

- [Manuals](#)
- [Owners Manual](#)
- [Service Manual](#)
- [New](#)
- [Top](#)
- [Sitemap](#)
- [Search](#)



Toyota 4Runner: Light Sensor Circuit Malfunction (B1244)

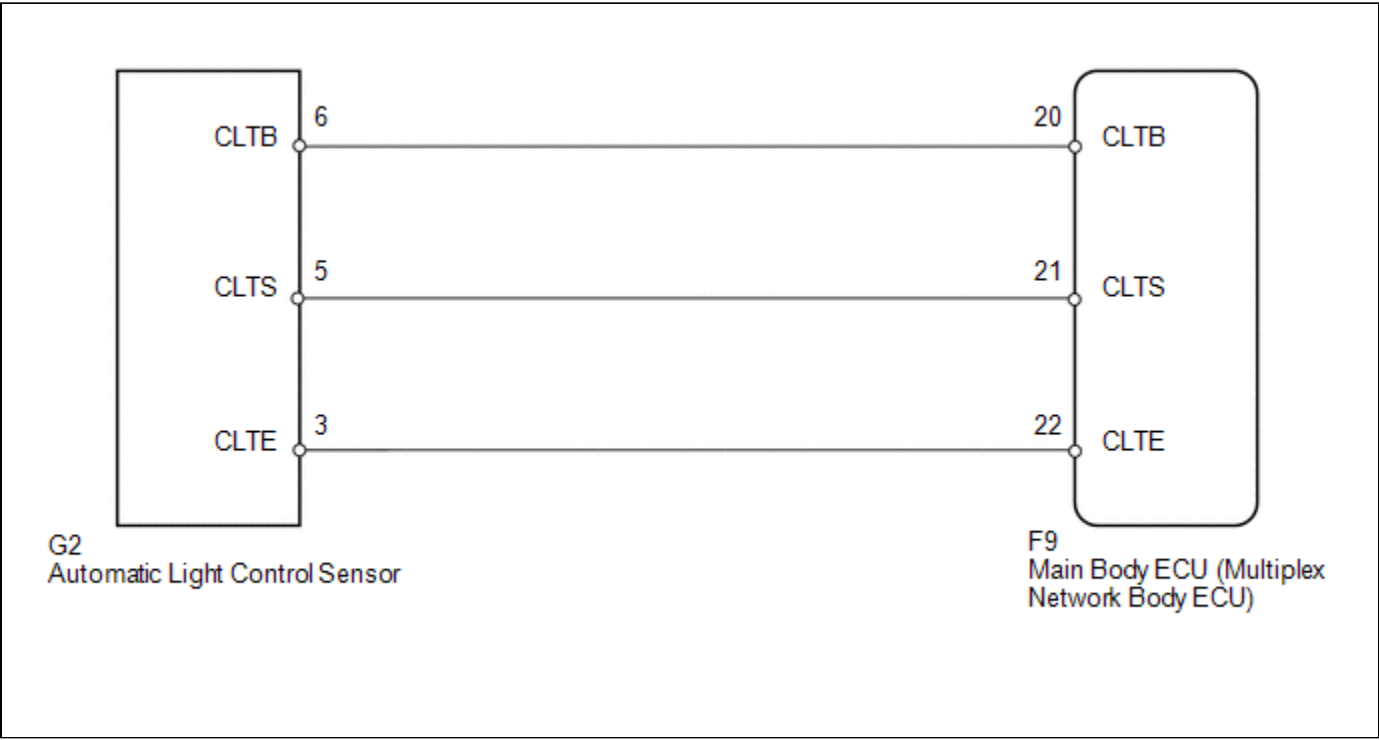
[Toyota 4Runner Service Manual](#) / [Vehicle Exterior](#) / [Lighting \(ext\)](#) / [Lighting System](#) / Light Sensor Circuit Malfunction (B1244)

DESCRIPTION

The automatic light control sensor detects ambient light, converts it into an electrical signal, and outputs it to the main body ECU. The main body ECU turns on or off the headlights and taillights according to the signal.

DTC Code	DTC Detection Condition	Trouble Area
B1244	- Malfunction in automatic light control sensor. - Open or short in automatic light control sensor circuit.	- Automatic light control sensor - Main body ECU (multiplex network body ECU) - Harness or connector

WIRING DIAGRAM



PROCEDURE

1.	CHECK FOR DTC
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(a) Clear the DTCs (See page [INFO](#)).

(b) Check for DTCs (See page [INFO](#)).

OK:

DTC B1244 output does not occur.

OK▶USE SIMULATION METHOD TO CHECK

NG
▼

2.	READ VALUE USING TECHSTREAM (AUTOMATIC LIGHT CONTROL SENSOR)
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(a) Using the Techstream, read the Data List (See page [INFO](#)).

Main Body

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Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Illumination Rate Info	Illumination rate information / 0 ms. to 99.99 ms.	Value is output according to ambient light levels	-

OK:

Normal condition listed above is displayed.

