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2017 Lexus ES 350 Service and Repair Manual

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Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002I7K3
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: MIRROR (EXT): POWER MIRROR CONTROL SYSTEM: AUTO Power Retract Mirrors do not operate; 2024 MY GX550 [12/2023 -]		

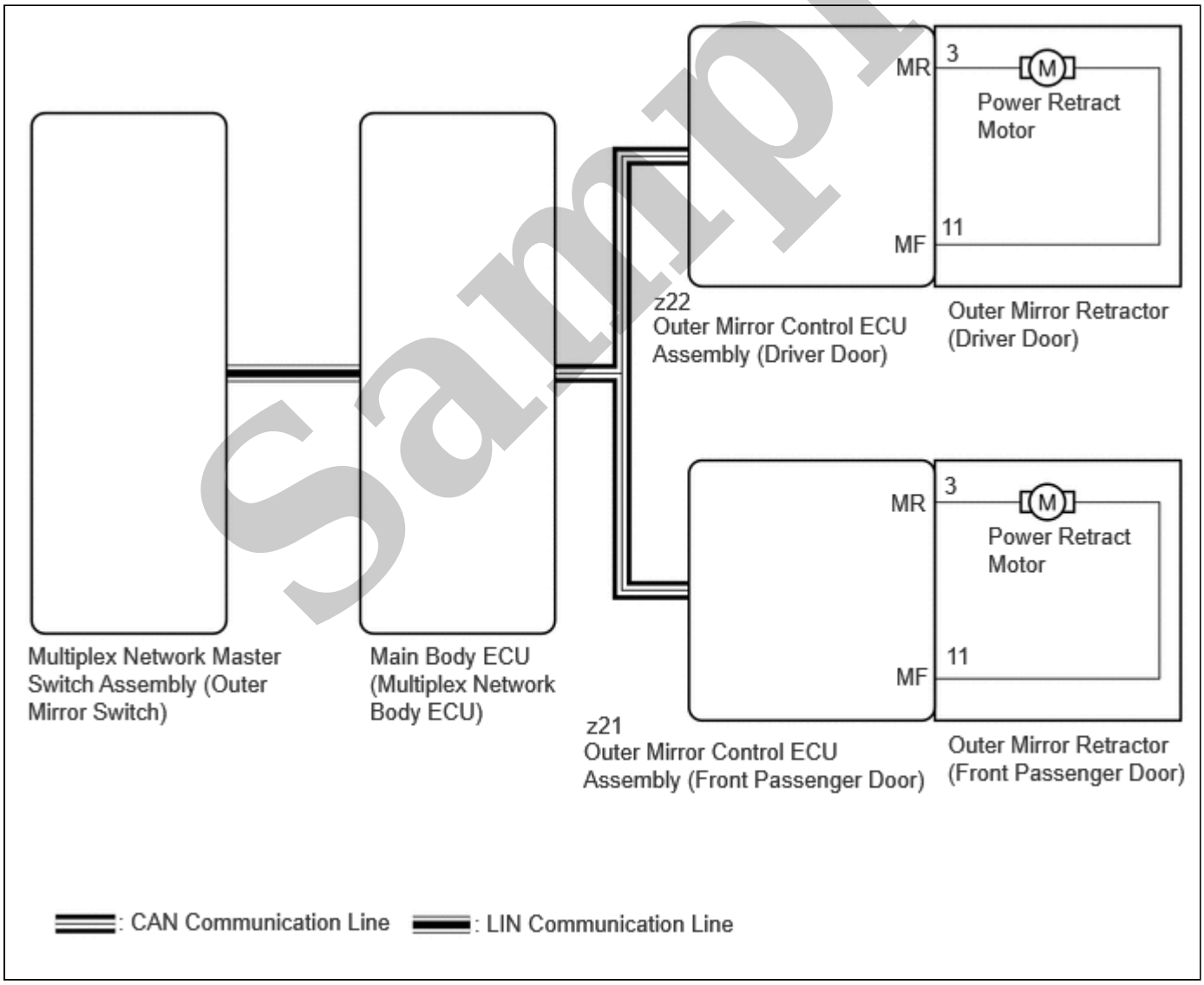
AUTO Power Retract Mirrors do not operate

DESCRIPTION

The multiplex network master switch assembly (outer mirror switch) sends the retractable outer mirror switch signal to the main body ECU (multiplex network body ECU). The main body ECU (multiplex network body ECU) sends the auto retract/return signal to the outer mirror control ECU assemblies via CAN communication, which then controls the mirrors.

