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.

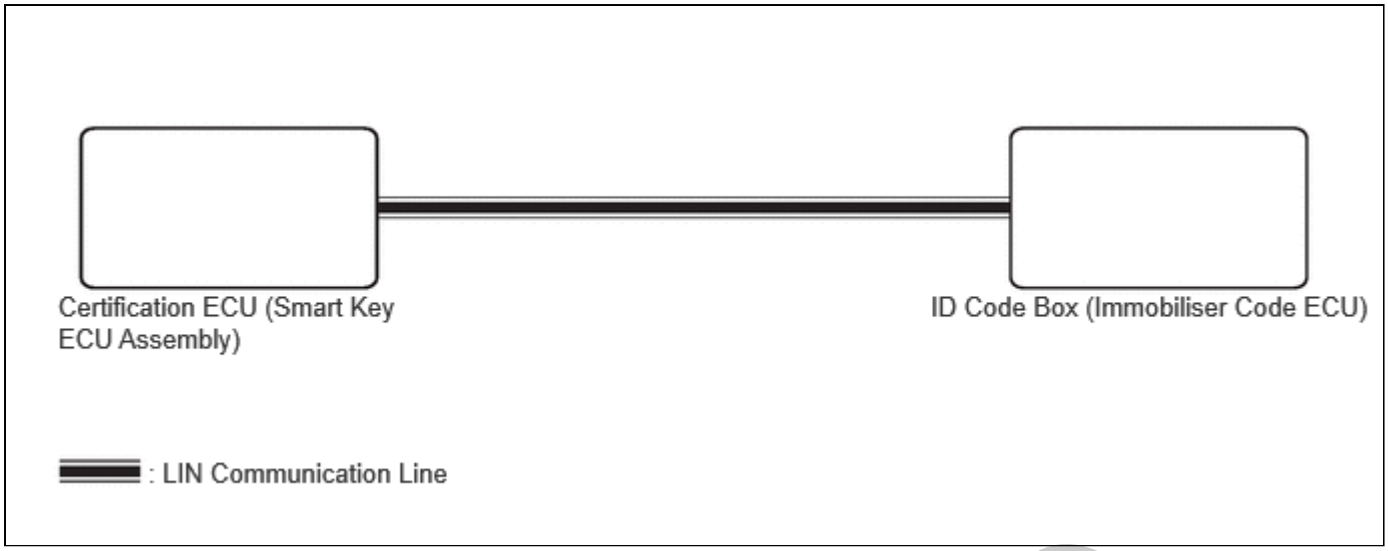
2012 LEXUS RX OEM Service and Repair Workshop Manual

Go to manual page

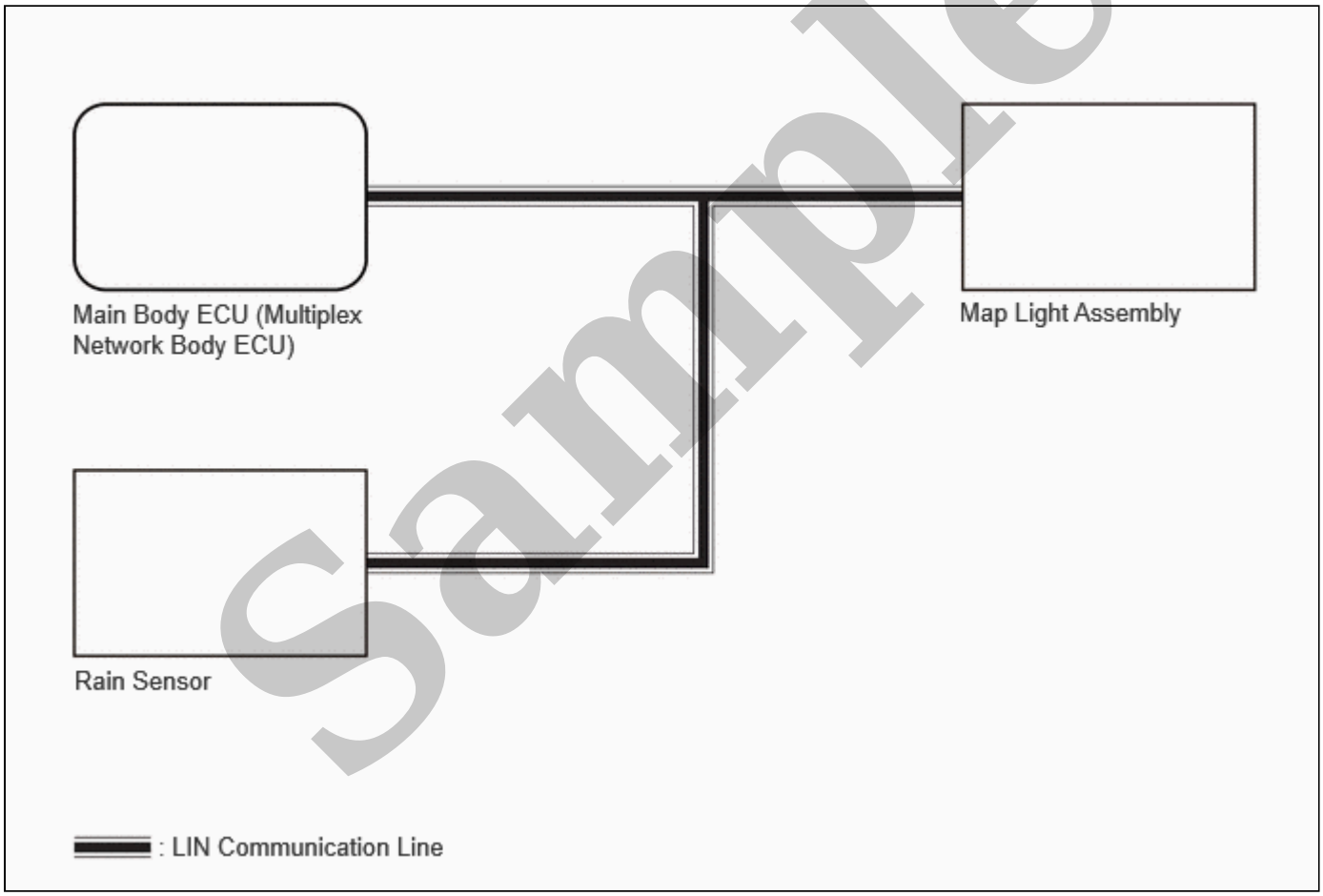
Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HBMT
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: NETWORKING: LIN COMMUNICATION SYSTEM: SYSTEM DIAGRAM; 2024 MY GX550 [12/2023 -]		

