

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.

2024 Lexus ES 350 Service and Repair Manual

[Go to manual page](#)

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Module (Local-Bus)	system is lost		Yes: Abnormal	

CLEAR FREEZE FRAME DATA

NOTICE:
Clearing the DTCs will also clear the freeze frame data.

(a) Clear the DTCs and freeze frame data.

Chassis > Circumference Monitoring Camera Control Module > Clear DTCs

Sample

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
			Yes: Wheel speed sensor disabled	
FR Wheel Rotatory Direction Invalid	Front wheel RH rotational direction status	No or Yes	No: Front wheel RH rotational direction enabled Yes: Front wheel RH rotational direction disabled	-
FL Wheel Rotatory Direction Invalid	Front wheel LH rotational direction status	No or Yes	No: Front wheel LH rotational direction enabled Yes: Front wheel LH rotational direction disabled	-
RR Wheel Rotatory Direction Invalid	Rear wheel RH rotational direction status	No or Yes	No: Rear wheel RH rotational direction enabled Yes: Rear wheel RH rotational direction disabled	-
RL Wheel Rotatory Direction Invalid	Rear wheel LH rotational direction status	No or Yes	No: Rear wheel LH rotational direction enabled Yes: Rear wheel LH rotational direction disabled	-
FR Wheel Speed Sensor Invalid	Front wheel RH speed sensor status	No or Yes	No: Front wheel RH speed sensor enabled Yes: Front wheel RH speed sensor disabled	-
FL Wheel Speed Sensor Invalid	Front wheel LH speed sensor status	No or Yes	No: Front wheel LH speed sensor enabled Yes: Front wheel LH speed sensor disabled	-
RR Wheel Speed Sensor Invalid	Rear wheel RH speed sensor status	No or Yes	No: Rear wheel RH speed sensor enabled Yes: Rear wheel RH speed sensor disabled	-
RL Wheel Speed Sensor Invalid	Rear wheel LH speed sensor status	No or Yes	No: Rear wheel LH speed sensor enabled Yes: Rear wheel LH speed sensor disabled	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Rear Camera Temporarily Unavailable - Camera Full Blockage (Snow)	Rear camera obstruction (adhered snow)	No or Yes	No: Normal Yes: Abnormal	RoB X20B2 is output if Yes is displayed
Rear Camera Temporarily Unavailable - Camera Full Blockage (Rain Drop)	Rear camera obstruction (adhered raindrops)	No or Yes	No: Normal Yes: Abnormal	RoB X20B2 is output if Yes is displayed
Rear Camera Temporarily Unavailable - Camera Image Invalid	Rear camera image status	No or Yes	No: Normal Yes: Abnormal	RoB X20B2 is output if Yes is displayed
Front Camera Temporarily Unavailable - Camera Partial Blockage (Dirt/Snow/Rain Drop)	Front camera partial obstruction (dirt/snow/raindrops)	No or Yes	No: Normal Yes: Abnormal	RoB X20BA is output if Yes is displayed
Front Camera Temporarily Unavailable - Camera Full Blockage (Dirt)	Front camera obstruction (adhered dirt)	No or Yes	No: Normal Yes: Abnormal	RoB X20BA is output if Yes is displayed
Front Camera Temporarily Unavailable - Camera Full Blockage (Snow)	Front camera obstruction (adhered snow)	No or Yes	No: Normal Yes: Abnormal	RoB X20BA is output if Yes is displayed
Front Camera Temporarily Unavailable - Camera Full Blockage (Rain Drop)	Front camera obstruction (adhered raindrops)	No or Yes	No: Normal Yes: Abnormal	RoB X20BA is output if Yes is displayed
Front Camera Temporarily Unavailable - Camera Image Invalid	Front camera image status	No or Yes	No: Normal Yes: Abnormal	RoB X20BA is output if Yes is displayed
Side Camera (Left) Temporarily Unavailable - Camera Partial Blockage (Dirt/Snow/Rain Drop)	Side camera LH partial obstruction (dirt/snow/raindrops)	No or Yes	No: Normal Yes: Abnormal	RoB X20BB is output if Yes is displayed
Side Camera (Left) Temporarily Unavailable - Camera Full Blockage (Dirt)	Side camera LH obstruction (adhered dirt)	No or Yes	No: Normal Yes: Abnormal	RoB X20BB is output if Yes is displayed
Side Camera (Left) Temporarily Unavailable - Camera Full Blockage (Snow)	Side camera LH obstruction (adhered snow)	No or Yes	No: Normal Yes: Abnormal	RoB X20BB is output if Yes is displayed
Side Camera (Left) Temporarily Unavailable - Camera Full Blockage (Rain Drop)	Side camera LH obstruction (adhered raindrops)	No or Yes	No: Normal Yes: Abnormal	RoB X20BB is output if Yes is displayed
Side Camera (Left) Temporarily Unavailable - Camera Image Invalid	Side camera LH image status	No or Yes	No: Normal Yes: Abnormal	RoB X20BB is output if Yes is displayed
Side Camera (Left) Temporarily Unavailable - IR Projector Invalid	Side camera LH parking assist light disabled	No or Yes	No: Normal Yes: Abnormal	RoB X20BB is output if Yes is displayed
Side Camera (Right) Temporarily Unavailable - Camera Partial	Side camera RH partial obstruction (dirt/snow/raindrops)	No or Yes	No: Normal Yes: Abnormal	RoB X20BC is output if Yes is displayed

