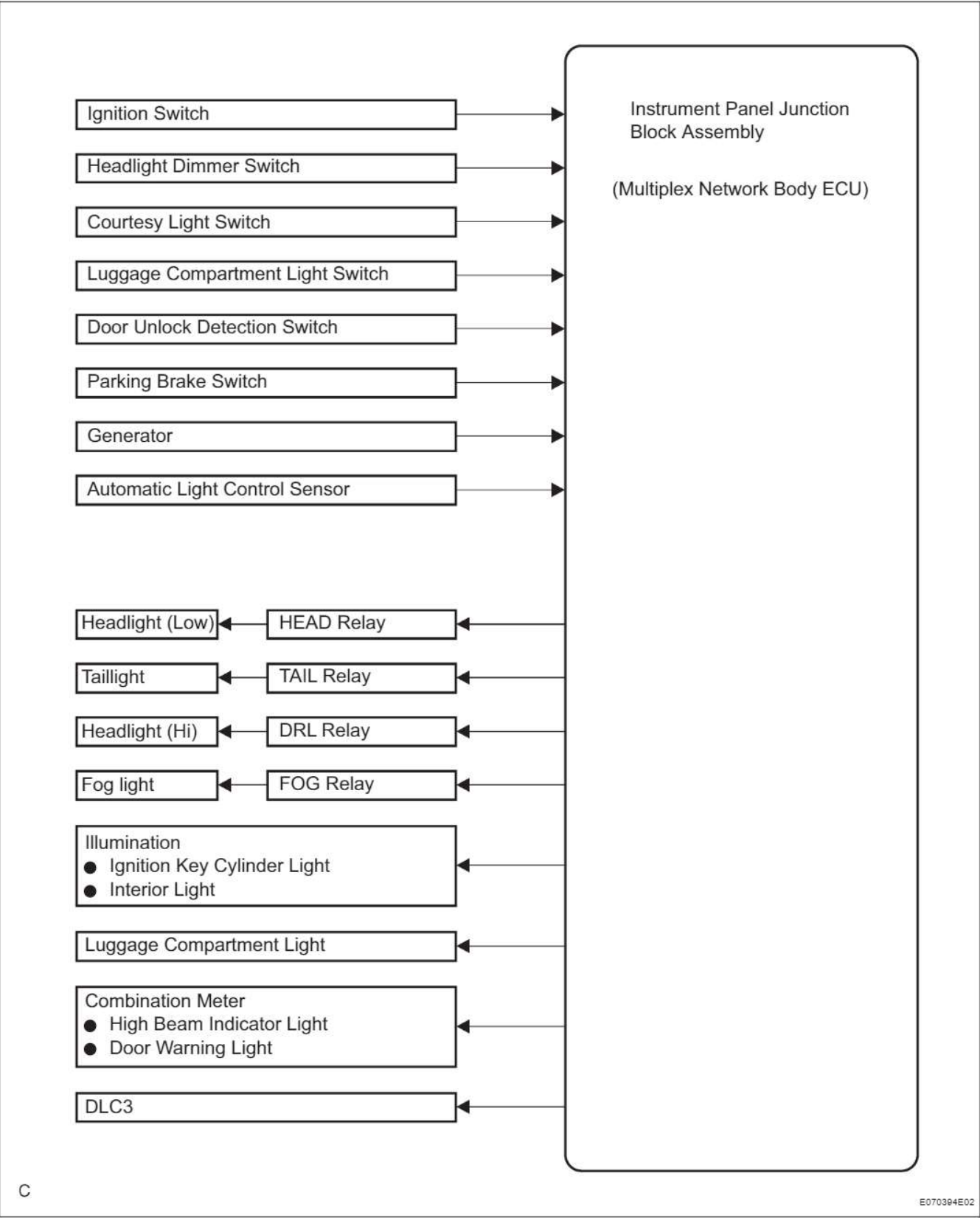


LI-6

LIGHTING – LIGHTING SYSTEM

SYSTEM DIAGRAM



SYSTEM DESCRIPTION

1. LIGHTING SYSTEM

- (a) Illumination control system (Illuminated entry system):

When a door is unlocked through a key or transmitter operation, or if a door is opened or closed, the illuminated entry system turns on the interior light and the ignition key illumination.

- (1) The multiplex network body ECU receives the following (A).

- Door courtesy switch signal
- Door detection switch signal
- Ignition switch signal

- (2) The multiplex network body ECU controls the following based on the signals listed in "A".

- Illumination operation signal

- (3) The multiplex network body ECU controls the on/off and fade-in/fade-out operation of the following.

- Room light assembly No.1
- Ignition key cylinder light
- Map light assembly (convertible only)

- (b) Battery saver system:

When the ignition switch is turned off and the driver's door is open continuously for 30 minutes, the multiplex network body ECU will turn the illumination operation signal off. As a result, the room light assembly No.1, ignition key cylinder light, taillights, and the headlights will turn off.

- (1) The multiplex network body ECU receives the following (B).

- Door courtesy switch signal
- Ignition switch signal

- (2) The multiplex network body ECU controls the following based on the signals listed in "B" (C).

- Illumination operation signal
- HEAD relay operation signal
- TAIL relay operation signal

- (3) The multiplex network body ECU controls the illuminating period of the following based on the signals listed in "C".

