Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM1000000029X7I
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: NETWORKING: LIN COMMUNICATION SYSTEM: B120687,B232187-B232487; P/W Master SW System Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**B120687**	**P/W Master SW System Missing Message**

DTC	**B232187**	**D-Door P/W System Missing Message**

DTC	**B232287**	**P-Door P/W System Missing Message**

DTC	**B232387**	**RR-Door P/W System Missing Message**

DTC	**B232487**	**RL-Door P/W System Missing Message**

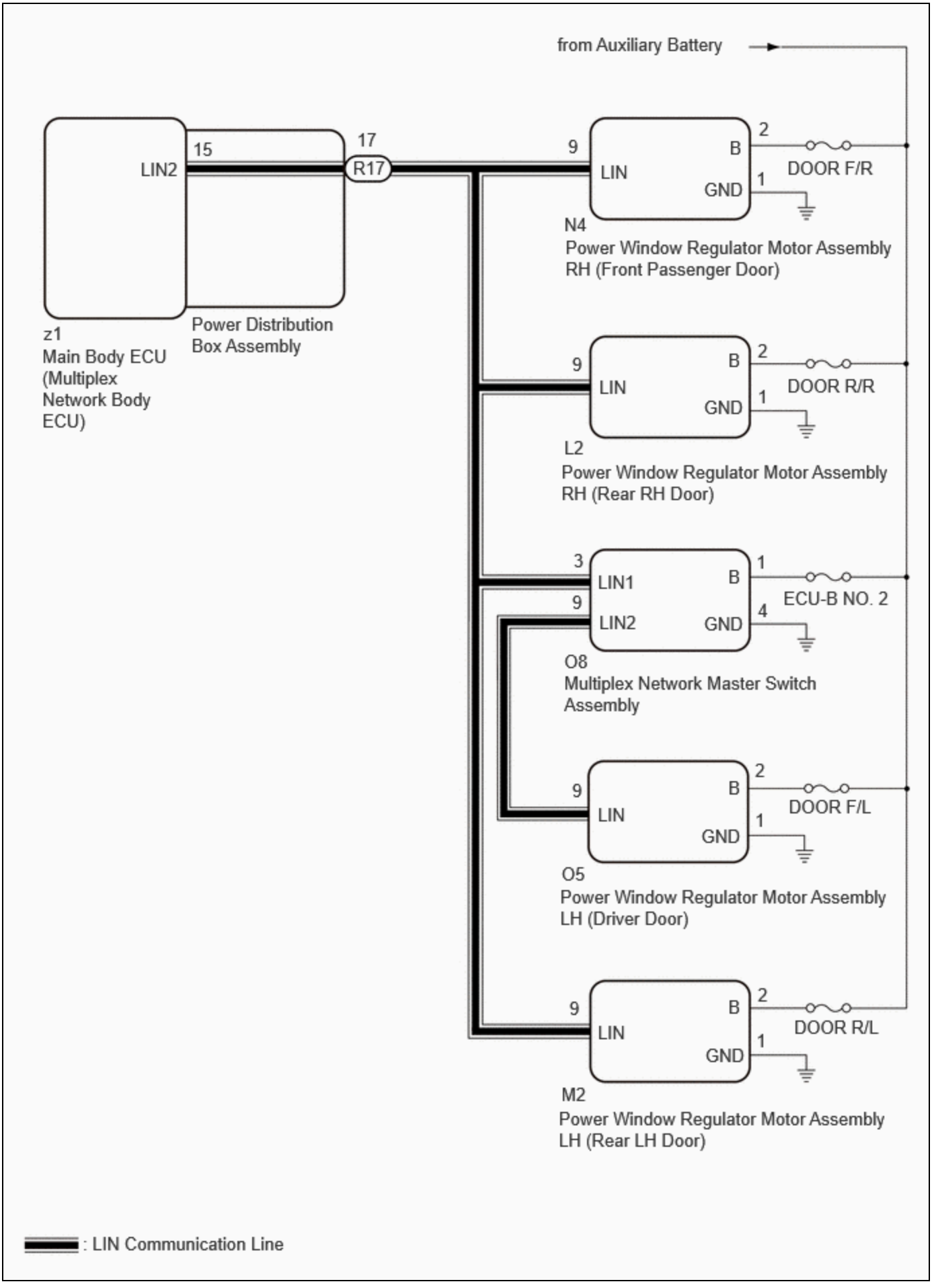
DESCRIPTION

This DTC is stored when LIN communication between the main body ECU (multiplex network body ECU) and multiplex network master switch assembly, power window regulator motor assembly LH (driver door), power window regulator motor assembly RH (front passenger door), power window regulator motor assembly RH (rear RH door) or power window regulator motor assembly LH (rear LH door) stops for 10 seconds or more.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
B120687	P/W Master SW System Missing Message	No communication between multiplex network master switch assembly and main body ECU (multiplex network body ECU) for 10 seconds or more.	• Main body ECU (multiplex network body ECU) • Power distribution box assembly • Multiplex network master switch assembly • Wire harness or connector	Main Body	A
B232187	D-Door P/W System Missing Message	No communication between power window regulator motor assembly LH (driver door) and main body ECU (multiplex network body ECU) for 10 seconds or more.	• Main body ECU (multiplex network body ECU) • Power distribution box assembly	Main Body	A