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

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3.	CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - AUTOMATIC LIGHT CONTROL SENSOR)
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- (a) Disconnect the F9 main body ECU connector.
- (b) Disconnect the G2 automatic light control sensor connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

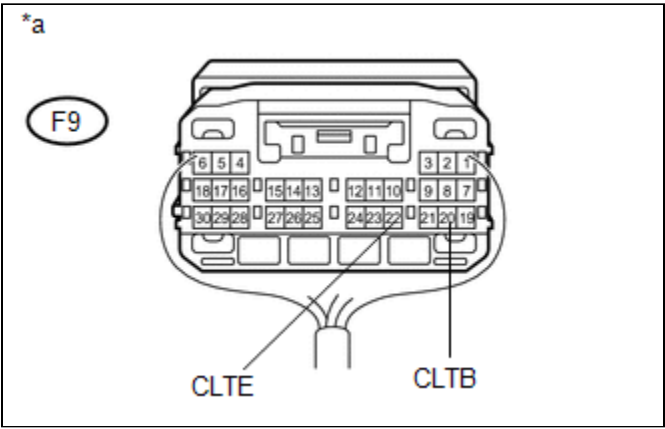
Tester Connection	Condition	Specified Condition
F9-22 (CLTE) - G2-3 (CLTE)	Always	Below 1 Ω
F9-21 (CLTS) - G2-5 (CLTS)	Always	Below 1 Ω
F9-20 (CLTB) - G2-6 (CLTB)	Always	Below 1 Ω
F9-22 (CLTE) - Body ground	Always	10 kΩ or higher
F9-21 (CLTS) - Body ground	Always	10 kΩ or higher
F9-20 (CLTB) - Body ground	Always	10 kΩ or higher

NG▶REPAIR OR REPLACE HARNESS OR CONNECTOR

OK
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4.	CHECK MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)
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(a) Reconnect the F9 main body ECU connector.



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

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F9-20 (CLTB) - F9-22 (CLTE)	Ignition switch off	Below 1 V
	Ignition switch ON	11 to 14 V

Text in Illustration

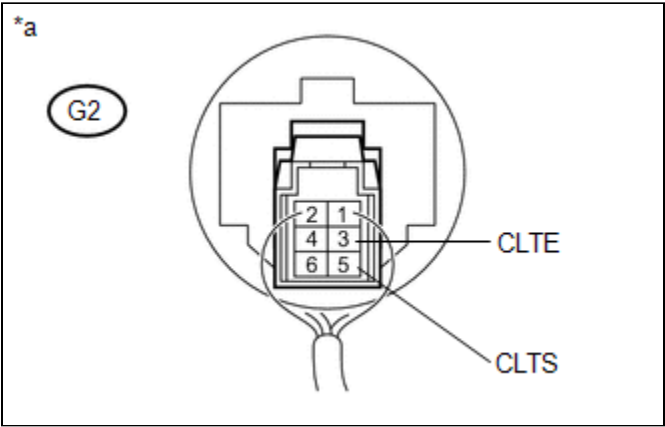
^a	Component with harness connected (Main Body ECU)
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NG▶REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

OK
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5.	CHECK AUTOMATIC LIGHT CONTROL SENSOR
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(a) Reconnect the G2 automatic light control sensor connector.



(b) Connect an oscilloscope to the automatic light control sensor connector.

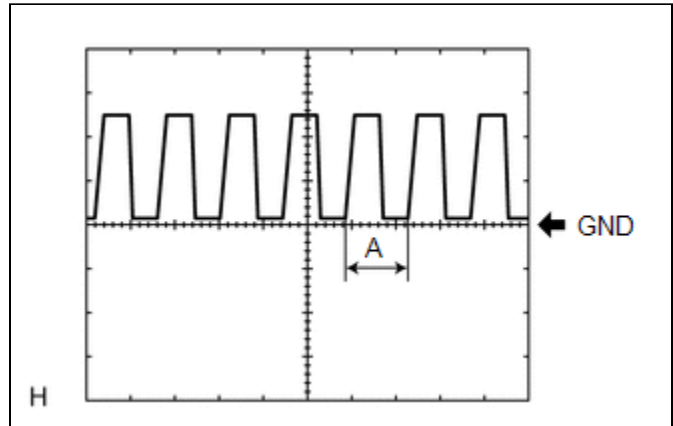
(c) Check the waveform.

OK:

Tester Connection	Tool Setting	Switch Condition	Specified Condition
G2-3 (CLTE) - G2-5 (CLTS)	5 V/DIV., 5 ms./DIV.	Ignition switch ON, headlight dimmer switch in AUTO position	Correct waveform is as shown

Text in Illustration

*a	Component with harness connected (Automatic Light Control Sensor)
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HINT:

If the ambient light becomes brighter, width A becomes narrower.

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

NG▶ REPLACE AUTOMATIC LIGHT CONTROL SENSOR

Diagnostic Trouble Code Chart

DIAGNOSTIC TROUBLE CODE CHART HINT: If a trouble code is output during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to the "See page" bel ...

Headlight Dimmer Switch Circuit

DESCRIPTION The main body ECU receives the following signals: Headlight dimmer switch tail, head, AUTO*, high or high flash signal Front fog light switch signal *: w/ Aut ...

Other materials about Toyota 4Runner:

[No Signal from Transmitter ID1 in Main Mode \(C2121/21-C2125/25,C2181/81-C2185/85\)](#)

DESCRIPTION The tire pressure warning valve and transmitters that are installed in the tire and wheel assemblies measure the tire pressure of the tires. The measured values are transmitted to the tire pressure warning antenna and receiver on the body as ...

[Blower Motor Circuit](#)

DESCRIPTION The blower with fan motor sub-assembly operates according to signals from the air conditioning amplifier assembly. The blower with fan motor sub-assembly speed signals are transmitted by changes in the duty ratio. Duty Ratio: The duty rati ...

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