- Room light assembly No.1
- Ignition key cylinder light
- Headlight (Low)
- Position light (Front and rear)

- (c) Manual light control system:

This system functions if lights such as the headlights and taillights come on by manual operation of the light control switch.

- (1) The multiplex network body ECU receives the following (D).

- Light control switch signal
- Headlight dimmer switch signal
- Fog light switch signal

LI-8

LIGHTING – LIGHTING SYSTEM

- (2) The multiplex network body ECU controls the following based on the signals listed in "D" (E).
 - HEAD relay operation signal
 - TAIL relay operation signal
 - DRL relay operation signal
 - FOG relay operation signal
- (3) The multiplex network body ECU controls the on/off operation of the following signals based on the signals listed in "E".
 - Headlight (Low)
 - Headlight (Hi)
 - Position light (Front and Rear)
 - Fog light
- (d) light auto turn off system:
 When the headlights and taillights are on through the operation of the automatic light control switch, if the ignition switch is turned off and all doors are closed, this system continues to illuminate the headlights and taillights for approximately 30 seconds, and then turns off the headlights. However, with all the doors locked manually, using the door lock button or using the key or pressing the "LOCK" on the wireless remote will turn the headlights and taillights off immediately.
 - (1) The multiplex network body ECU receives the following (F).
 - Door courtesy switch signal
 - Ignition switch signal
 - (2) The multiplex network body ECU controls the following based on the signals listed in "F" (G).
 - HEAD relay operation signal
 - TAIL relay operation signal
 - DRL relay operation signal
 - FOG relay operation signal
 - (3) The multiplex network body ECU controls the illuminating period of the following based on the signals listed in "G".
 - Headlight (Low)
 - Headlight (Hi)
 - Position light (Front and Rear)
 - Fog light
- (e) Automatic light control system:
 When the light control switch is in the AUTO position, the automatic light control sensor detects ambient light and automatically turns the headlights and taillight on or off accordingly.
 - (1) The multiplex network body ECU receives the following (H).
 - Light control switch signal
 - Automatic light control sensor signal
 - (2) The multiplex network body ECU controls the following based on the signals listed in "H".
 - HEAD relay operation signal
 - TAIL relay operation signal

LIGHTING – LIGHTING SYSTEM**LI-9**

- (3) The multiplex network body ECU controls the on/off operation of the following.
 - Headlight (Low)
 - Tail light (Front and rear)
- (f) Daytime running light system:
This system is directly connected to the high-beam headlights and is designed to automatically activate the daytime running lights in order to remain highly visible to other vehicles.
 - (1) The multiplex network body ECU receives the following (I).
 - Ignition switch signal
 - Generator signal
 - Parking brake switch signal
 - Light control switch signal
 - (2) The multiplex network body ECU controls the following based on the signals listed in "I".
 - DRL relay operation signal
 - (3) The multiplex network body ECU controls the on/off operation of the following.
 - Headlight (Hi)
- (g) High beam indicator on the combination meter is on:
When the light is HI-BEAM, the system turns on the indicator on the combination meter.
 - (1) The multiplex network body ECU receives the following (J).
 - Headlight dimmer switch signal
 - (2) The multiplex network body ECU controls the following based on the signals listed in "J".
 - High beam indicator signal
 - (3) The multiplex network body ECU controls the on/off operation the following.
 - High beam indicator

LI

LI-10

LIGHTING – LIGHTING SYSTEM

HOW TO PROCEED WITH TROUBLESHOOTING

LI-29

1

VEHICLE BROUGHT TO WORK SHOP



2

CUSTOMER PROBLEM ANALYSIS

(a) Confirm problem symptoms.



3

PROBLEM SYMPTOM CONFIRMATION



SYMPTOM DOES NOT OCCUR (GO TO STEP 4)



SYMPTOM OCCURS (GO TO STEP 6)

4

DTC CHECK

HINT:
See page [LI-18](#)



TROUBLE CODE (GO TO STEP 5)



NORMAL SYSTEM CODE (GO TO STEP 6)

LI

5

DTC CHART

HINT:
See page [LI-19](#)



GO TO STEP 8

6

PROBLEM SYMPTOMS TABLE

HINT:
See page [LI-12](#)

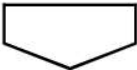


LIGHTING – LIGHTING SYSTEM

LI-11

7	TERMINALS OF ECU
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HINT:
See page
[LI-15](#)



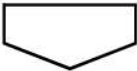
8	CIRCUIT INSPECTION
---	--------------------



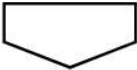
9	IDENTIFICATION OF PROBLEM
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10	REPAIR OR REPLACE
----	-------------------



11	CONFIRMATION TEST
----	-------------------



END

OPERATION CHECK

1. ILLUMINATED ENTRY SYSTEM OPERATION CHECK

- (a) Illuminated entry system controls the following lights:
 - Ignition key cylinder light (Transponder key amplifier)
 - Interior light (Room light assembly No.1)
 - Map light assembly (convertible only)
- (b) Check that the lights come on after:
 - (1) Unlocking any door that was closed and locked with the ignition switch off
- (c) Check that the lights fade out after:
 - (1) Leaving the doors unlocked for 15 seconds
 - (2) Turning the ignition switch to the ACC or ON position
 - (3) Locking all the doors
- (d) Check that the lights stay ON for at least 15 seconds after opening any of the doors, then fade out again after 15 seconds.
- (e) Check that the lights come on after:
 - (1) Closing all the doors and turning the ignition switch from the ACC or ON position off.
- (f) Check that the lights fade out after:
 - (1) Leaving the doors unlocked for 15 seconds
 - (2) Locking all the doors
- (g) Check that the lights stay ON for at least 15 seconds after opening any of the doors, then fade out again in 15 seconds after closing all the doors.
- (h) Check that the lights come on when opening any of the doors and fade out after either closing and locking them or turning the ignition switch to the ACC or ON position.