When the outer mirror control ECU assemblies receive a door lock output signal from the main body ECU (multiplex network body ECU) while the retractable outer mirror switch is in auto position, the outer mirror control ECU assemblies operate the retract motors built into the outer rear view mirror assemblies to retract or return the outer rear view mirror assemblies.

WIRING DIAGRAM



CAUTION / NOTICE / HINT

4.	CHECK SMART ACCESS SYSTEM WITH PUSH-BUTTON START (for Entry Function)

(a) Check the smart access system with push-button start (for Entry Function).

Click here INFO

OK:
Smart access system with push-button start (for Entry Function) is normal.

NG ▶ **GO TO SMART ACCESS SYSTEM WITH PUSH-BUTTON START (for Entry Function)**

OK

5.	REPLACE MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY (OUTER MIRROR SWITCH)

(a) Temporarily replace the multiplex network master switch assembly (outer mirror switch) with a new or known good one.

Click here INFO

NEXT

6.	CHECK POWER MIRROR CONTROL SYSTEM

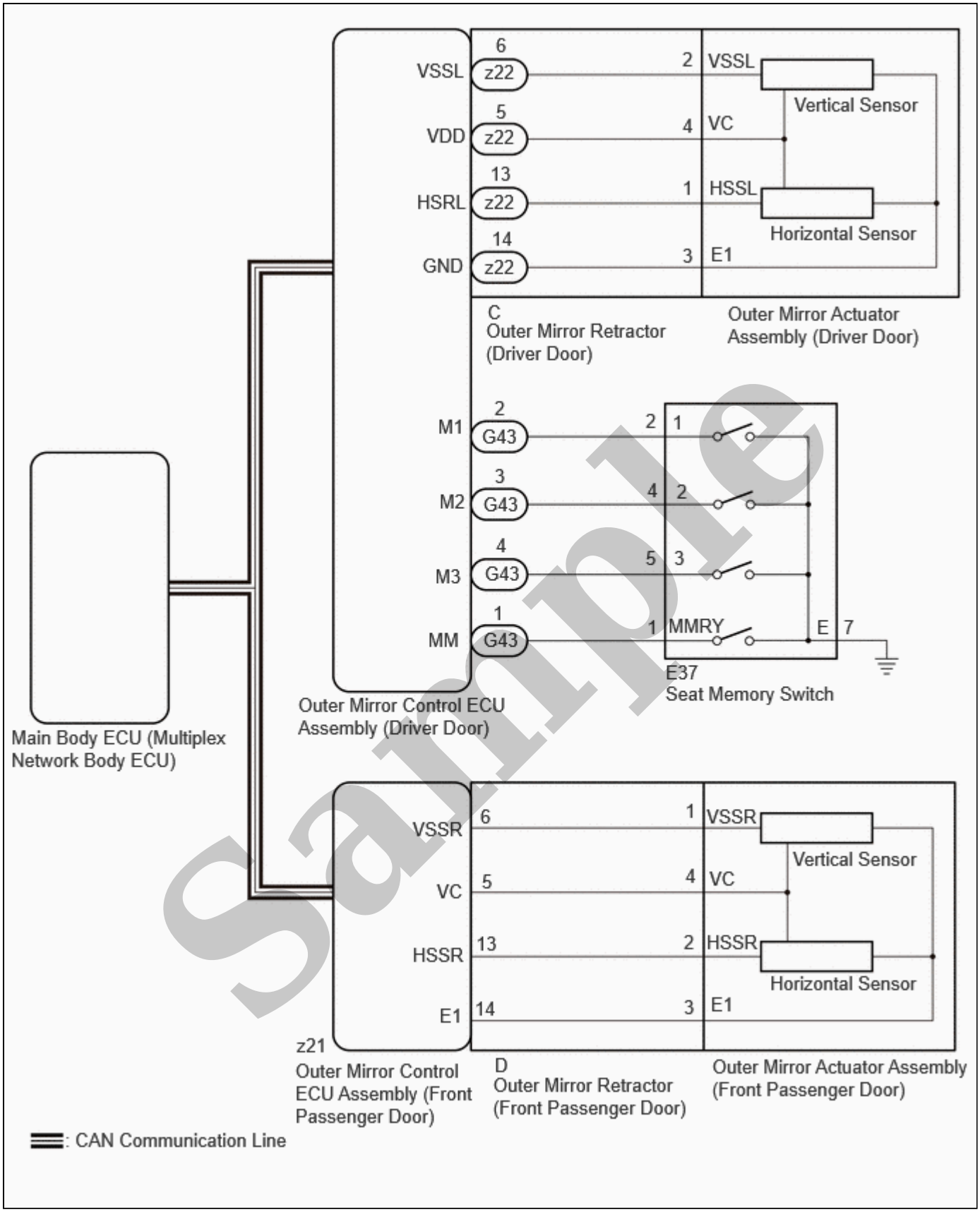
(a) Check the auto power retract mirror function operates normally.

