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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: NETWORKING: LIN COMMUNICATION SYSTEM: B232588; Door LIN Bus off; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

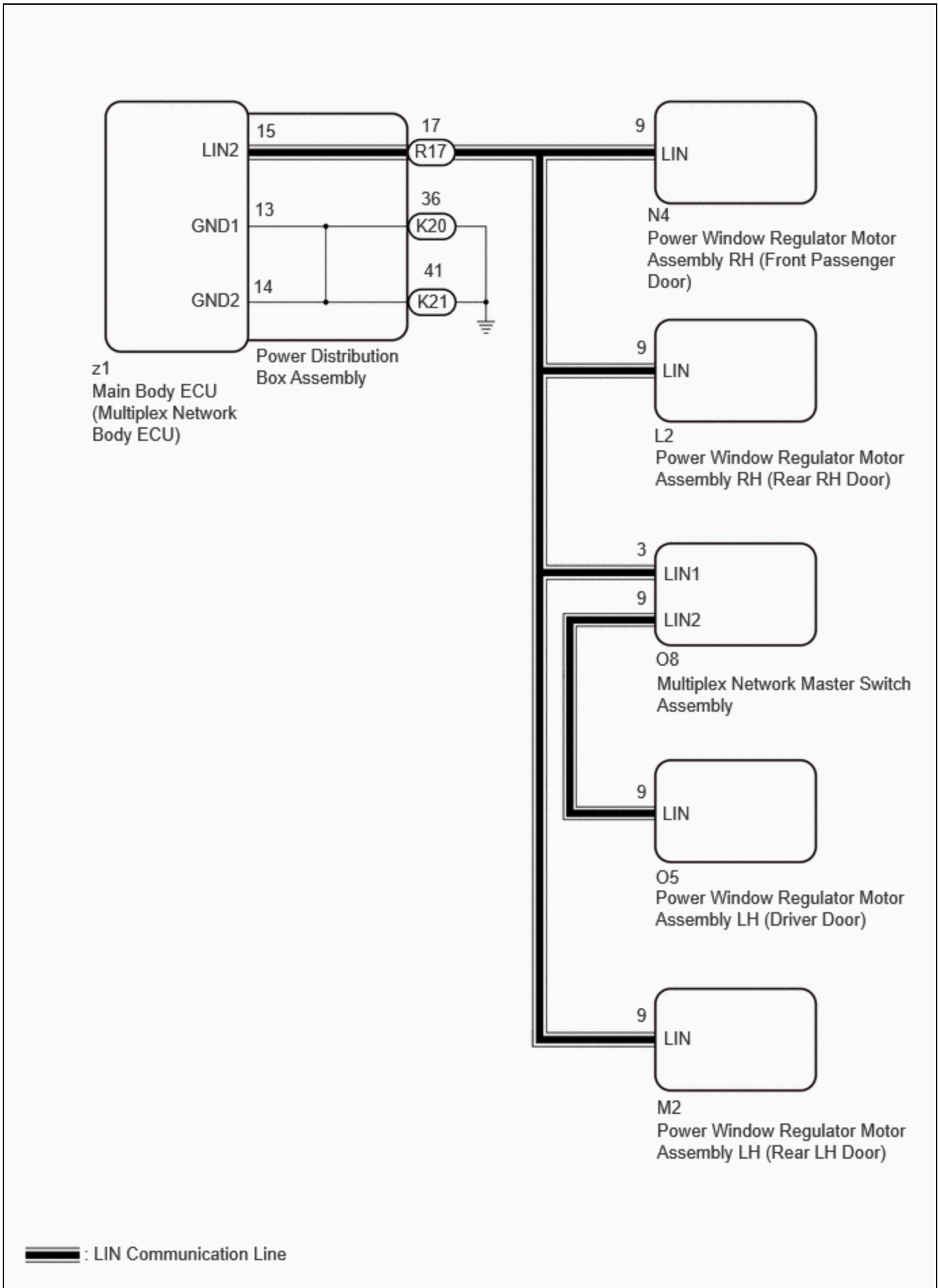
DTC	B232588	Door LIN Bus off
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DESCRIPTION

If the main body ECU (multiplex network body ECU) detects a communication error with an ECU connected to the door bus lines for 8 seconds or more, DTC B232588 will be stored.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
B232588	Door LIN Bus off	The main body ECU (multiplex network body ECU) detects a communication error with an ECU connected to the door bus lines for 8 seconds or more.	<ul style="list-style-type: none"> • Main body ECU (multiplex network body ECU) • Power distribution box assembly • 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 LH (rear LH door) • Power window regulator motor assembly RH (rear RH door) • Wire harness or connector 	Main Body	A

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- 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
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Pre-procedure1

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

Procedure1

- (b) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

Post-procedure1

- (c) None

NEXT



2.	CHECK POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (DRIVER DOOR)
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- (a) After 10 seconds have elapsed, check if the same DTC is output again.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B232588 is not output	A
B232588 is not output	B