SYSTEM DIAGRAM

DOOR BUS LINES



SENSOR BUS LINES



(c) Check the connector connections and terminals to make sure that there are no abnormalities such as loose connections, deformation, etc.

NEXT

4.	INSPECT COMMUNICATION FUNCTION OF CAN COMMUNICATION SYSTEM*

(a) Using the GTS, check for CAN communication system DTCs.

Click here INFO

RESULT	PROCEED TO
CAN DTCs are not output	A
CAN DTCs are output	B

B ▶ **GO TO CAN COMMUNICATION SYSTEM**

A

5.	INSPECT COMMUNICATION FUNCTION OF LIN COMMUNICATION SYSTEM*

(a) Using the GTS, check for LIN communication system DTCs.

Body Electrical > Main Body > Trouble Codes
Body Electrical > Power Source Control > Trouble Codes
Body Electrical > Smart Access > Trouble Codes

RESULT	PROCEED TO
LIN DTCs are not output	A
LIN DTCs are output	B

B ▶ **GO TO DIAGNOSTIC TROUBLE CODE CHART**

A

6.	OVERALL ANALYSIS AND TROUBLESHOOTING*

(a) Terminals of ECU

Click here INFO

(b) Data List / Active Test

Click here INFO

Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HBMW
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: NETWORKING: LIN COMMUNICATION SYSTEM: TERMINALS OF ECU; 2024 MY GX550 [12/2023 -]		

TERMINALS OF ECU

CHECK POWER DISTRIBUTION BOX ASSEMBLY AND MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

HINT:

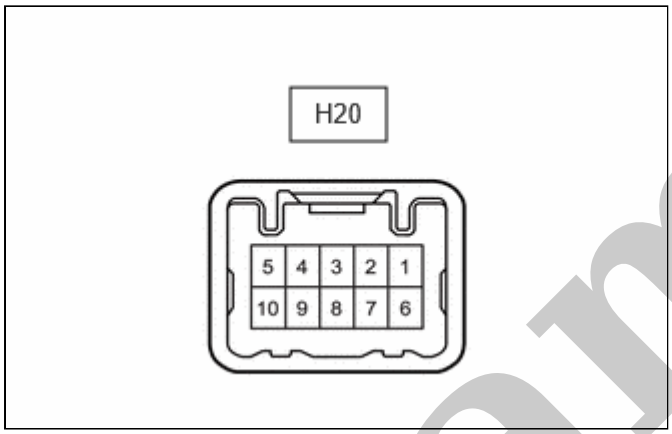
Measure the values on the wire harness side with the connectors disconnected.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
z1-13 (GND1) - Body ground	Ground	Always	Below 1 Ω
z1-14 (GND2) - Body ground	Ground	Always	Below 1 Ω
z1-26 (BECU) - Body ground	Battery power supply	Always	11 to 14 V
z1-27 (IGR) - Body ground	IG power supply	Ignition switch ON	11 to 14 V
		Ignition switch off	Below 1 V

(c) Reconnect the z1 main body ECU (multiplex network body ECU) connector.