2. BATTERY SAVER OPERATION CHECK

- (a) Remove the ignition key and close all doors.
- (b) Open any door to turn the room light on, and leave it open. Check that the light goes off in approximately 20 minutes.
- (c) After the room light goes off, close the driver's door.
- (d) Open any door to turn the room light on, and then open another door. Check that the room light goes off within 20 minutes after opening the doors.
- (e) Close all doors. With the ignition key inserted, open any door to turn the room light on, and then remove the ignition key. Check that the room light goes off within 20 minutes.

3. LIGHT AUTO TURN OFF OPERATION CHECK

- (a) Turn the ignition switch to the ON position, and switch the headlights into the TAIL or HEAD position.
- (b) Turn the ignition switch off and open the driver's door, and check that the headlights go off after approximately 30 seconds.

LIGHTING – LIGHTING SYSTEM**LI-13**

- (c) Turn the ignition switch to the ON position, and switch the headlights to the TAIL or HEAD position.
 - (d) Turn the ignition switch off and open the driver's door. Before the headlights go off after approximately 30 seconds, lock all doors. Check that the headlights go off immediately.
- 4. AUTOMATIC LIGHT CONTROL OPERATION CHECK**
- (a) Turn the ignition switch to the ON position.
 - (b) Turn the headlight dimmer switch to the AUTO position.
 - (c) Cover the automatic light control sensor and check that the tail light and headlight in order.
 - (d) Uncover the automatic light control sensor and check that the headlight and tail light go off in order.
- 5. DAYTIME RUNNING LIGHT OPERATION CHECK**
- (a) Check that the high beams come on when the headlight switch is off with the engine running and parking brake released (A).
 - (b) Check that the high beams go off when turning the headlight dimmer switch into the TAIL or HEAD (LOW) position under the condition as shown in "A".
 - (c) Check that the high beams go off when turning the ignition switch off under the condition as shown in "A".