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

[Click here](#) INFO

A**3. CLEAR DTC**

Pre-procedure1

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

Procedure1

(b) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

Post-procedure1

(c) None

NEXT**4. CHECK MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY**

(a) After 10 seconds have elapsed, check if the same DTC is output again.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B232588 is output	A
B232588 is not output	B

B **GO TO STEP 14****A****5. CLEAR DTC**

Pre-procedure1

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

Procedure1

(b) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

Post-procedure1

(c) None

NEXT



6.	CHECK POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (FRONT PASSENGER DOOR)
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(a) After 10 seconds have elapsed, check if the same DTC is output again.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B232588 is output	A
B232588 is not output	B

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

A



7.	CLEAR DTC
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Pre-procedure1

(a) Disconnect the L2 power window regulator motor assembly RH (rear RH door) connector.

Procedure1

(b) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

Post-procedure1

(c) None

NEXT



8.	CHECK POWER WINDOW REGULATOR MOTOR ASSEMBLY RH (REAR RH DOOR)
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(a) After 10 seconds have elapsed, check if the same DTC is output again.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B232588 is output	A
B232588 is not output	B

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

Click here [INFO](#)

A



9.	CLEAR DTC
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Pre-procedure1

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

Procedure1

(b) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

Post-procedure1

(c) None

NEXT



10.	CHECK POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (REAR LH DOOR)
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(a) After 10 seconds have elapsed, check if the same DTC is output again.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B232588 is output	A
B232588 is not output	B

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

Click here 

A


11.	CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - EACH ECU)
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Pre-procedure1

- (a) Disconnect the R17 power distribution box assembly connector.
- (b) Disconnect all connectors shown in the wiring diagram.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(R17\).](#)

[Click Connector\(R17\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - Body ground	Always	10 kΩ or higher	kΩ
R17-17 - Other terminals	Always	10 kΩ or higher	kΩ

Post-procedure1

- (d) None

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK


12. INSPECT POWER DISTRIBUTION BOX ASSEMBLY

Pre-procedure1

(a) Remove the power distribution box assembly.

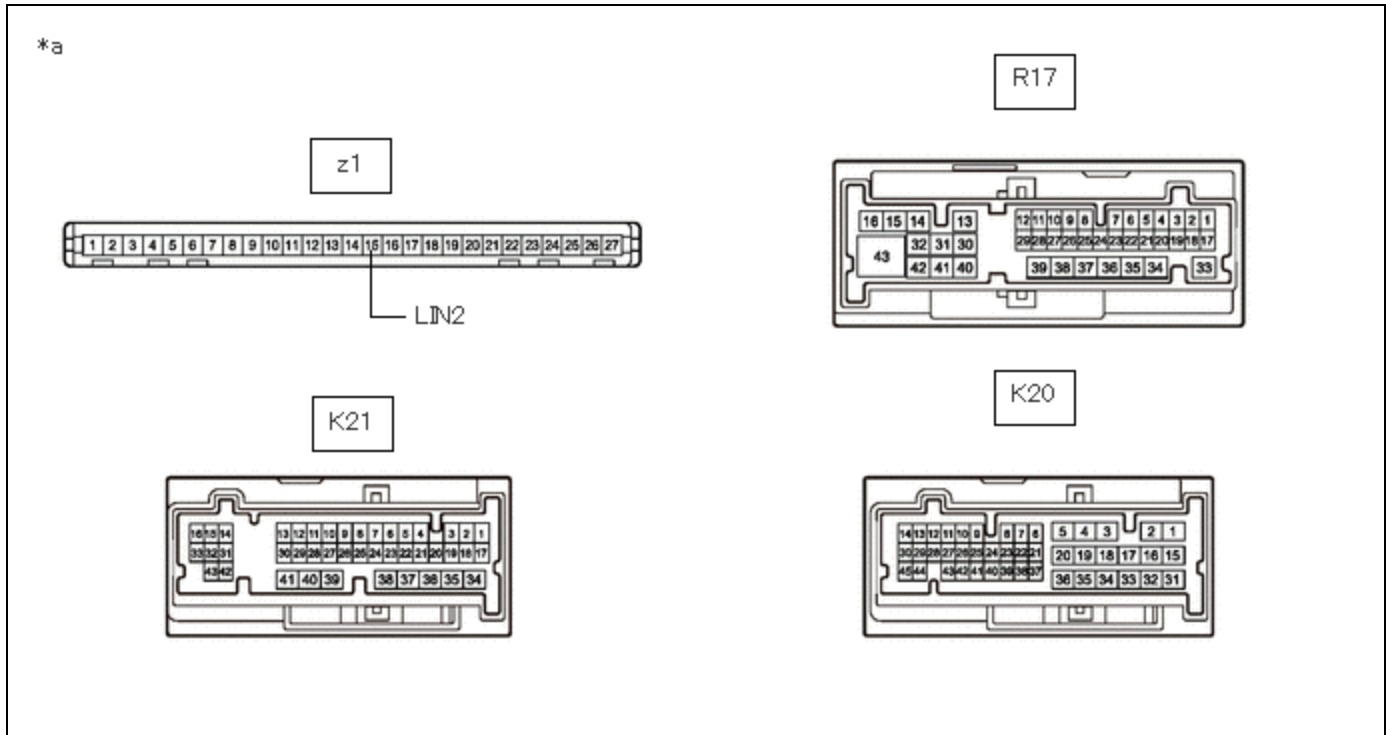
HINT:

