

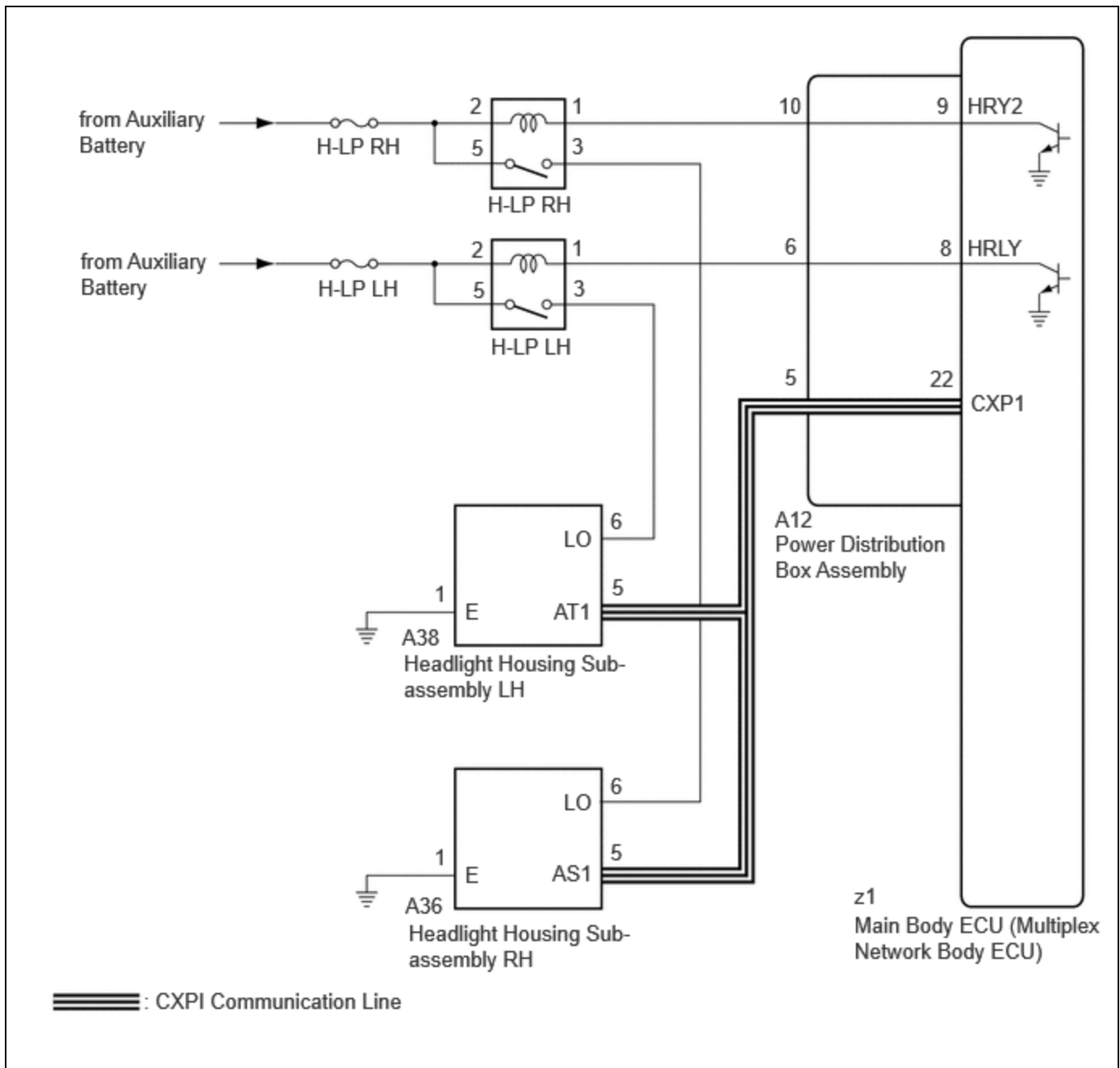
<b>Last Modified:</b> 12-04-2024	6.11:8.1.0	<b>Doc ID:</b> RM100000002A15G
<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> LIGHTING (EXT): LIGHTING SYSTEM: High Beam Headlight Circuit; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

