

Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM10000002A15B
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: LIGHTING (EXT): LIGHTING SYSTEM: B243900,B243A00; Headlight LH Circuit; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	B243900	Headlight LH Circuit
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DTC	B243A00	Headlight RH Circuit
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DESCRIPTION

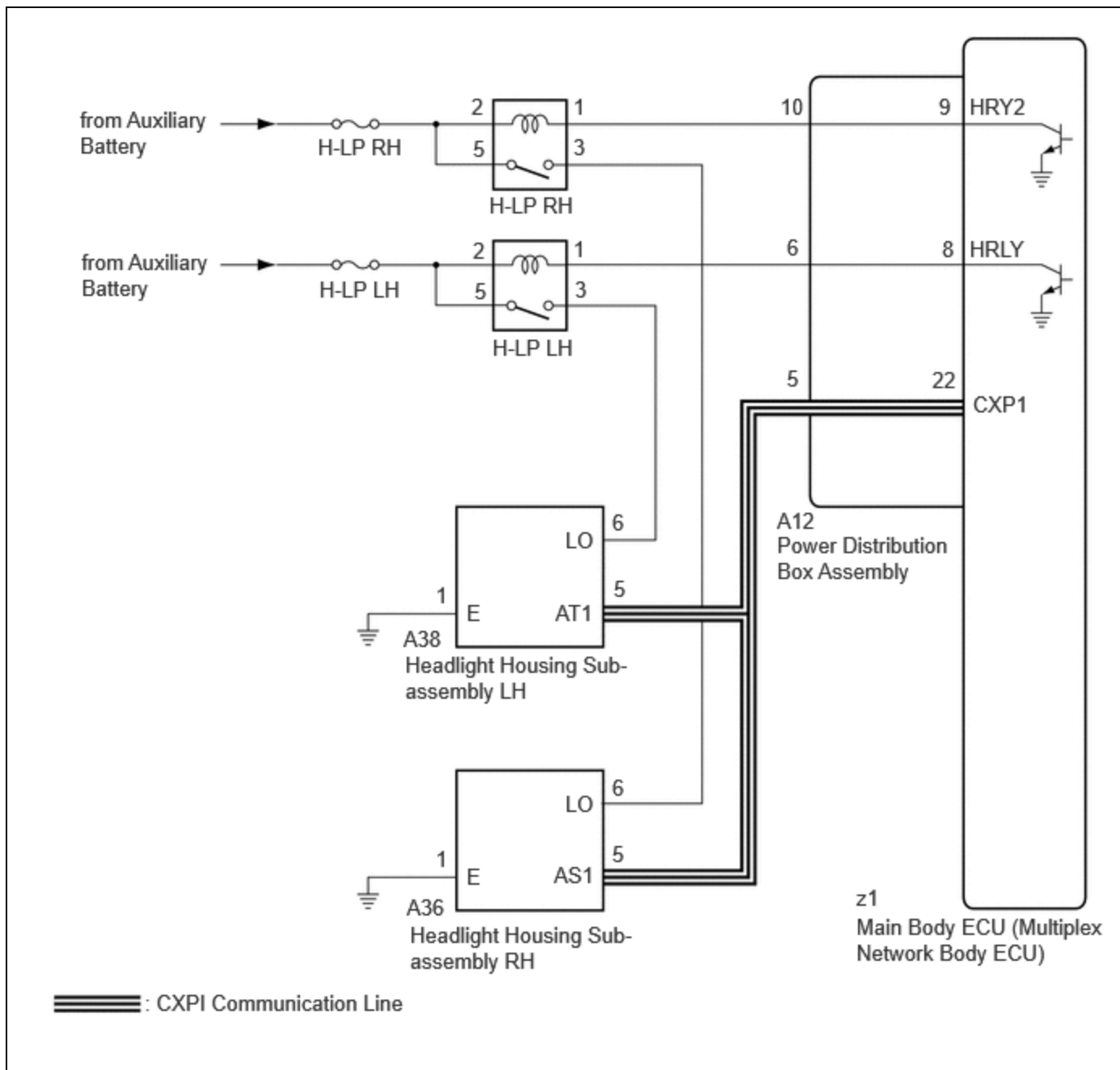
The light control LED ECU supplies internally boosted voltage to the light control LED ECU so that the current supplied to the LED is always maintained at a constant value.

These DTCs are also output when the main body ECU (multiplex network body ECU) detects malfunctions while monitoring the applied voltage.