Click here INFO

OK:
Auto power retract mirror function operates normally.

OK ▶ **END (MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY (OUTER MIRROR SWITCH) WAS DEFECTIVE)**

NG ▶ **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**



CAUTION / NOTICE / HINT

NOTICE:

- The power mirror control system uses the CAN communication system. Inspect the communication functions by following How to Proceed with Troubleshooting. Troubleshoot the power mirror control system after confirming that the communication systems are functioning properly.

OK

2.	CHECK SEAT MEMORY SWITCH (SEAT POSITION MEMORY FUNCTION)

(a) When any seat memory switch (M1, M2 or M3) is pressed, check that the driver seat moves to the memorized position.

Click here INFO

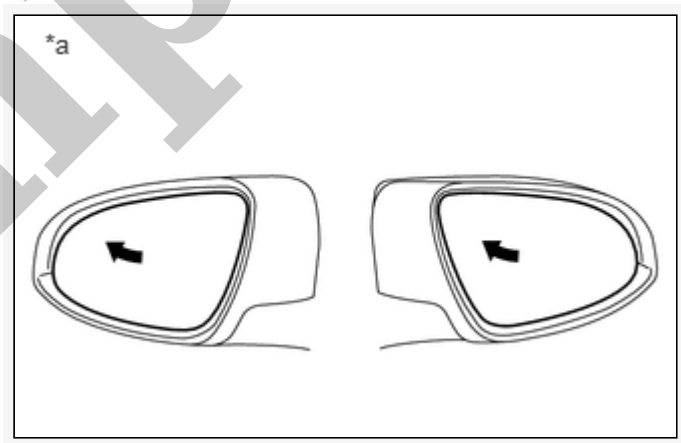
OK:
The driver seat moves to the memorized position.

NG ▶ **GO TO FRONT POWER SEAT CONTROL SYSTEM (Power Seat does not Return to Memorized Position)**

OK

3.	CHECK MEMORY AND REACTIVATION FUNCTION

(a) Turn the ignition switch ON.



*a	Turn to Fully Left Position

(b) Using the multiplex network master switch assembly (outer mirror switch), turn the mirror surface to the fully left position.

(c) Press the M1 switch while the SET switch is being pressed.

(d) Check that the buzzer sounds for 0.5 seconds and the mirror surface position is memorized.

(e) Using the multiplex network master switch assembly (outer mirror switch), turn the mirror surface to the fully right position.

(f) Press the M1 switch.

(g) Check that the buzzer sounds for 0.1 seconds and the outer mirror automatically moves to the memorized fully left position.

(a) Disconnect the z22 outer mirror control ECU assembly (driver door) connector.

(b) Disconnect the C outer mirror actuator assembly (driver door) connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(z22)
Click Connector(z22)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z22-5(VDD) - C-4(VC)	Always	Below 1 Ω
z22-6(VSSL) - C-2(VSSL)	Always	Below 1 Ω
z22-13(HSRL) - C-1(HSSL)	Always	Below 1 Ω
z22-14(GND) - C-3(E1)	Always	Below 1 Ω
z22-5(VDD) or C-4(VC) - Body ground	Always	10 kΩ or higher
z22-6(VSSL) or C-2(VSSL) - Body ground	Always	10 kΩ or higher
z22-13(HSRL) or C-1(HSSL) - Body ground	Always	10 kΩ or higher
z22-14(GND) or C-3(E1) - Body ground	Always	10 kΩ or higher

OK ▶ **REPLACE OUTER MIRROR ACTUATOR ASSEMBLY (DRIVER DOOR)**

NG ▶ **REPLACE OUTER MIRROR RETRACTOR (DRIVER DOOR)**

6.	INSPECT OUTER MIRROR RETRACTOR (FRONT PASSENGER DOOR)

Click here INFO

OK ▶ **REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (FRONT PASSENGER DOOR)**

NG ▼

7.	INSPECT OUTER MIRROR RETRACTOR (FRONT PASSENGER DOOR)

8.	INSPECT SEAT MEMORY SWITCH

Click here INFO

NG ▶ **REPLACE SEAT MEMORY SWITCH**

OK ▼

9.	CHECK HARNESS AND CONNECTOR (SEAT MEMORY SWITCH - OUTER MIRROR CONTROL ECU ASSEMBLY (DRIVER DOOR) - BODY GROUND)

(a) Disconnect the G43 outer mirror control ECU assembly (driver door) connector.