**High Beam Headlight Circuit**

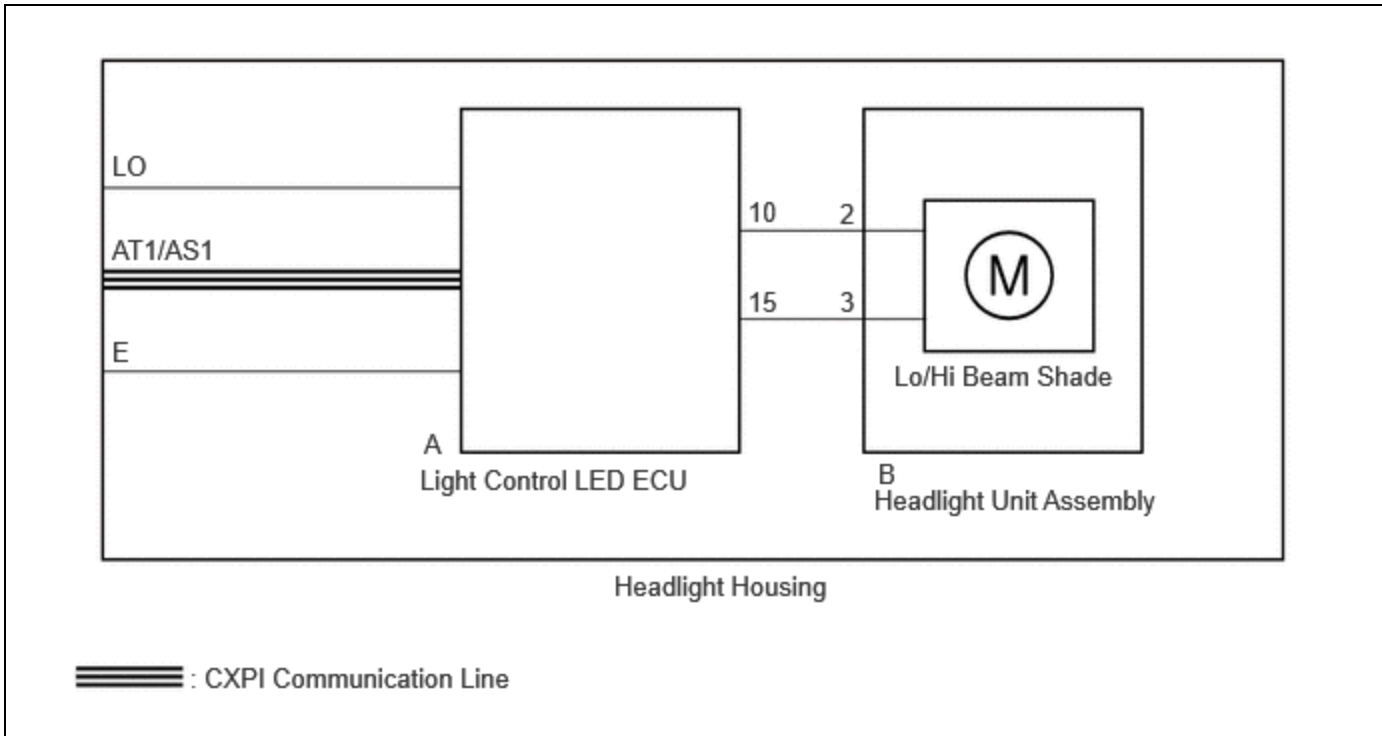
**DESCRIPTION**

The main body ECU (multiplex network body ECU) controls the high beam headlights.

**WIRING DIAGRAM**



**HEADLIGHT ASSEMBLY CIRCUIT (w/o Front Side Marker Light)**



**CAUTION / NOTICE / HINT**

**NOTICE:**

- Inspect the fuses for circuits related to this system before performing the following procedure.
- Before replacing the main body ECU (multiplex network body ECU), refer to Registration.

Click here [INFO](#)

- First perform the communication function inspections in How to Proceed with Troubleshooting to confirm that there are no CXPI communication malfunctions before troubleshooting this symptom.

Click here [INFO](#)

**PROCEDURE**

<b>1.</b>	<b>CONFIRM MODEL</b>
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(a) Choose the model to be inspected.

RESULT	PROCEED TO
w/ Front Side Marker Light	A
w/o Front Side Marker Light	B

**B** **GO TO STEP 3**

**A**



<b>2.</b>	<b>PERFORM ACTIVE TEST USING GTS</b>
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(a) Perform the Active Test according to the display on the GTS.

**Body Electrical > Main Body > Active Test**

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
High Beam Headlight	High beam headlights	OFF or ON	-

**Body Electrical > Main Body > Active Test**

TESTER DISPLAY
High Beam Headlight

OK:

High beam headlights illuminate.

RESULT	PROCEED TO
OK	A
NG (LH side high beam headlight does not illuminate)	B
NG (RH side high beam headlight does not illuminate)	C

**A** ▶ **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**

Click here [INFO](#)

**B** ▶ **REPLACE HEADLIGHT HOUSING SUB-ASSEMBLY LH**

**C** ▶ **REPLACE HEADLIGHT HOUSING SUB-ASSEMBLY RH**

<b>3.</b>	<b>PERFORM ACTIVE TEST USING GTS</b>
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(a) Perform the Active Test according to the display on the GTS.

