-information display.

CAUTION / NOTICE / HINT

NOTICE:

- 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 Access. 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.
- The smart access system with push-button start (for Start Function) uses the LIN communication system and CAN communication system. Inspect the communication function by following How to Proceed with Troubleshooting. Troubleshoot the smart access system with push-button start (for Start Function) after confirming that the communication systems are functioning properly.

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

  Click here INFO

PROCEDURE

1.	**CHECK FOR DTC**

(a) Check for DTCs.

Body Electrical > Smart Access > Trouble Codes

Body Electrical > Power Source Control > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
DTC is output.	B

B ▶ **GO TO SMART ACCESS SYSTEM WITH PUSH-BUTTON START (for Entry Function) (DIAGNOSTIC TROUBLE CODE CHART)**

A ▼

2.	**READ VALUE USING GTS (VEHICLE RUNNING CONDITION (LINE))**