LI

LIGHTING – LIGHTING SYSTEM

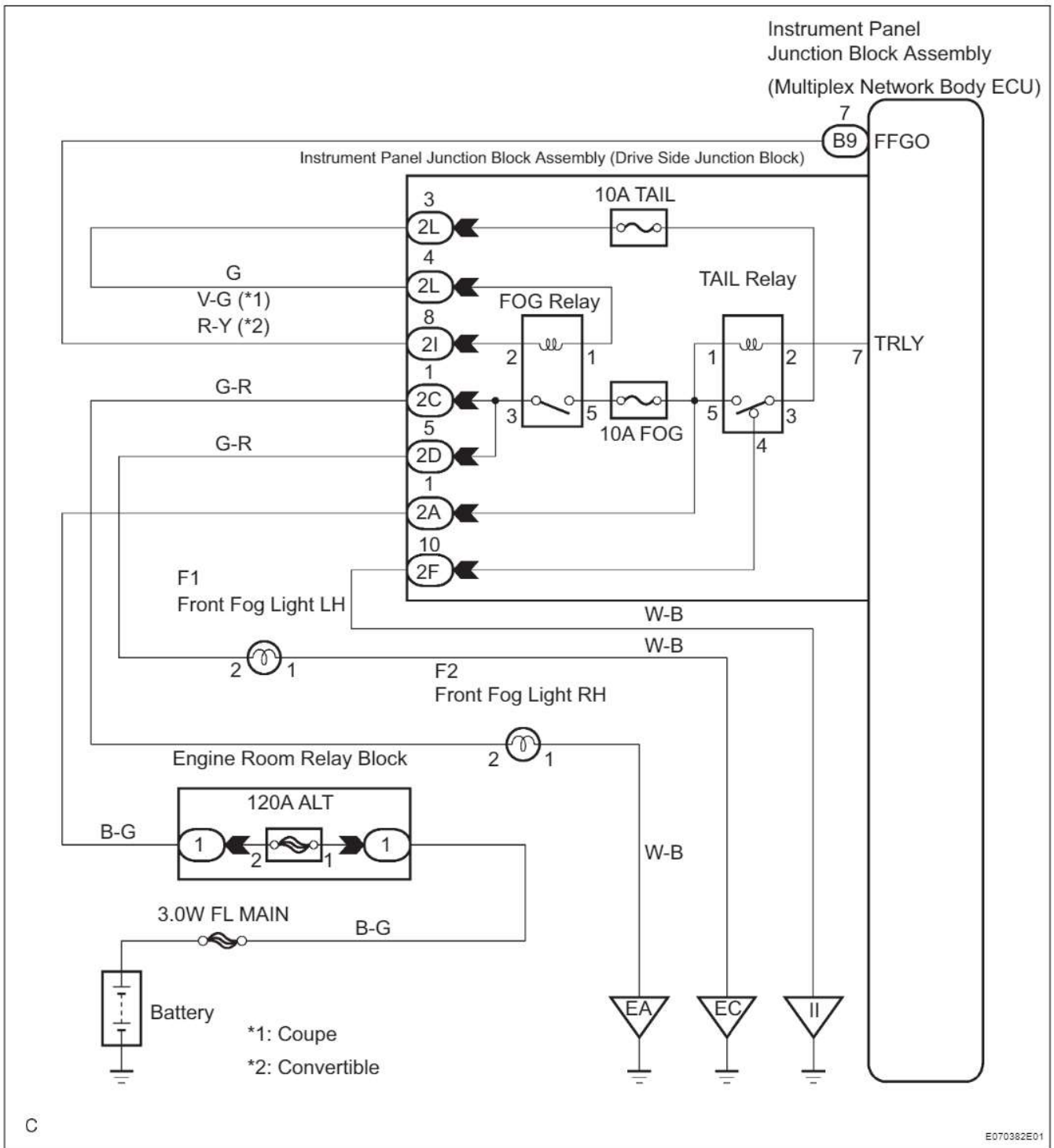
LI-55

Front Fog Light Circuit

DESCRIPTION

The multiplex network body ECU controls the FOG relay when a signal is received from the headlight dimmer switch assembly.

WIRING DIAGRAM

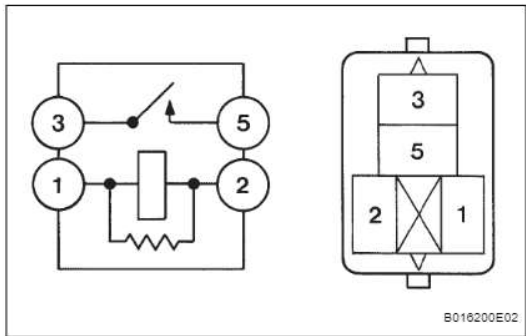


LI-56

LIGHTING – LIGHTING SYSTEM

1

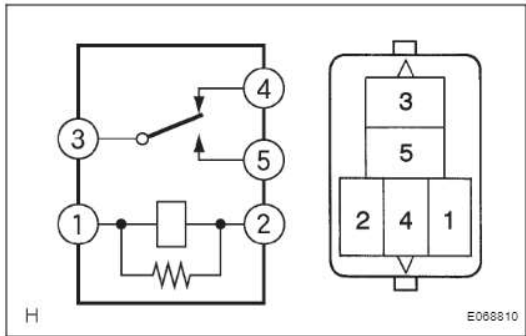
INSPECT RELAY



- (a) Inspect fog light relay continuity.
(1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)



- (b) Inspect tail relay continuity.
(1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)
3 - 4	10 kΩ or higher (When battery voltage is applied to terminals 1 - 2)

NG

REPLACE RELAY

OK

2

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (POWER SOURCE CIRCUIT)

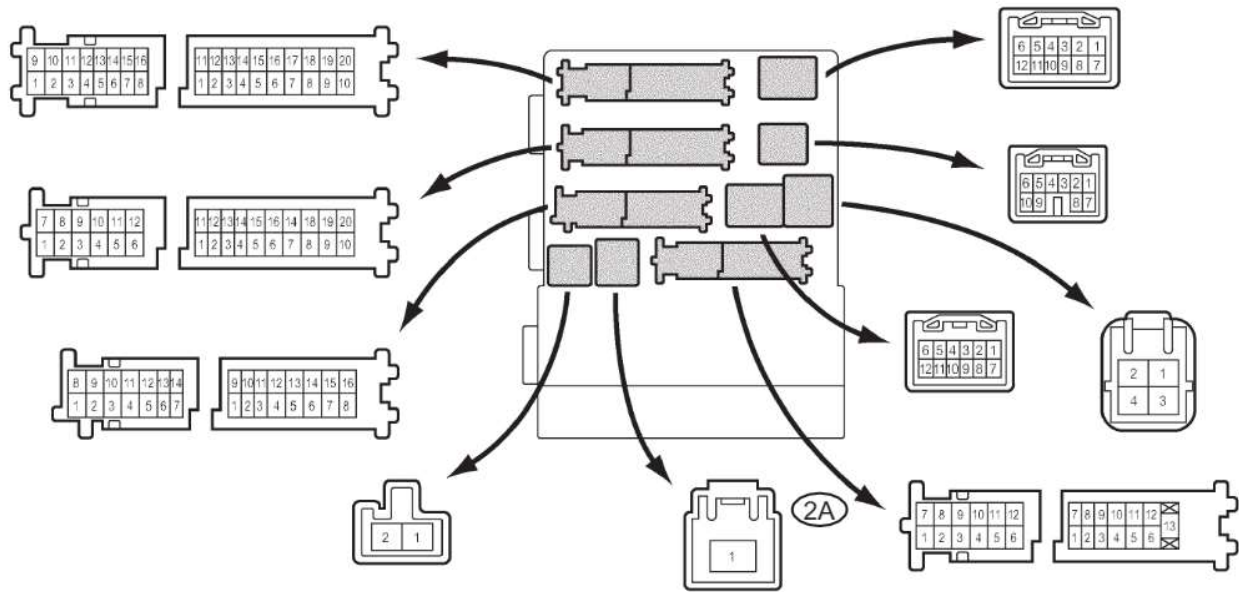
- (a) Disconnect the 2A connector from the instrument panel junction block assembly.