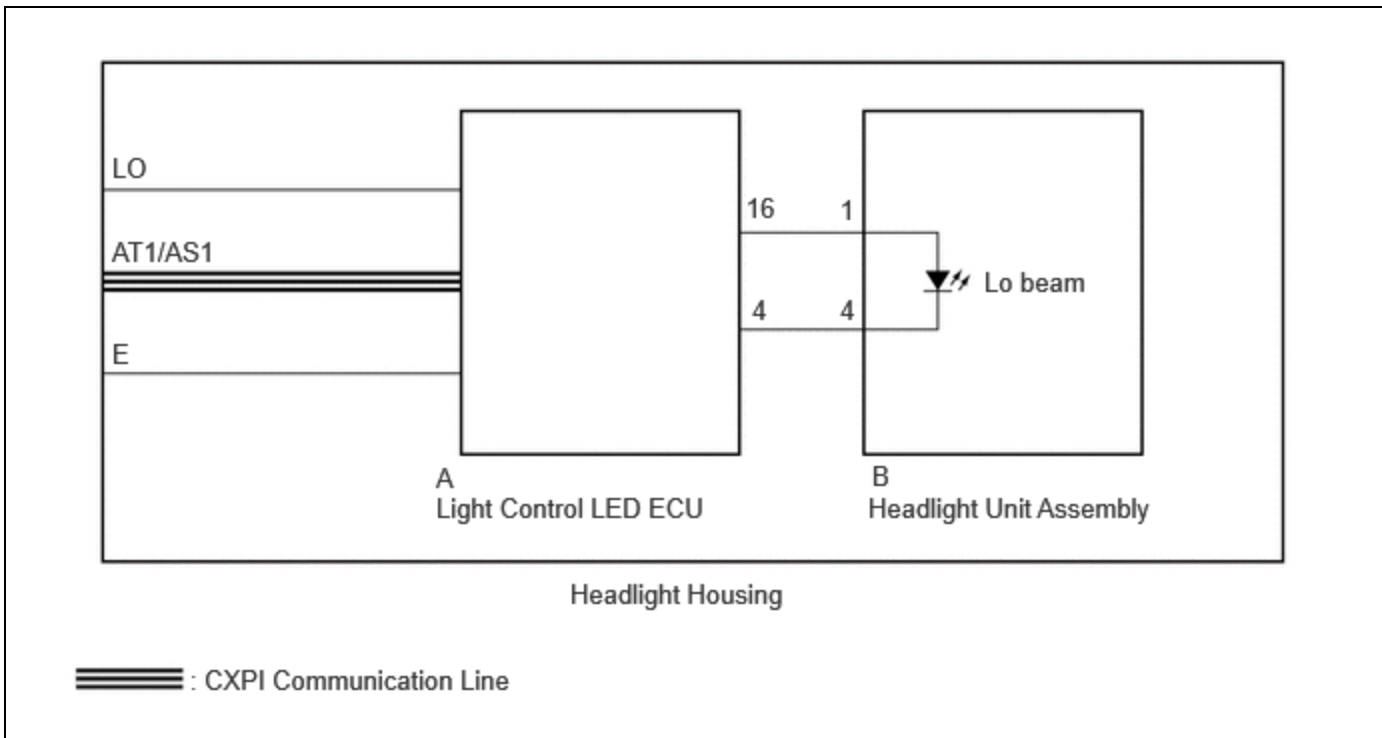
DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
B243900	Headlight LH Circuit	<p>Detection condition:</p> <p>All of the following conditions are met:</p> <ul style="list-style-type: none"> ◦ Ignition switch ON ◦ Low beam headlights on <p>Malfunction status:</p> <ul style="list-style-type: none"> • Headlight unit assembly malfunction • Open/short in headlight LH circuit <p>Malfunction duration:</p> <p>10 seconds or more</p>	<p>w/ Front Side Marker Light:</p> <ul style="list-style-type: none"> • Headlight housing sub-assembly LH • Main body ECU (multiplex network body ECU) <p>w/o Front Side Marker Light:</p> <ul style="list-style-type: none"> • Headlight housing LH • Light control LED ECU LH • Headlight unit assembly LH • Main body ECU (multiplex network body ECU) 	Main Body	A
B243A00	Headlight RH Circuit	<p>Detection condition:</p> <p>All of the following conditions are met:</p> <ul style="list-style-type: none"> ◦ Ignition switch ON ◦ Low beam headlights on 	<p>w/ Front Side Marker Light:</p> <ul style="list-style-type: none"> • Headlight housing sub-assembly RH • Main body ECU (multiplex network body ECU) <p>w/o Front Side Marker Light:</p>	Main Body	A