**Body Electrical > Main Body > Active Test**

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
High Beam Headlight	High beam headlights	OFF or ON	-

**Body Electrical > Main Body > Active Test**

TESTER DISPLAY
High Beam Headlight

OK:

High beam headlights illuminate.

RESULT	PROCEED TO
OK	A
NG (LH side high beam headlight does not illuminate)	B
NG (RH side high beam headlight does not illuminate)	C

**A** ▶ **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**

Click here [INFO](#)

**C** ▶ **GO TO STEP 6**

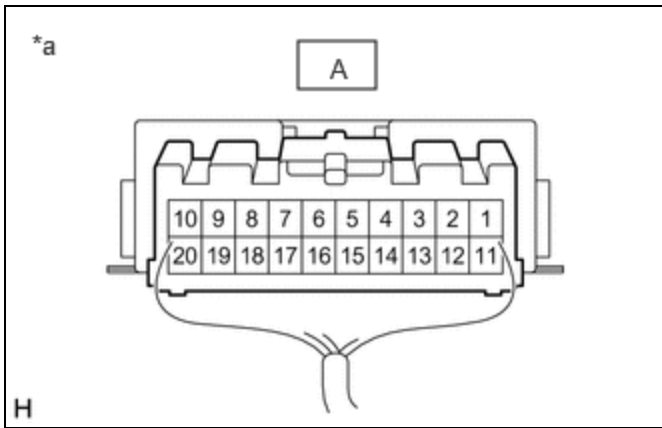
**B**



<b>4.</b>	<b>INSPECT LIGHT CONTROL LED ECU LH</b>
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(a) Remove the headlight housing sub-assembly LH.

Click here [INFO](#)



*a	Component with harness connected (Light Control LED ECU LH)
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(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A-10 - A-15	Light control switch in HEAD position	10 to 16 V

**NG** ▶ REPLACE LIGHT CONTROL LED ECU LH

**OK**



<b>5.</b>	<b>INSPECT HEADLIGHT HOUSING LH</b>
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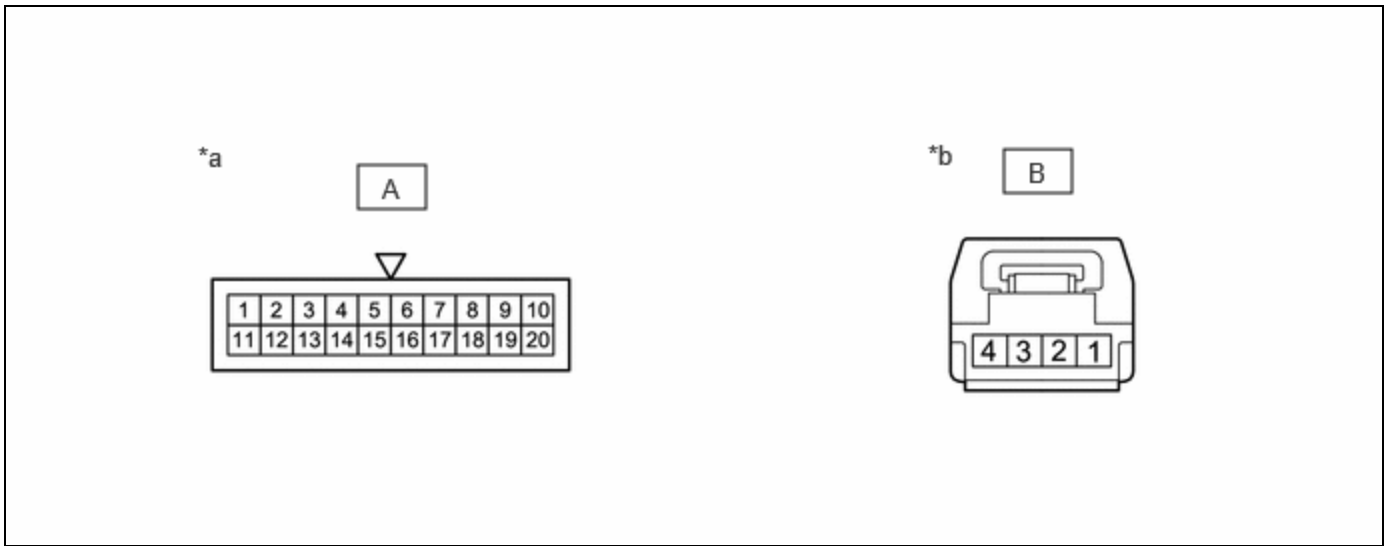
(a) Remove the headlight housing sub-assembly LH.

Click here [INFO](#)

(b) Disconnect the light control LED ECU LH connector.

(c) Disconnect the headlight unit assembly LH connector.