LI

LIGHTING – LIGHTING SYSTEM

LI-57

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



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

Tester connection	Condition	Specified condition
2A-1 - Body ground	Always	10 to 14 V

NG

REPAIR OR REPLACE HARNESS OR
CONNECTOR (BATTERY - INSTRUMENT
PANEL JUNCTION BLOCK ASSEMBLY)

OK

3

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

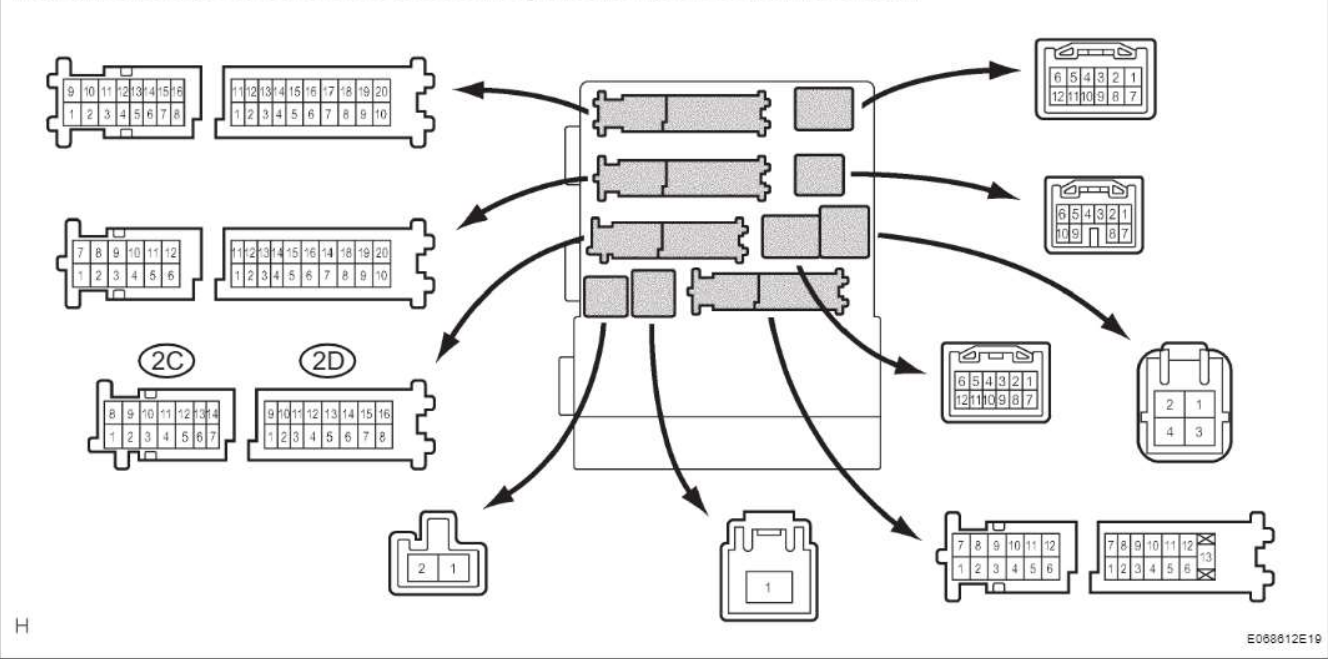
LI

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

LI-58

LIGHTING – LIGHTING SYSTEM

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



Standard voltage

Tester connection	Condition	Specified condition
2C-1 - Body ground	Light control switch TAIL and Front fog light switch OFF	Below 1 V
	Light control switch TAIL and Front fog light switch ON	10 to 14 V
2D-5 - Body ground	Light control switch TAIL and Front fog light switch OFF	Below 1 V
	Light control switch TAIL and Front fog light switch ON	10 to 14 V

NG

Go to step 4

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (EACH OF FRONT FOG LIGHT CIRCUIT)