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
			• Multiplex network master switch assembly • Power window regulator motor assembly LH (driver door) • Wire harness or connector		
B232287	P-Door P/W System Missing Message	No communication between power window regulator motor assembly RH (front passenger door) and main body ECU (multiplex network body ECU) for 10 seconds or more.	• Main body ECU (multiplex network body ECU) • Power distribution box assembly • Power window regulator motor assembly RH (front passenger door) • Wire harness or connector	Main Body	A
B232387	RR-Door P/W System Missing Message	No communication between power window regulator motor assembly RH (rear RH door) and main body ECU (multiplex network body ECU) for 10 seconds or more.	• Main body ECU (multiplex network body ECU) • Power distribution box assembly • Power window regulator motor assembly RH (rear RH door) • Wire harness or connector	Main Body	A
B232487	RL-Door P/W System Missing Message	No communication between power window regulator motor assembly LH (rear LH door) and main body ECU (multiplex network body ECU) for 10 seconds or more.	• Main body ECU (multiplex network body ECU) • Power distribution box assembly • Power window regulator motor assembly LH (rear LH door) • Wire harness or connector	Main Body	A

WIRING DIAGRAM


from Auxiliary Battery
LIN2
15
17
R17
z1
Main Body ECU
(Multiplex
Network Body
ECU)
Power Distribution
Box Assembly
9
LIN
B
GND
2
1
DOOR F/R
N4
Power Window Regulator Motor Assembly
RH (Front Passenger Door)
DOOR R/R
L2
Power Window Regulator Motor Assembly
RH (Rear RH Door)
3
LIN1
LIN2
ECU-B NO. 2
4
O8
Multiplex Network Master Switch
Assembly
DOOR F/L
O5
Power Window Regulator Motor Assembly
LH (Driver Door)
DOOR R/L
M2
Power Window Regulator Motor Assembly
LH (Rear LH Door)
: LIN Communication Line

CAUTION / NOTICE / HINT

NOTICE:

- Inspect the fuses for circuits related to this system before performing the following procedure.
- When a power window regulator motor assembly is replaced or removed and reinstalled, it is necessary to perform initialization.

  Click here INFO
- Before replacing the main body ECU (multiplex network body ECU), refer to Registration.

  Click here INFO

PROCEDURE

1.	**CLEAR DTC**

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT

2.	**CHECK FOR DTC**

(a) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
B120687, B232187, B232287, B232387 and B232487 are output	B
B120687, B232187, B232387 and B232487 are output	C
B120687, B232187 and B232487 are output	D
B120687 and B232187 are output	E
Only B120687 is output	F
Only B232187 is output	G

RESULT	PROCEED TO
Only B232287 is output	H
Only B232387 is output	I
Only B232487 is output	J

A ▶ **USE SIMULATION METHOD TO CHECK**

C ▶ **GO TO STEP 5**

D ▶ **GO TO STEP 6**

E ▶ **GO TO STEP 6**

F ▶ **GO TO STEP 7**

G ▶ **GO TO STEP 8**

H ▶ **GO TO STEP 11**

I ▶ **GO TO STEP 13**

J ▶ **GO TO STEP 15**

B ▼

3.	**INSPECT POWER DISTRIBUTION BOX ASSEMBLY**

Pre-procedure1

(a) Remove the power distribution box assembly.