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



*a	Component without harness connected (to Light Control LED ECU LH)	*b	Component without harness connected (to Headlight Unit assembly LH)
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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A-10 - B-2	Always	Below 1 Ω
A-15 - B-3	Always	Below 1 Ω

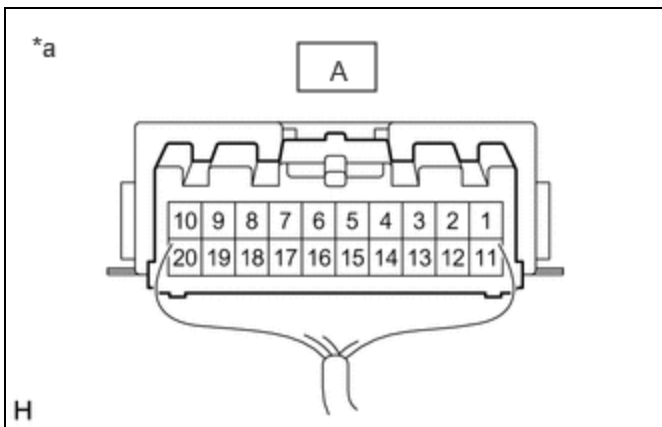
**OK** ► REPLACE HEADLIGHT UNIT ASSEMBLY LH

**NG** ► REPLACE HEADLIGHT HOUSING LH

**6. INSPECT LIGHT CONTROL LED ECU RH**

(a) Remove the headlight housing sub-assembly RH.

Click here [INFO](#)



*a	Component with harness connected (Light Control LED ECU LH)
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(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A-10 - A-15	Light control switch in HEAD position	10 to 16 V

**NG**  **REPLACE LIGHT CONTROL LED ECU RH**

**OK**  


<b>7.</b>	<b>INSPECT HEADLIGHT HOUSING RH</b>
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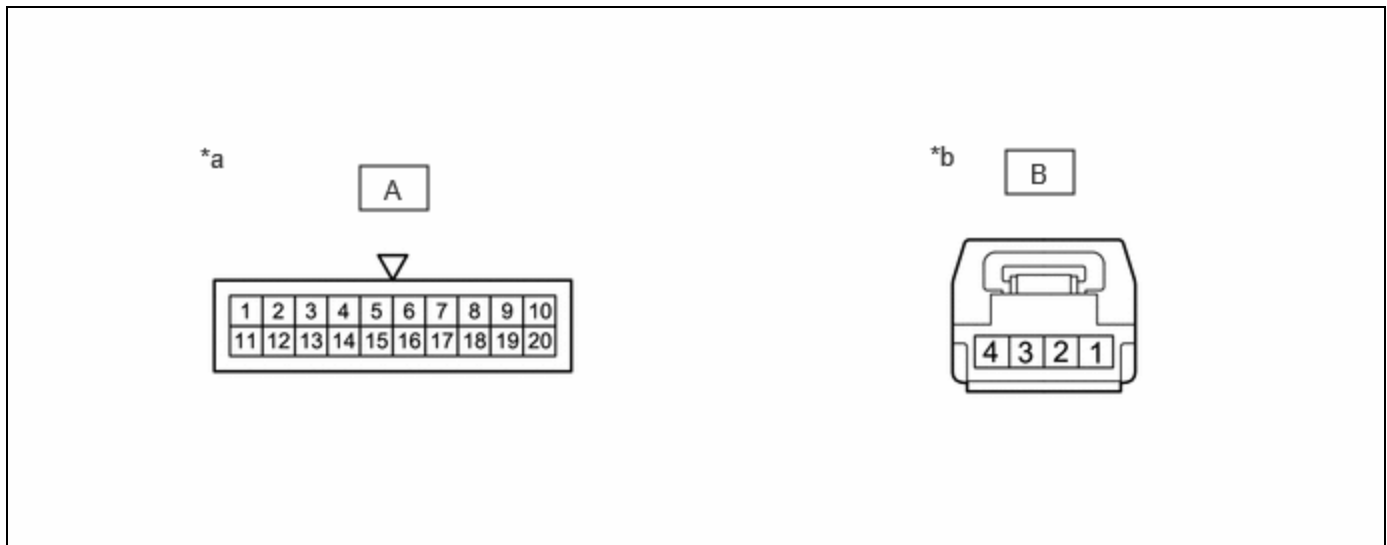
(a) Remove the headlight housing sub-assembly RH.

Click here 

(b) Disconnect the light control LED ECU RH connector.

(c) Disconnect the headlight unit assembly RH connector.

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



*a	Component without harness connected (to Light Control LED ECU RH)	*b	Component without harness connected (to Headlight Unit assembly RH)
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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A-10 - B-2	Always	Below 1 Ω
A-15 - B-3	Always	Below 1 Ω

**OK** ► **REPLACE HEADLIGHT UNIT ASSEMBLY RH**

**NG** ► **REPLACE HEADLIGHT HOUSING RH**