Last Modified: 10-07-2024	6.11:8.1.0	Doc ID: RM100000002H6MG
Model Year Start: 2024	Model: GX550	Prod Date Range: [12/2023 -]
Title: PARK ASSIST / MONITORING: MULTI-TERRAIN MONITOR SYSTEM: DIAGNOSTIC TROUBLE CODE CHART; 2024 MY GX550 [12/2023 -]		

DIAGNOSTIC TROUBLE CODE CHART

Multi-terrain Monitor System

DTC NO.	DETECTION ITEM	DTC OUTPUT FROM	PRIORITY	LINK
U011487	Lost Communication with Four-Wheel Drive Clutch Control Module Missing Message	Circumference Monitoring Camera Control Module	B	INFO

Last Modified: 10-07-2024	6.11:8.1.0	Doc ID: RM100000002H6MI
Model Year Start: 2024	Model: GX550	Prod Date Range: [12/2023 -]
Title: PARK ASSIST / MONITORING: MULTI-TERRAIN MONITOR SYSTEM: U011487; Lost Communication with Four-Wheel Drive Clutch Control Module Missing Message; 2024 MY GX550 [12/2023 -]		

DTC	U011487	Lost Communication with Four-Wheel Drive Clutch Control Module Missing Message
------------	----------------	---

DESCRIPTION

These DTCs are stored if there is a malfunction in the CAN communication system connected to the parking assist ECU.

HINT:

If CAN communication system DTCs are stored, they may also be stored in other systems.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
U011487	Lost Communication with Four-Wheel Drive Clutch Control Module Missing Message	Lost communication with 4 wheel drive control ECU	CAN communication system	Circumference Monitoring Camera Control Module	B

PROCEDURE

1. CLEAR DTC

(a) Clear the DTCs.

Chassis > Circumference Monitoring Camera Control Module > Clear DTCs

NEXT



2. CHECK FOR DTC

(a) Check for DTCs.

Chassis > Circumference Monitoring Camera Control Module > Trouble Codes

HINT:

- If CAN communication system DTCs are stored, they may also be stored in other systems.
- If the CAN communication system has been inspected and repaired in other systems, the DTCs will not be output when rechecking for DTCs.
- If these DTCs are output frequently, duplicate the conditions that cause the problem symptoms and perform the inspection again, even though the DTC was not output when rechecking for DTCs.

Click here [INFO](#)

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



USE SIMULATION METHOD TO CHECK

Last Modified: 10-07-2024	6.11:8.1.0	Doc ID: RM100000002H6MJ
Model Year Start: 2024	Model: GX550	Prod Date Range: [12/2023 -]
Title: PARK ASSIST / MONITORING: MULTI-TERRAIN MONITOR SYSTEM: "CHK" message(s) are displayed on the SIGNAL CHECK screen.; 2024 MY GX550 [12/2023 -]		

"CHK" message(s) are displayed on the SIGNAL CHECK screen.

DESCRIPTION

On the Signal Check (*) screen, it is possible to check if the signals sent to the parking assist ECU are normal.