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY
		<p>Malfunction status:</p> <ul style="list-style-type: none"> Headlight unit assembly malfunction Open/short in headlight RH circuit <p>Malfunction duration:</p> <p>10 seconds or more</p>	<ul style="list-style-type: none"> Headlight housing RH Light control LED ECU RH Headlight unit assembly RH Main body ECU (multiplex network body ECU) 		

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

1.	CONFIRM MODEL
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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 12**

A



2.	CLEAR DTC
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(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT



3.	CHECK FOR DTC
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Pre-procedure1

(a) Turn the ignition switch to ON.

(b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

(c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243900 is not output	A
B243900 is output	B

Post-procedure1

(d) None

B **GO TO STEP 9**

A



4.	CLEAR DTC
-----------	------------------

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT**5. CHECK FOR DTC**

Pre-procedure1

- (a) Turn the ignition switch to ON.
- (b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

- (c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243A00 is not output	A
B243A00 is output	B

Post-procedure1

- (d) None

A **USE SIMULATION METHOD TO CHECK****B****6. CHECK HEADLIGHT HOUSING SUB-ASSEMBLY RH**

- (a) Interchange the headlight housing sub-assembly RH with LH and connect the connectors.

HINT:

Click here

NEXT**7. CLEAR DTC**

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT



8.	CHECK FOR DTC
-----------	----------------------

Pre-procedure1

(a) Turn the ignition switch to ON.

(b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

(c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243A00 is output	A
B243A00 is not output	B

Post-procedure1

(d) None

A **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

Click here [INFO](#)

B **REPLACE HEADLIGHT HOUSING SUB-ASSEMBLY RH**

9.	CHECK HEADLIGHT HOUSING SUB-ASSEMBLY LH
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(a) Interchange the headlight housing sub-assembly LH with RH and connect the connectors.

HINT:

Click here [INFO](#)

NEXT



10. CLEAR DTC

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT**11. CHECK FOR DTC**

Pre-procedure1

(a) Turn the ignition switch to ON.

(b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

(c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243900 is output	A
B243900 is not output	B

Post-procedure1

(d) None

A **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

Click here [INFO](#)

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

12. CLEAR DTC

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT



13.	CHECK FOR DTC
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Pre-procedure1

- (a) Turn the ignition switch to ON.
- (b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

- (c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243900 is not output	A
B243900 is output	B

Post-procedure1

- (d) None

B **GO TO STEP 21**

A



14.	CLEAR DTC
------------	------------------

- (a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT



15.	CHECK FOR DTC
------------	----------------------

Pre-procedure1

- (a) Turn the ignition switch to ON.

(b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

(c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243A00 is not output	A
B243A00 is output	B

Post-procedure1

(d) None

A  **USE SIMULATION METHOD TO CHECK**

B



16.	CHECK HEADLIGHT HOUSING SUB-ASSEMBLY RH
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(a) Interchange the headlight housing sub-assembly RH with LH and connect the connectors.

HINT:

Click here 

NEXT



17.	CLEAR DTC
------------	------------------

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

NEXT



18.	CHECK FOR DTC
------------	----------------------

Pre-procedure1

- (a) Turn the ignition switch to ON.
- (b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

- (c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243900 is not output	A
B243900 is output	B

Post-procedure1

- (d) None

A  **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

Click here [INFO](#)

B 

19.	INSPECT LIGHT CONTROL LED ECU RH
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Pre-procedure1

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

HINT:

Click here [INFO](#)

Procedure1

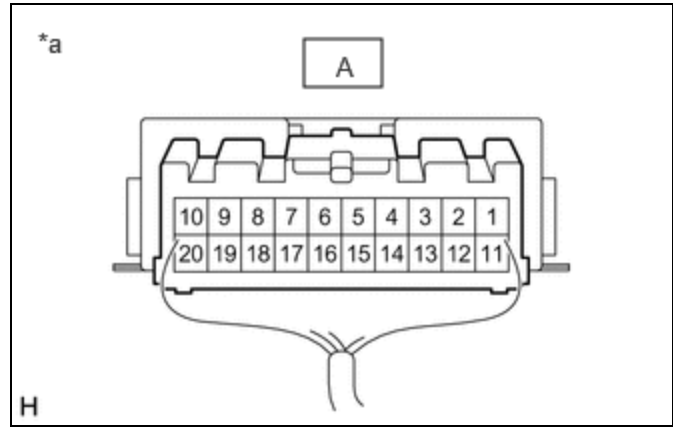
- (b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A-16 - A-4	Light control switch in HEAD position	10 to 16 V	V