(b) Disconnect the E37 seat memory switch connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

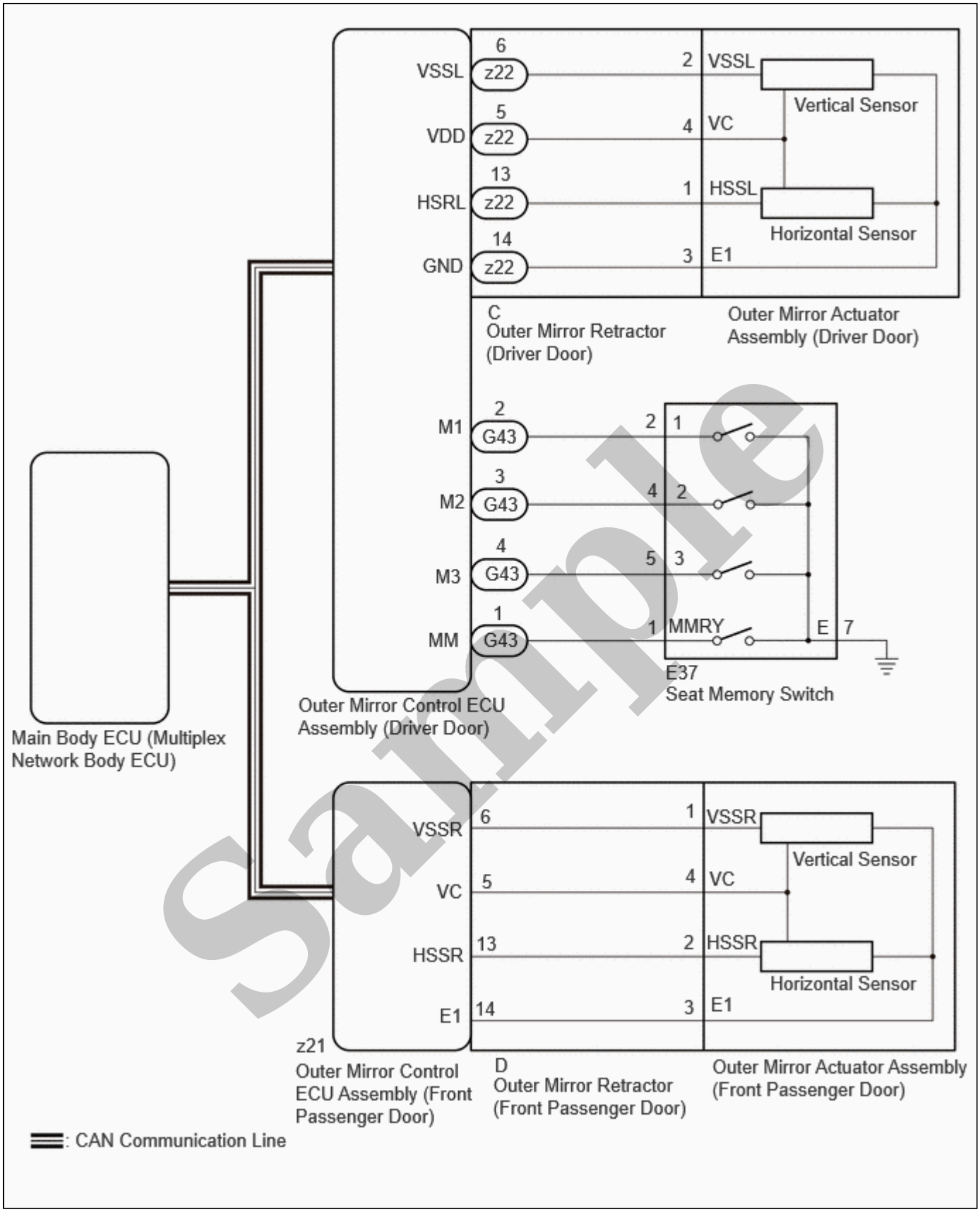
EWD INFO

Click Location & Routing(G43,E37)
Click Connector(G43)
Click Connector(E37)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G43-1 (MM) - E37-1 (MMRY)	Always	Below 1 Ω
G43-2 (M1) - E37-2 (1)	Always	Below 1 Ω
G43-3 (M2) - E37-4 (2)	Always	Below 1 Ω
G43-4 (M3) - E37-5 (3)	Always	Below 1 Ω
E37-7 (E) - Body ground	Always	Below 1 Ω
G43-1 (MM) or E37-1 (MMRY) - Body ground	Always	10 kΩ or higher
G43-2 (M1) or E37-2 (1) - Body ground	Always	10 kΩ or higher
G43-3 (M2) or E37-4 (2) - Body ground	Always	10 kΩ or higher
G43-4 (M3) or E37-5 (3) - Body ground	Always	10 kΩ or higher

OK ▶ **REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (DRIVER DOOR)**

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**



CAUTION / NOTICE / HINT

NOTICE:

- The power mirror control system uses the CAN communication system. Inspect the communication functions by following How to Proceed with Troubleshooting. Troubleshoot the power mirror control system after confirming that the communication systems are functioning properly.

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
			ON: Memorized	

Body Electrical > Mirror L > Data List

TESTER DISPLAY
Memory No.1 Position Memory
Memory No.2 Position Memory
Memory No.3 Position Memory

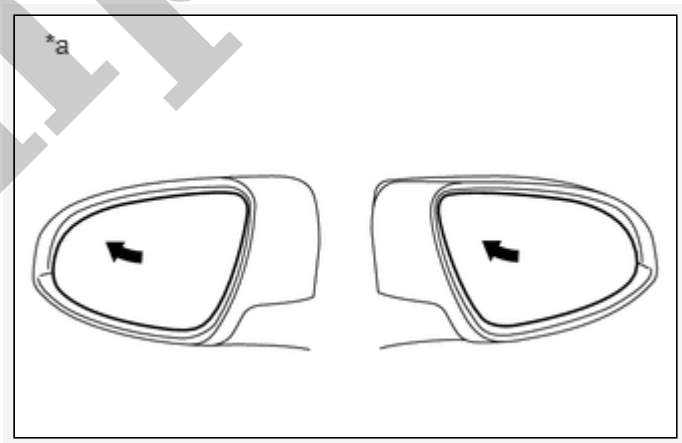
OK:
ON (Memorized) appears on the GTS screen.

NG ▶ **GO TO OTHER DIAGNOSTIC PROCEDURE (Power Mirror Surface Position is not Memorized)**

OK ▼

4.	CHECK MEMORY AND REACTIVATION FUNCTION