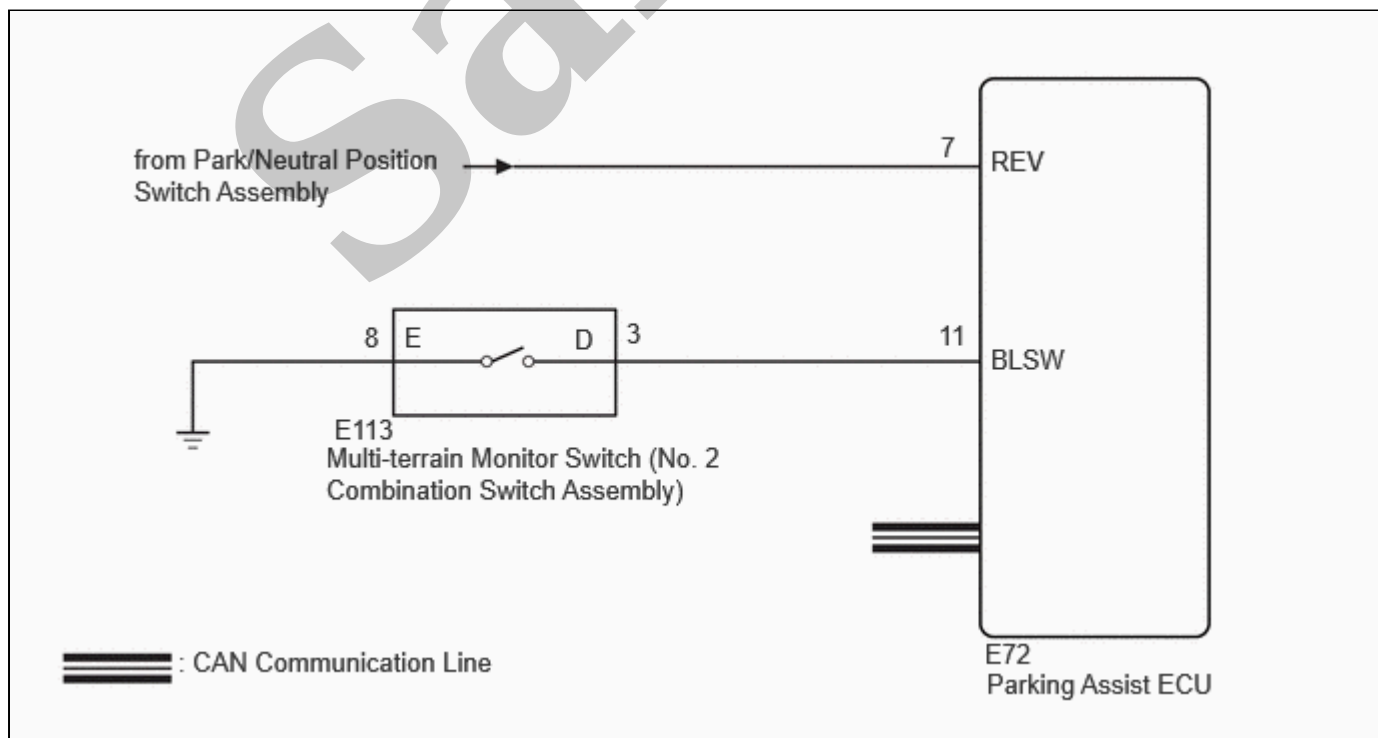
Click here [INFO](#)

HINT:

- On the Signal Check (*) screen, "OK" (blue) is displayed for items with a normal inspection result or input state.
- On the Signal Check (*) screen, "CHK" (red) is displayed for items with an abnormal inspection result or input state.
- Displayed items may differ depending on vehicle specifications.

ITEM	SIGNAL INPUT METHOD	DETAIL	DTC OUTPUT WHEN ABNORMAL RESULT IS DISPLAYED	SIGNAL RECEIVER
CAN	CAN communication	CAN communication signal	DTC is output	Related ECUs
CAMERA SW	Vehicle wire harness	Multi-terrain monitor switch signal input state	DTC is not output	Multi-terrain monitor switch (No. 2 combination switch assembly)
SHIFT	Vehicle wire harness	Shift position switch signal	DTC is not output	Park/neutral position switch assembly

WIRING DIAGRAM



[Click Connector\(E72\).](#)

[Click Connector\(E113\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E72-11 (BLSW) - E113-3 (D)	Always	Below 1 Ω
E113-8 (E) - Body ground	Always	Below 1 Ω
E72-11 (BLSW) - Body ground	Always	10 k Ω or higher

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



3. INSPECT MULTI-TERRAIN MONITOR SWITCH (NO. 2 COMBINATION SWITCH)

Click here [INFO](#)

OK ► REPLACE PARKING ASSIST ECU

NG ► REPLACE MULTI-TERRAIN MONITOR SWITCH (NO. 2 COMBINATION SWITCH ASSEMBLY)

4. CHECK BACK-UP LIGHT

(a) Check that the back-up light comes on.

OK:

The back-up light comes on.

NG ► GO TO LIGHTING SYSTEM (EXT)

OK



5. CHECK HARNESS AND CONNECTOR (REVERSE SIGNAL)

(a) Disconnect the parking assist ECU connector.

