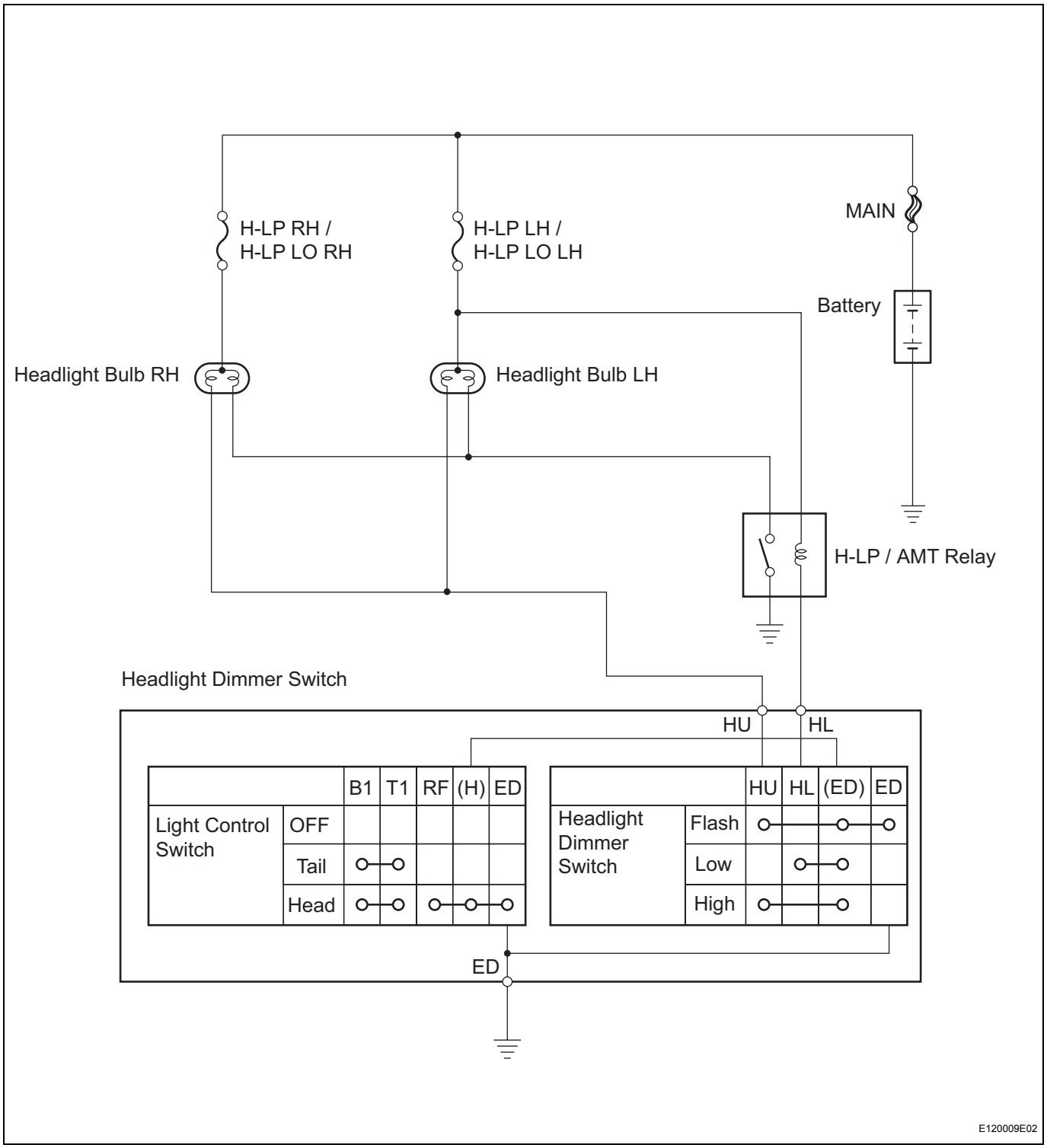
Headlight Relay Circuit

DESCRIPTION

When the light control switch, located on the headlight dimmer switch, is turned to the HEAD position, the H-LP/AMT relay illuminates the headlights.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER (HEAD LIGHT)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON and turn the tester ON.
(c) Select the item below in the ACTIVE TEST and then check the relay operation.