(d) Check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K5-17 - Body ground	LIN communication line	Ignition switch ON	Pulse generation
E2-37 - Body ground	LIN communication line	Ignition switch ON	Pulse generation
E10-11 (LIN4) - Body ground	LIN communication line	Ignition switch ON	Pulse generation



CHECK MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY

(a) Disconnect the H20 multiplex network master switch assembly connector.

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

HINT:

Measure the values on the wire harness side with the connector disconnected.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
H20-1 (B) - Body ground	Battery power supply	Always	11 to 14 V
H20-4 (GND) - Body ground	Ground	Always	Below 1 Ω

(c) Reconnect the H20 multiplex network master switch assembly connector.

(d) Check for pulses according to the value(s) in the table below.

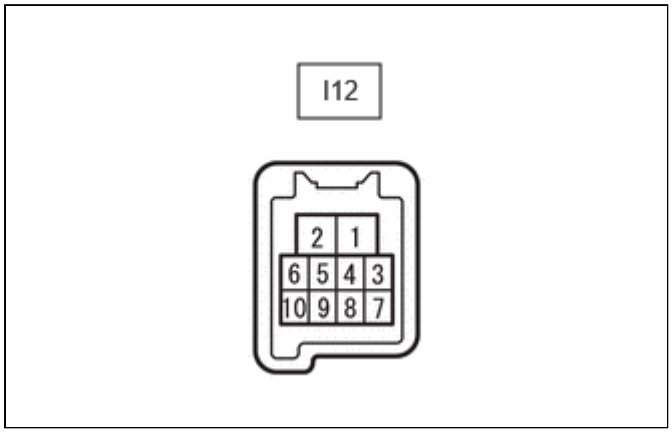
TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
H20-3 (LIN1) - Body ground	LIN communication line	Ignition switch ON	Pulse generation

(c) Reconnect the G14 power window regulator motor assembly RH (for Front Door) connector.

(d) Check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
G14-9 (LIN) - Body ground	LIN communication line	Ignition switch ON	Pulse generation

CHECK POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (for Rear Door)



(a) Disconnect the I12 power window regulator motor assembly LH (for Rear Door) connector.

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

HINT:

Measure the values on the wire harness side with the connector disconnected.

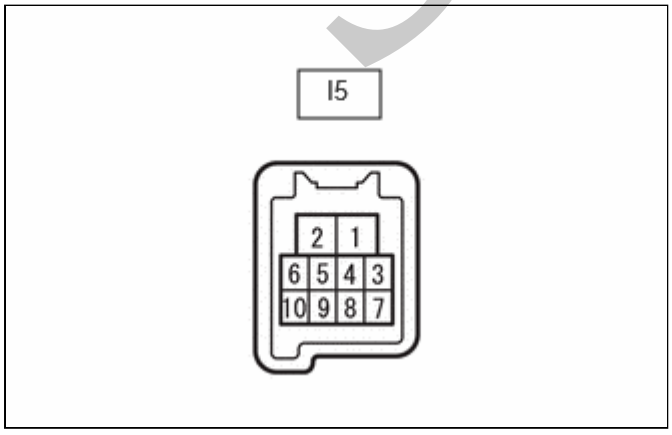
TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
I12-2 (B) - Body ground	Battery power supply	Always	11 to 14 V
I12-1 (GND) - Body ground	Ground	Always	Below 1 Ω

(c) Reconnect the I12 power window regulator motor assembly LH (for Rear Door) connector.

(d) Check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
I12-9 (LIN) - Body ground	LIN communication line	Ignition switch ON	Pulse generation

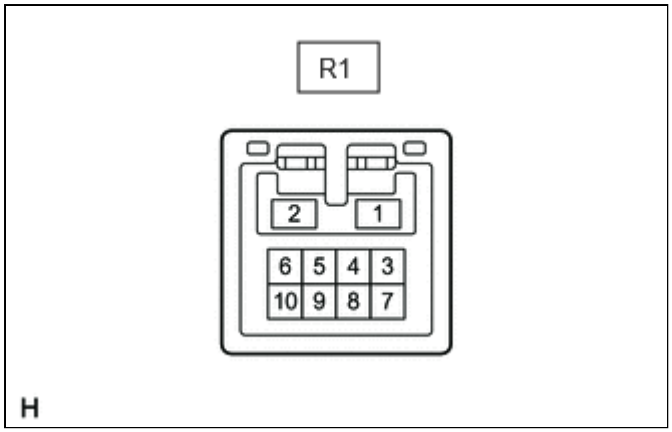
CHECK POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (for Rear Door)



(a) Disconnect the I5 power window regulator motor assembly RH (for Rear Door) connector.