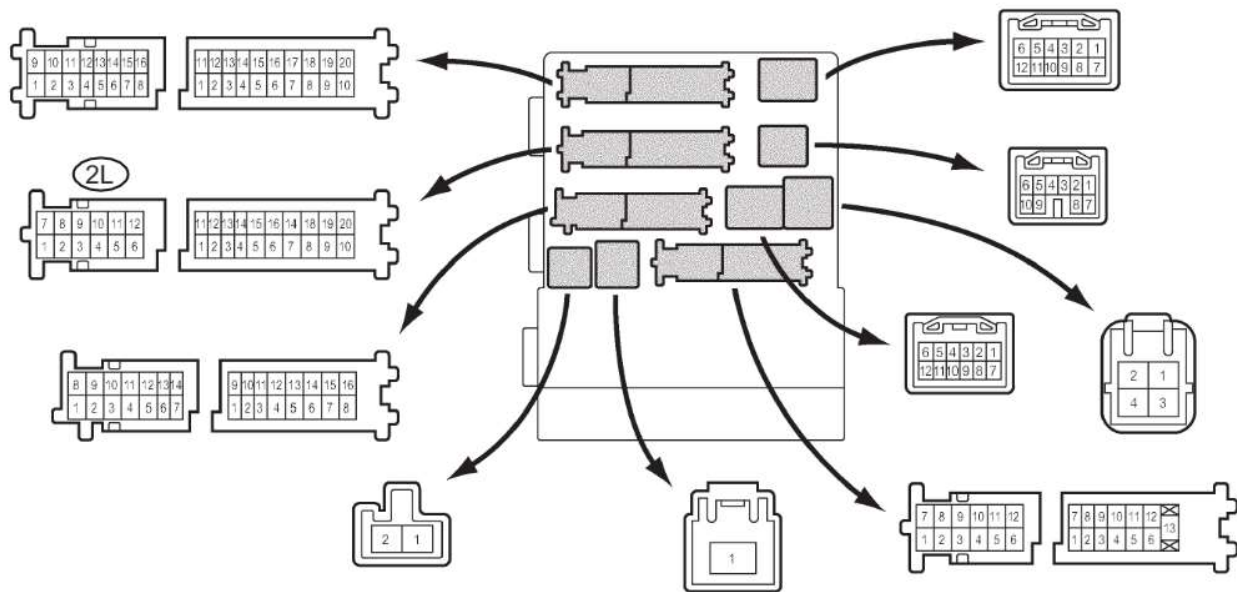
4

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

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

LIGHTING – LIGHTING SYSTEM

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



H

E068612E20

Standard voltage

Tester connection	Condition	Specified condition
2L-3 - Body ground	Light control switch OFF	Below 1 V
	Light control switch TAIL	10 to 14 V

NG

**PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN IN PROBLEM SYMPTOMS TABLE**

OK

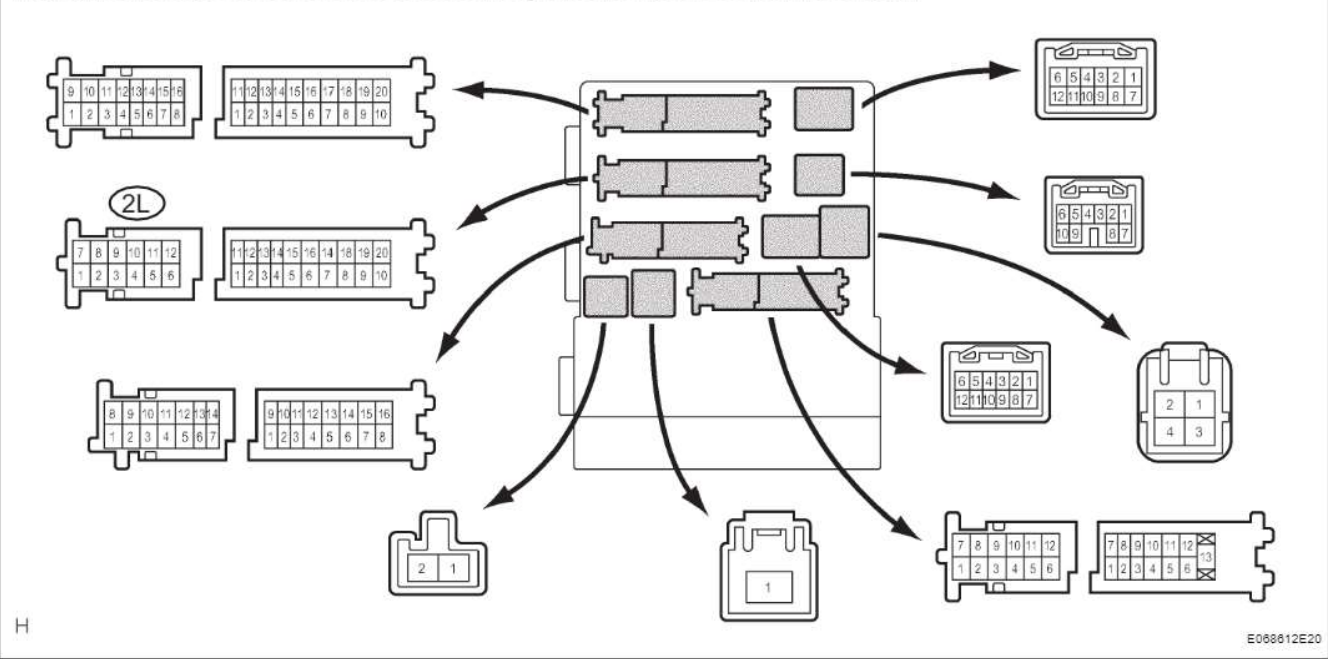
5 CHECK HARNESS AND CONNECTOR

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

LI-60

LIGHTING – LIGHTING SYSTEM

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



Standard voltage

Tester connection	Condition	Specified condition
2L-4 - Body ground	Light control switch OFF	Below 1 V
	Light control switch TAIL	10 to 14 V