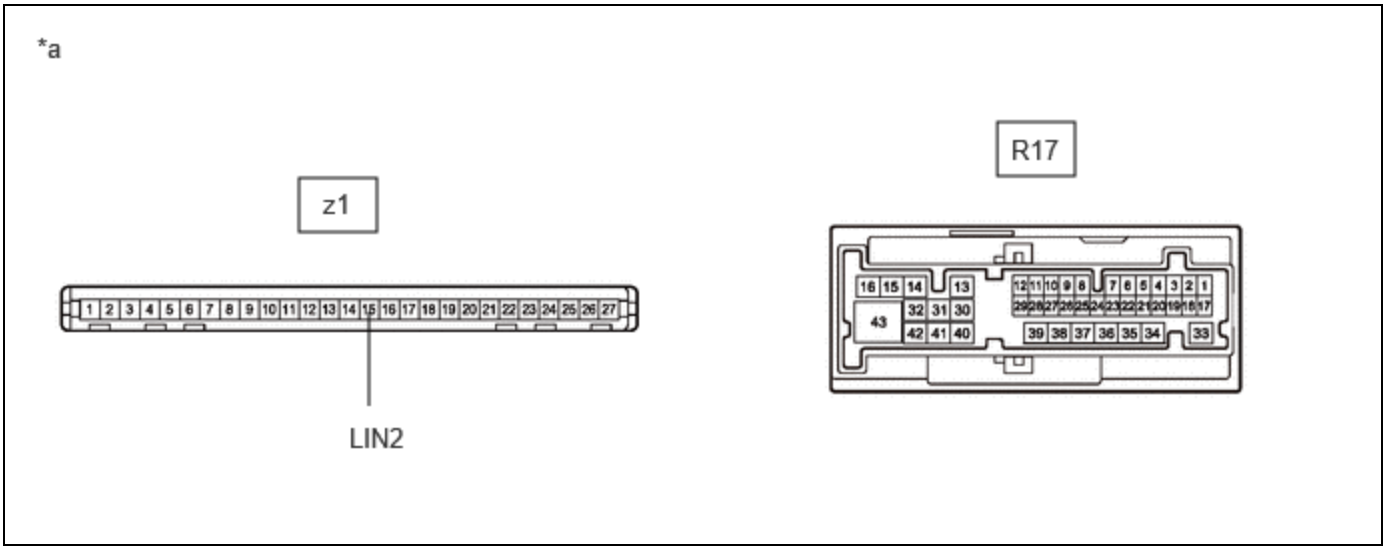
HINT:

Click here INFO

(b) Remove the main body ECU (multiplex network body ECU) from the power distribution box assembly.

Procedure1

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



*a	Component without harness connected (Power Distribution Box Assembly)	-	-

HINT:

This inspection is to check the LIN communication line in the power distribution box assembly that connects the wire harness to the built-in main body ECU (multiplex network body ECU).

Standard Resistance:

EWD INFO

Click Location & Routing(z1,R17)
Click Connector(z1)
Click Connector(R17)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
z1-15 (LIN2) - R17-17	Always	Below 1 Ω	Ω

Post-procedure1

(d) None

NG ▶ **REPLACE POWER DISTRIBUTION BOX ASSEMBLY**

Click here INFO

OK ▼

4.	**CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (REAR LH DOOR))**

Pre-procedure1

(a) Disconnect the M2 power window regulator motor assembly LH (rear LH door) connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(R17,M2)
Click Connector(R17)
Click Connector(M2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - M2-9 (LIN)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

(c) None

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

Click here INFO

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

5.	**CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (FRONT PASSENGER DOOR))**

Pre-procedure1

(a) Disconnect the R17 power distribution box assembly connector.

(b) Disconnect the N4 power window regulator motor assembly RH (front passenger door) connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(R17,N4)

Click Connector(R17)
Click Connector(N4)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - N4-9 (LIN)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

(d) None

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

Click here INFO

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

6.	**CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY)**

Pre-procedure1

(a) Disconnect the R17 power distribution box assembly connector.

(b) Disconnect the O8 multiplex network master switch assembly connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(R17,O8)
Click Connector(R17)
Click Connector(O8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - O8-3 (LIN1)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

(d) None

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

Click here INFO

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

7.	**CHECK HARNESS AND CONNECTOR (MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY - AUXILIARY BATTERY AND BODY GROUND)**

Pre-procedure1

(a) Disconnect the O8 multiplex network master switch assembly connector.

Procedure1

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

Standard Voltage:

EWD INFO

Click Location & Routing(O8)
Click Connector(O8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O8-1 (B) - Body ground	Ignition switch off	11 to 14 V	V

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

Standard Resistance:

EWD INFO

Click Location & Routing(O8)
Click Connector(O8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O8-4 (GND) - Body ground	Always	Below 1 Ω	Ω

Post-procedure1

(d) None

OK ▶ **REPLACE MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY**

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

8.	**INSPECT MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY**

Pre-procedure1

(a) Remove the multiplex network master switch assembly.

HINT:

Click here INFO

Procedure1

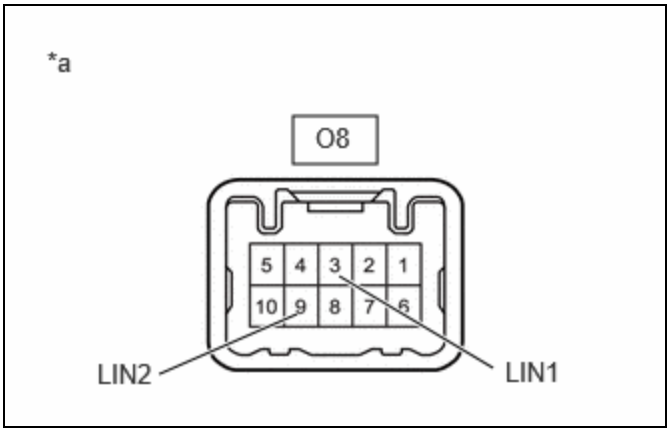
(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(O8)
Click Connector(O8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O8-9 (LIN2) - O8-3 (LIN1)	Always	Below 1 Ω	Ω