Main Body ECU

Item	Test Details: Display (Range)	Diagnostic Note
HEAD LIGHT	Headlight Relay ON/OFF	-

OK:
Headlights come on

OK → **Go to step 7**

NG

2	INSPECT FUSE (H-LP RH/H-LP LO RH, H-LP LH/H-LP LO LH)

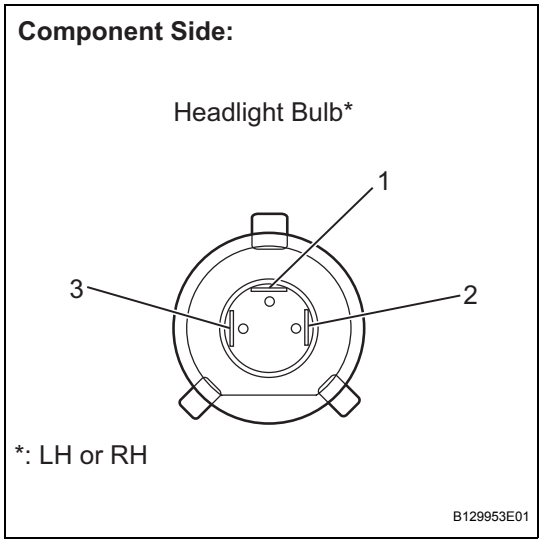
(a) Remove the H-LP RH/H-LP LO RH and H-LP LH/H-LP LO LH fuses from the engine room relay block.
(b) Measure the resistance.
Standard resistance:
Below 1 Ω
(c) Reinstall the H-LP RH/H-LP LO RH and H-LP LH/H-LP LO LH fuses

NG → **REPLACE FUSE**

OK

3	INSPECT BULB (HEADLIGHT BULB)

Component Side:



(a) Disconnect the B4 and B6 headlight connectors.
(b) Apply battery voltage to the terminals and check that the headlight illuminates.
Standard

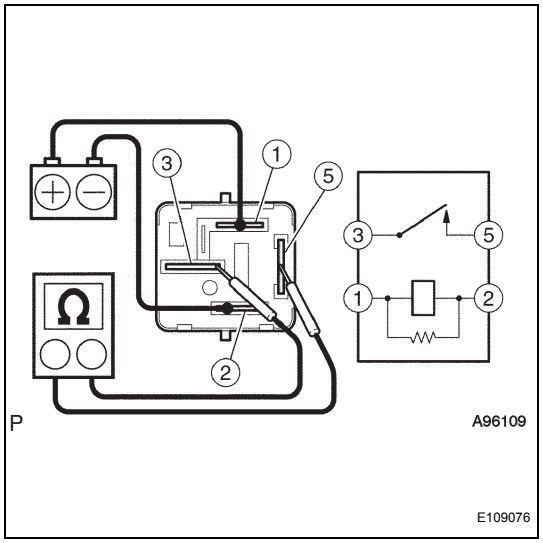
Measurement Condition	Standard
Positive battery - Terminal 1 Negative battery - Terminal 3	Headlight illuminates (HI-Beam)
Positive battery - Terminal 2 Negative battery - Terminal 3	Headlight illuminates (LO-Beam)

(c) Reconnect the headlight connectors.

NG → **REPLACE BULB**

OK

4 INSPECT H-LP/AMT RELAY



(a) Remove the H-LP/AMT relay from the engine room relay block No. 2.
(b) Measure the resistance.
Standard resistance

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage applied to terminals 1 and 2)

(c) Reinstall the H-LP/AMT relay.