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

Standard Voltage:



[Click Location & Routing\(E72\).](#)

[Click Connector\(E72\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E72-7 (REV) - Body ground	Ignition switch ON, shift lever in R	11 to 14 V
E72-7 (REV) - Body ground	Ignition switch ON, shift lever not in R	Below 1 V

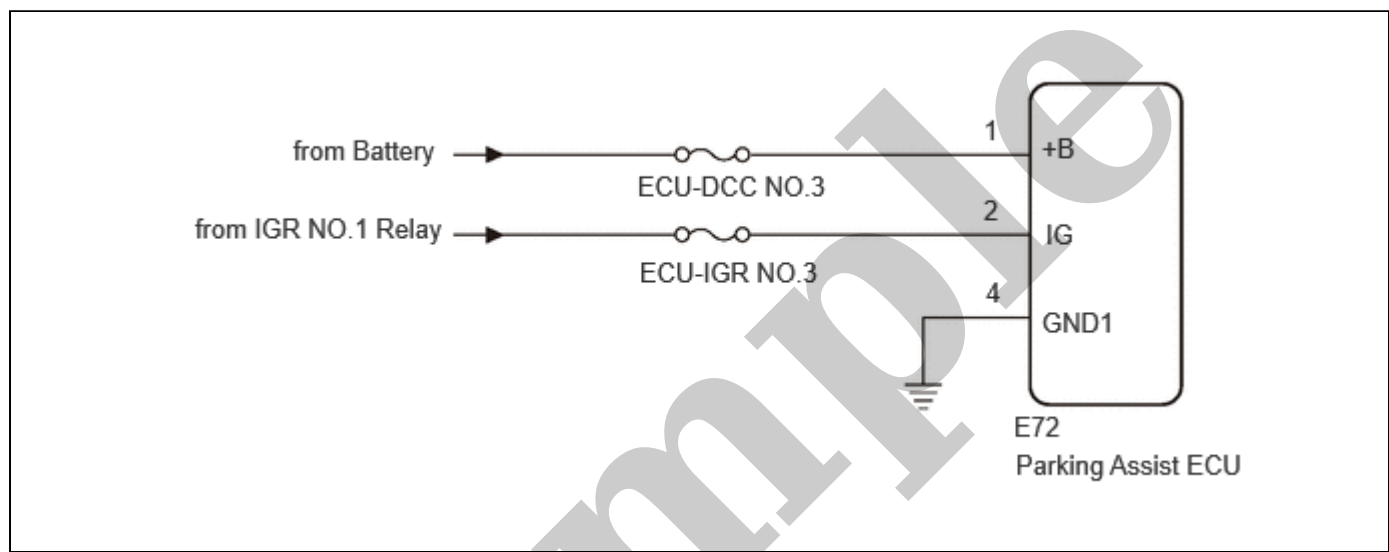
Last Modified: 10-07-2024	6.11:8.1.0	Doc ID: RM100000002H6MK
Model Year Start: 2024	Model: GX550	Prod Date Range: [12/2023 -]
Title: PARK ASSIST / MONITORING: MULTI-TERRAIN MONITOR SYSTEM: ECU Power Source Circuit; 2024 MY GX550 [12/2023 -]		

ECU Power Source Circuit

DESCRIPTION

This circuit is the power source circuit to operate the parking assist ECU. The parking assist ECU controls the multi-terrain monitor system.

WIRING DIAGRAM



CAUTION / NOTICE / HINT

- NOTICE:
- Inspect the fuse for circuits related to this system before performing the following procedure.
- NOTICE:
- Inspect the fuse for circuits related to this system before performing the following procedure.
 - Depending on the parts that are replaced or operations that are performed during vehicle inspection or maintenance, calibration of other systems as well as the multi-terrain monitor system may be needed.

Click here

INFO

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - BATTERY AND BODY GROUND)
----	--

- (a) Disconnect the E72 parking assist ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.
- Standard Resistance:

 EWD INFO

[Click Location & Routing\(E72\).](#)

Last Modified: 10-07-2024	6.11:8.1.0	Doc ID: RM100000002H6ML
Model Year Start: 2024	Model: GX550	Prod Date Range: [12/2023 -]
Title: PARK ASSIST / MONITORING: MULTI-TERRAIN MONITOR SYSTEM: Image from Camera for Multi-terrain Monitor is Abnormal; 2024 MY GX550 [12/2023 -]		
Image from Camera for Multi-terrain Monitor is Abnormal		

DESCRIPTION

The display signal from each television camera is transmitted to the radio and display receiver assembly via the parking assist ECU.

WIRING DIAGRAM

Sample