NG

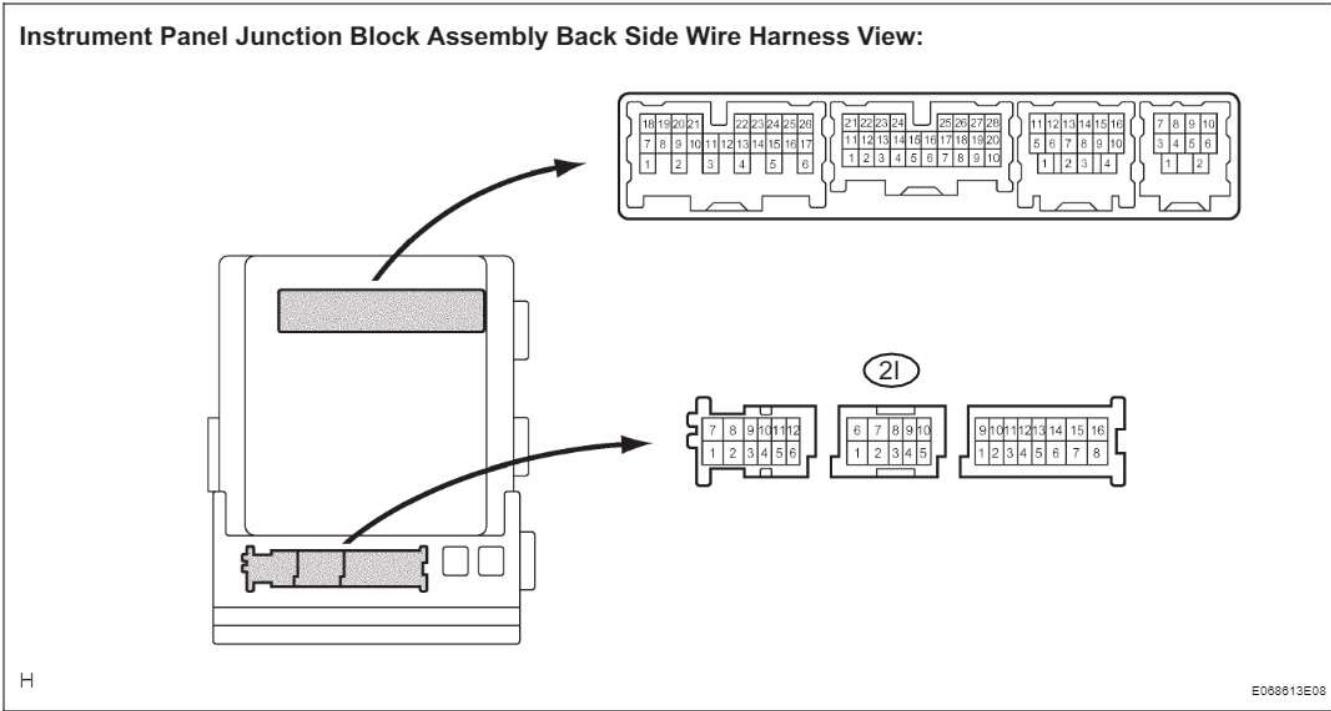
REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

6

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

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



Standard voltage

Tester connection	Condition	Specified condition
2I-8 - Body ground	Light control switch OFF	Below 1 V
	Light control switch TAIL	10 to 14 V

NG

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

OK

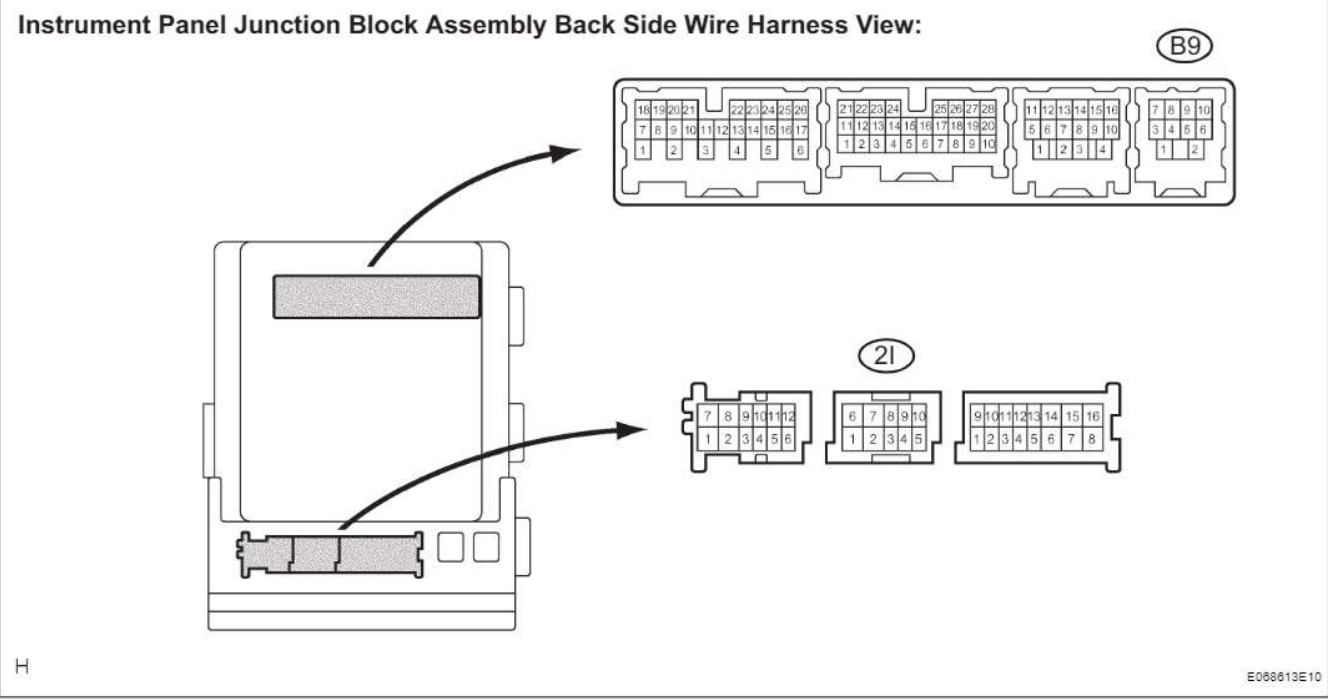
7	CHECK HARNESS AND CONNECTOR (MULTIPLEX NETWORK BODY ECU - INSTRUMENT PANEL JUNCTION BLOCK)
---	--

- (a) Disconnect the B9 connector of the multiplex network body ECU and the 2I connector of the instrument panel junction block assembly.