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

HINT:



(a) Disconnect the R1 sliding roof drive gear assembly connector.

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

HINT:

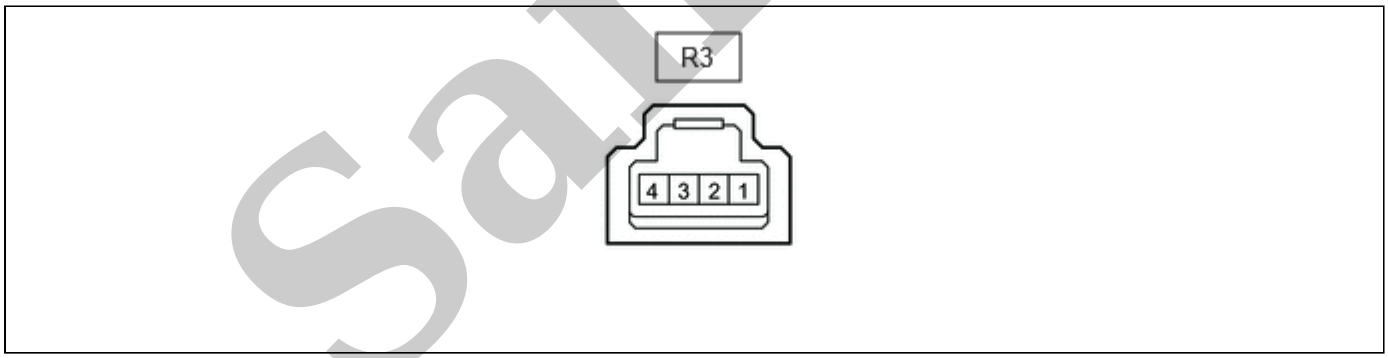
Measure the values on the wire harness side with the connector disconnected.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
R1-1 (B) - Body ground	Battery power supply	Always	11 to 14 V
R1-2 (E) - Body ground	Ground	Always	Below 1 Ω

(c) Reconnect the R1 sliding roof drive gear assembly connector.

(d) Check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
R1-7 (MPX1) - Body ground	LIN communication line	Ignition switch ON	Pulse generation



CHECK RAIN SENSOR

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

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
R3-3 (MPX1) - Body ground	LIN communication line	Ignition switch ON	Pulse generation

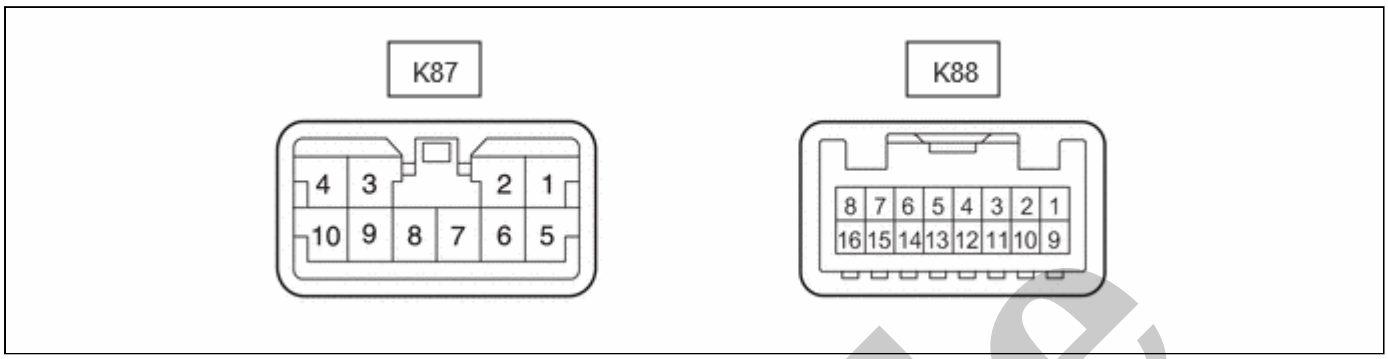
CHECK CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

(c) Reconnect the E83 ID code box (immobiliser code ECU) connector.

(d) Check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
E83-2 (LIN1) - Body ground	LIN communication line	Ignition switch ON	Pulse generation

SIDE AUTO STEP CONTROLLER ECU ASSEMBLY (w/ Power Running Board System)



(a) Disconnect the K17 side auto step controller ECU assembly connector.

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

HINT:

Measure the values on the wire harness side with the connector disconnected.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K17-7 (GND) - Body ground	Ground	Always	Below 1 Ω
K17-8 (B) - Body ground	Battery power supply	Always	11 to 14 V

(c) Reconnect the K17 side auto step controller ECU assembly connector.

(d) Check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K18-2 (LIN) - Body ground	LIN communication line	Ignition switch ON	Pulse generation