Result:

PROCEED TO
OK
NG



*a Component with harness connected (Light Control LED ECU RH)

Post-procedure1

(c) None

NG ▶ REPLACE LIGHT CONTROL LED ECU RH

OK



20.	INSPECT HEADLIGHT HOUSING RH
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Pre-procedure1

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

HINT:

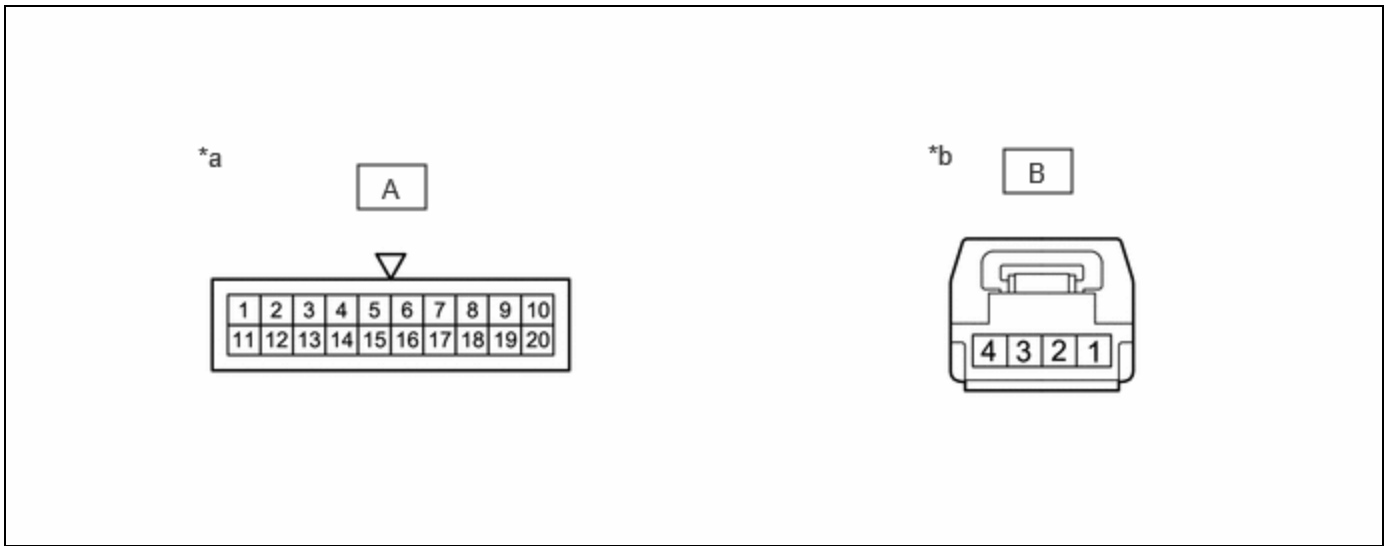
[Click here](#) INFO

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

(c) Disconnect the headlight unit assembly RH connector.

Procedure1

(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	RESULT
A-16 - B-1	Always	Below 1 Ω	Ω
A-4 - B-4	Always	Below 1 Ω	Ω

Post-procedure1

(e) None

OK ► REPLACE HEADLIGHT UNIT ASSEMBLY RH

NG ► REPLACE HEADLIGHT HOUSING RH

21.	CHECK HEADLIGHT HOUSING SUB-ASSEMBLY LH
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(a) Interchange the headlight housing sub-assembly LH with RH and connect the connectors.

HINT:

Click here [INFO](#)

NEXT



22.	CLEAR DTC
------------	------------------

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs**NEXT****23. CHECK FOR DTC**

Pre-procedure1

- (a) Turn the ignition switch to ON.
- (b) Operate the light control switch to turn on the low beam headlights and wait 10 seconds or more.

Procedure1

- (c) Check for DTCs.