*a	Component without harness connected (Multiplex Network Master Switch Assembly)

Result:

PROCEED TO
OK
NG

Post-procedure1

(c) None

NG ▶ **REPLACE MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY**

OK ▼

9.	**CHECK HARNESS AND CONNECTOR (MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (DRIVER DOOR))**

Pre-procedure1

(a) Disconnect the O5 power window regulator motor assembly LH (driver door) connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(O8,O5)
Click Connector(O8)
Click Connector(O5)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O8-9 (LIN2) - O5-9 (LIN)	Always	Below 1 Ω	Ω

Post-procedure1

(c) None

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

OK ▼

10.	**CHECK HARNESS AND CONNECTOR (POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (DRIVER DOOR) - AUXILIARY BATTERY AND BODY GROUND)**

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

Standard Voltage:

EWD INFO

Click Location & Routing(O5)
Click Connector(O5)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O5-2 (B) - Body ground	Ignition switch off	11 to 14 V	V

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

Standard Resistance:

EWD INFO

Click Location & Routing(O5)
Click Connector(O5)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O5-1 (GND) - Body ground	Always	Below 1 Ω	Ω

OK ▶ **REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (DRIVER DOOR)**

Click here INFO

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

11.	**CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (FRONT PASSENGER DOOR))**

Pre-procedure1

(a) Disconnect the R17 power distribution box assembly connector.

(b) Disconnect the N4 power window regulator motor assembly RH (front passenger door) connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(R17,N4)
Click Connector(R17)
Click Connector(N4)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - N4-9 (LIN)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

(d) None

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

OK ▼

12.	**CHECK HARNESS AND CONNECTOR (POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (FRONT PASSENGER DOOR) - AUXILIARY BATTERY AND BODY GROUND)**

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

Standard Voltage:

EWD INFO

Click Location & Routing(N4)
Click Connector(N4)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
N4-2 (B) - Body ground	Ignition switch off	11 to 14 V	V

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

Standard Resistance:

EWD INFO

Click Location & Routing(N4)
Click Connector(N4)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
N4-1 (GND) - Body ground	Always	Below 1 Ω	Ω

OK ▶ **REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (FRONT PASSENGER DOOR)**

Click here INFO

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

13.	**CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (REAR RH DOOR))**

Pre-procedure1

(a) Disconnect the R17 power distribution box assembly connector.

(b) Disconnect the L2 power window regulator motor assembly RH (rear RH Door) connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(R17,L2)
Click Connector(R17)
Click Connector(L2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - L2-9 (LIN)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

(d) None

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

OK ▼

14.	**CHECK HARNESS AND CONNECTOR (POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (REAR RH DOOR) - AUXILIARY BATTERY AND BODY GROUND)**

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

Standard Voltage:

EWD INFO

Click Location & Routing(L2)
Click Connector(L2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
L2-2 (B) - Body ground	Ignition switch off	11 to 14 V	V

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

Standard Resistance:

EWD INFO

Click Location & Routing(L2)
Click Connector(L2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
L2-1 (GND) - Body ground	Always	Below 1 Ω	Ω

OK ▶ **REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (REAR RH DOOR)**

Click here INFO

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

15.	**CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (REAR LH DOOR))**

Pre-procedure1

(a) Disconnect the R17 power distribution box assembly connector.

(b) Disconnect the M2 power window regulator motor assembly LH (rear LH door) connector.

Procedure1

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

NOTICE:

Make sure that each ECU is in sleep mode before performing the inspection. To enter sleep mode, turn the ignition switch from ON to off and wait for 180 seconds or more without operating any switches.

Standard Resistance:

EWD INFO

Click Location & Routing(R17,M2)
Click Connector(R17)
Click Connector(M2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - M2-9 (LIN)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

(d) None

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

OK ▼

16.	**CHECK HARNESS AND CONNECTOR (POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (REAR LH DOOR) - AUXILIARY BATTERY AND BODY GROUND)**

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

Standard Voltage:

EWD INFO

Click Location & Routing(M2)
Click Connector(M2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
M2-2 (B) - Body ground	Ignition switch off	11 to 14 V	V

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

Standard Resistance:

EWD INFO

Click Location & Routing(M2)
Click Connector(M2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
M2-1 (GND) - Body ground	Always	Below 1 Ω	Ω

OK ▶ **REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (REAR LH DOOR)**

Click here INFO

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