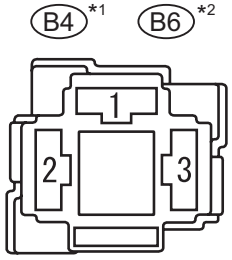
NG → **REPLACE H-LP/AMT RELAY**

OK

5 CHECK HARNESS AND CONNECTOR (FUSE - HEADLIGHT BULB)

Wire Harness Side:

Headlight Bulb Connector



*1: RH
*2: LH

B125793E04

(a) Disconnect the B4 and B6 headlight bulb connectors.
(b) Measure the voltage.
Standard voltage

Tester Connection	Condition	Specified Condition
B4-3 - Body ground	Always	11 to 14 V
B6-3 - Body ground	Always	11 to 14 V

(c) Reconnect the headlight bulb connectors.

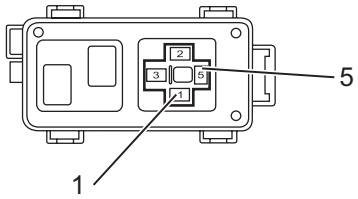
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

6 CHECK HARNESS AND CONNECTOR (HEADLIGHT - H-LP/AMT RELAY)

Component Side:

Engine Room Relay Block No, 2



B125794E01

(a) Remove the H-LP/AMT relay from the engine room relay block No. 2.
(b) Measure the voltage.
Standard voltage

Tester Connection	Condition	Specified Condition
1 - Body ground	Always	11 to 14 V
5 - Body ground	Always	11 to 14 V

(c) Reinstall the H-LP/AMT relay.

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

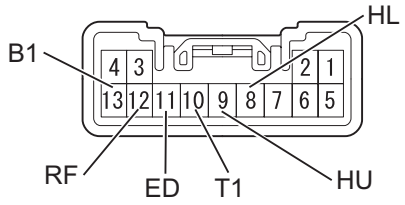
OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (HEADLIGHT - HEADLIGHT DIMMER SWITCH)

7 INSPECT HEADLIGHT DIMMER SWITCH

Component Side:

Headlight Dimmer Switch



E123010E02

(a) Remove the headlight dimmer switch.
(b) Inspect the light control switch.
(c) Measure the resistance.
Standard resistance

Tester Connection	Condition	Specified Condition
10 (T1) - 13 (B1)	TAIL	Below 1 Ω
10 (T1) - 13 (B1)	OFF	10 kΩ or higher
10 (T1) - 13 (B1)	HEAD	Below 1 Ω
10 (T1) - 13 (B1)	OFF	10 kΩ or higher
11 (ED) - 12 (RF)	HEAD	Below 1 Ω
11 (ED) - 12 (RF)	OFF	10 kΩ or higher

(d) Inspect the headlight dimmer switch.
(e) Measure the resistance.
Standard resistance

Tester Connection	Condition	Specified Condition
9 (HU) - 11 (ED)	FLASH	Below 1 Ω
8 (HL) - 11 (ED)	LOW BEAM	Below 1 Ω
9 (HU) - 11 (ED)	HI BEAM	Below 1 Ω

(f) Reinstall the headlight dimmer switch.

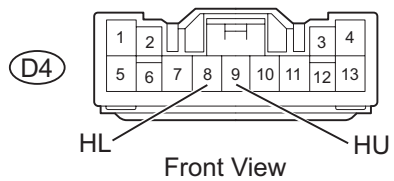
NG → **REPLACE HEADLIGHT DIMMER SWITCH**

OK

8	CHECK HARNESS AND CONNECTOR (H-LP/AMT RELAY - HEADLIGHT DIMMER SWITCH)

Wire Harness Side:

Headlight Dimmer Switch Connector



Y

B124050E07

(a) Disconnect the D4 headlight dimmer switch connector.

(b) Measure the voltage.

Standard voltage

Tester Connection	Condition	Specified Condition
D4-8 (HL) - Body ground	Always	11 to 14 V
D4-9 (HU) - Body ground	Always	11 to 14 V

(c) Reconnect the headlight dimmer switch connector.

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (HEADLIGHT DIMMER SWITCH - BODY GROUND)

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