Body Electrical > Main Body > Trouble Codes

RESULT	PROCEED TO
B243900 is output	A
B243900 is not output	B

Post-procedure1

- (d) None

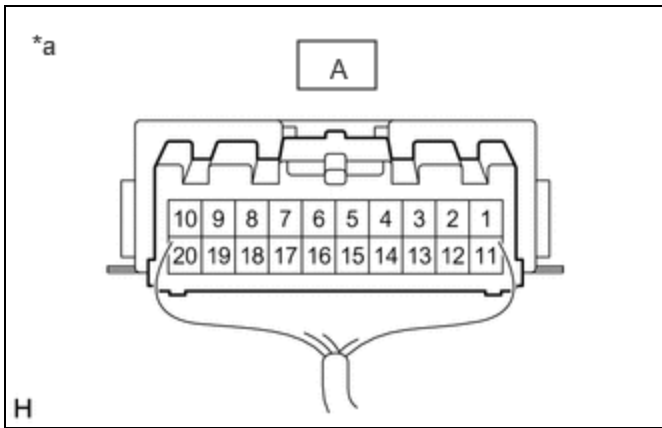
A **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**Click here [INFO](#)**B****24. INSPECT LIGHT CONTROL LED ECU LH**

Procedure1

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

HINT:Click here [INFO](#)

Post-procedure1



*a	Component with harness connected (Light Control LED ECU LH)
----	--

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A-16 - A-4	Light control switch in HEAD position	10 to 16 V	V

Pre-procedure1

(c) None

NG ▶ REPLACE LIGHT CONTROL LED ECU LH

OK



25.	INSPECT HEADLIGHT HOUSING LH
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Pre-procedure1

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

HINT:

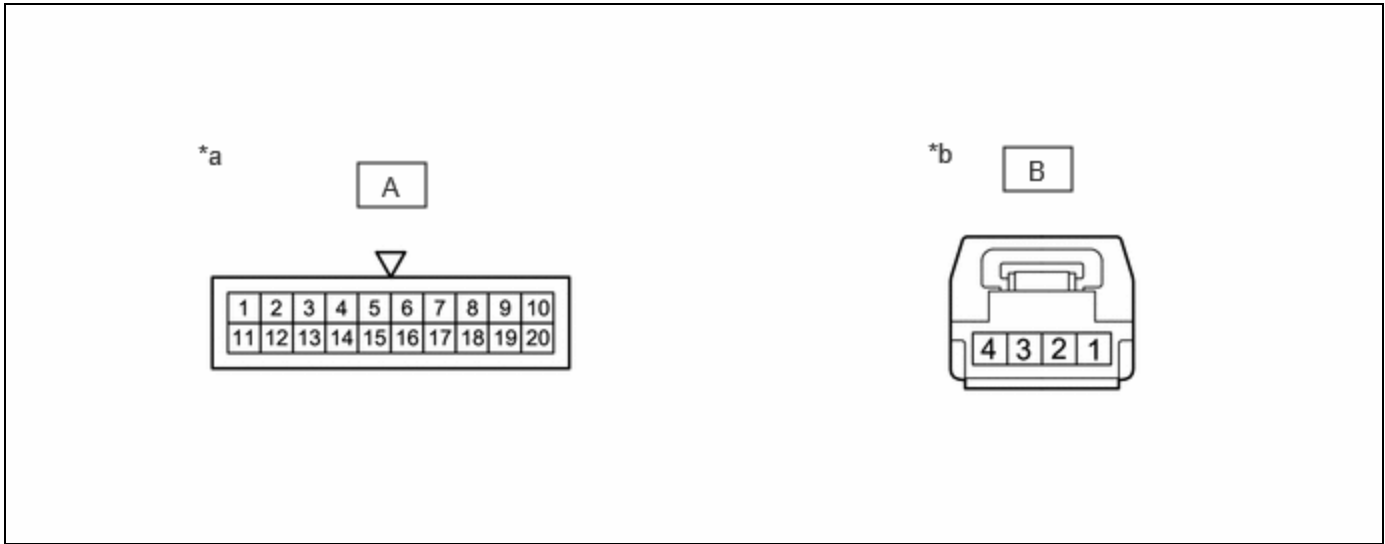
[Click here](#) **INFO**

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

(c) Disconnect the headlight unit assembly LH connector.

Procedure1

(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	RESULT
A-16 - B-1	Always	Below 1 Ω	Ω
A-4 - B-4	Always	Below 1 Ω	Ω

Post-procedure1

(e) None

OK ► REPLACE HEADLIGHT UNIT ASSEMBLY LH

NG ► REPLACE HEADLIGHT HOUSING LH