[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)	-	-
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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:



[Click Location & Routing\(R17,K20,K21,z1\)](#)

[Click Connector\(R17\)](#)

[Click Connector\(K20\)](#)

[Click Connector\(K21\)](#)

[Click Connector\(z1\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R17-17 - K20-36 or K21-41	Always	10 kΩ or higher	kΩ
z1-15 (LIN2) - Other terminals	Always	10 kΩ or higher	kΩ

Post-procedure1

(d) None

NG  **REPLACE POWER DISTRIBUTION BOX ASSEMBLY**

Click here 

OK



13. CHECK MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

Pre-procedure1

(a) Install the main body ECU (multiplex network body ECU) to the power distribution box assembly.

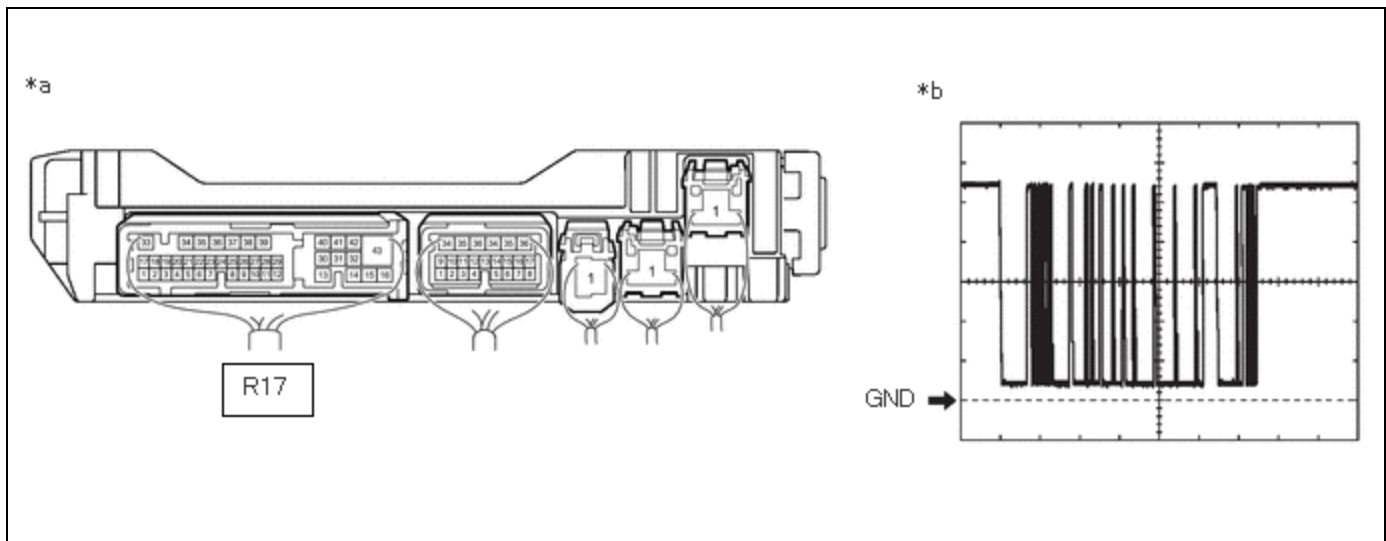
HINT:

Click here 

(b) Connect all power distribution box assembly connectors other than R17.

Procedure1

(c) Using a GTS, check the waveform.



*a	Component with harness connected (Power Distribution Box Assembly)	*b	Waveform
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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).

OK:



[Click Location & Routing\(R17\)](#)

[Click Connector\(R17\)](#)

TESTER CONNECTION	CONDITION	TOOL SETTING	SPECIFIED CONDITION
R17-17 - Body ground	Ignition switch ON	2 V/DIV., 200 ms/DIV.	Pulse generation (See waveform)

Post-procedure1

(d) None

OK ► **USE SIMULATION METHOD TO CHECK**

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

Click here [INFO](#)

14.	CHECK HARNESS AND CONNECTOR (MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY - POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (DRIVER DOOR))
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(O8\)](#)

[Click Connector\(O8\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
O8-9 (LIN2) - Body ground	Always	10 kΩ or higher	kΩ
O8-9 (LIN2) - Other terminals	Always	10 kΩ or higher	kΩ

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

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR**