(a) Turn the ignition switch ON.



*a	Turn to Fully Left Position

(b) Using the multiplex network master switch assembly (outer mirror switch), turn the mirror surface to the fully left position.

(c) Press the M1 switch while the SET switch is being pressed.

(d) Check that the buzzer sounds for 0.5 seconds and the mirror surface position is memorized.

(e) Using the multiplex network master switch assembly (outer mirror switch), turn the mirror surface to the fully right position.

(f) Press the M1 switch.

(g) Check that the buzzer sounds for 0.1 seconds and the outer mirror automatically moves to the memorized fully left position.

(a) Disconnect the z22 outer mirror control ECU assembly (driver door) connector.

(b) Disconnect the C outer mirror actuator assembly (driver door) connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(z22)
Click Connector(z22)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z22-5(VDD) - C-4(VC)	Always	Below 1 Ω
z22-6(VSSL) - C-2(VSSL)	Always	Below 1 Ω
z22-13(HSRL) - C-1(HSSL)	Always	Below 1 Ω
z22-14(GND) - C-3(E1)	Always	Below 1 Ω
z22-5(VDD) or C-4(VC) - Body ground	Always	10 kΩ or higher
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z22-14(GND) or C-3(E1) - Body ground	Always	10 kΩ or higher

OK ▶ **REPLACE OUTER MIRROR ACTUATOR ASSEMBLY (DRIVER DOOR)**

NG ▶ **REPLACE OUTER MIRROR RETRACTOR (DRIVER DOOR)**

7.	INSPECT OUTER MIRROR RETRACTOR RH

Click here INFO

OK ▶ **REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (FRONT PASSENGER DOOR)**

NG ▼

8.	INSPECT OUTER MIRROR RETRACTOR (FRONT PASSENGER DOOR)