LI

LI-62

LIGHTING – LIGHTING SYSTEM



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

Standard resistance

Tester connection	Condition	Specified condition
B9-7 - 2I-8	Always	Below 1 Ω
B9-7 - Body ground	Always	10 k Ω or higher

OK

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

LIGHTING SYSTEM

PRECAUTION

1. PRECAUTION FOR DISCONNECTING THE BATTERY CABLE

NOTICE:

When disconnecting the negative (-) battery terminal, initialize the following systems after the terminal is reconnected.

System Name	See procedure
Power Window Control System	IN-24
Sliding Roof System	IN-24

2. PRECAUTION OF HEADLIGHT BULB REPLACEMENT

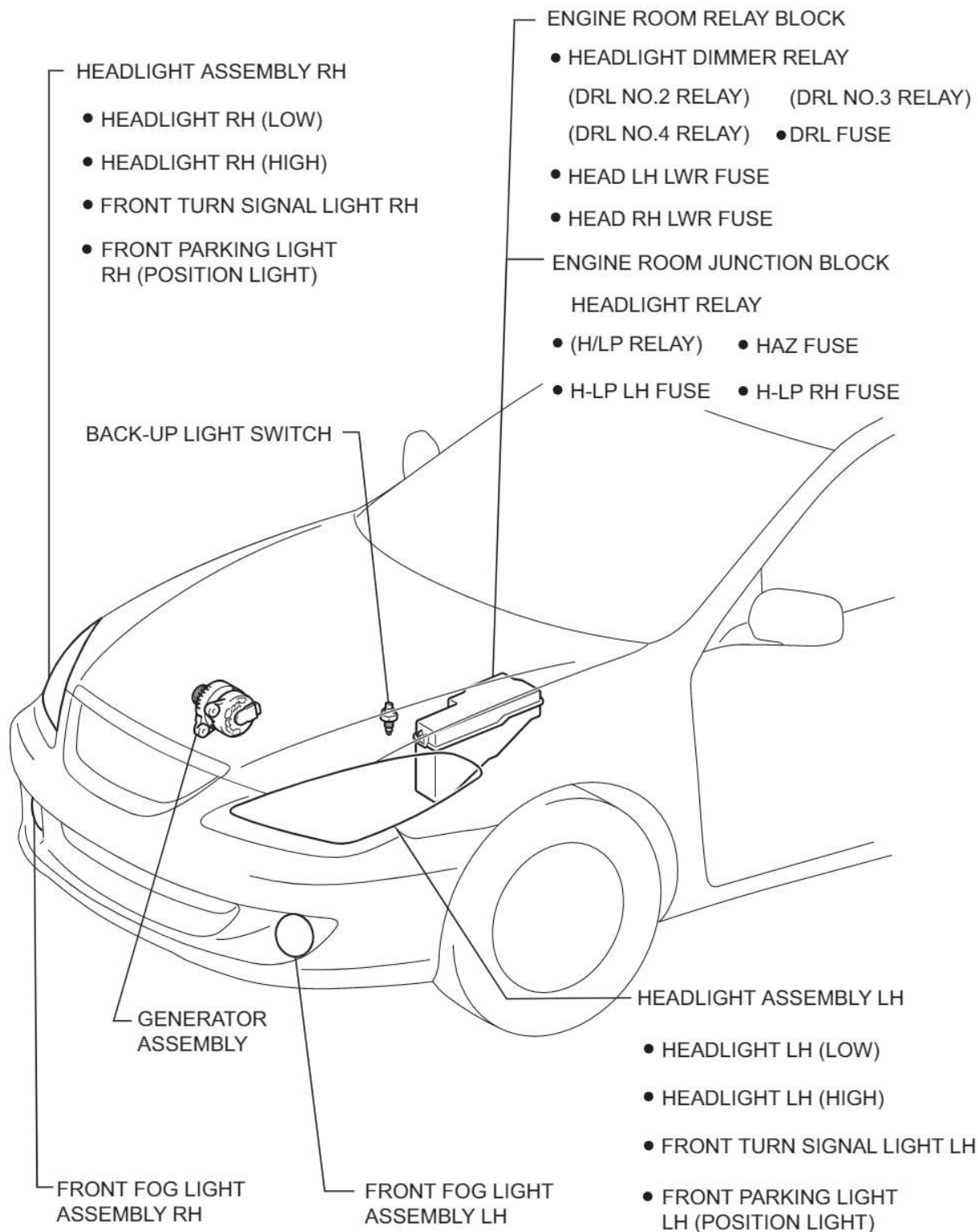
- (a) If even a thin film of oil is left on the surface of the halogen light, its service life will be shortened because the light will burn at a higher temperature.
- (b) Handle any halogen light with great care. Dropping, hitting or damaging the bulb, in any way, may result in it exploding and shattering because the internal pressure is high.
- (c) Always prepare a new bulb for immediate replacement. While replacing the bulb, the lens may attract dust and moisture if removed from the vehicle for too long.
- (d) Always use a bulb of the same wattage for replacement.
- (e) Firmly reinstall the socket after bulb replacement. The lens may become cloudy or the light cavity may fill with water through the gaps around the socket.



LI-2

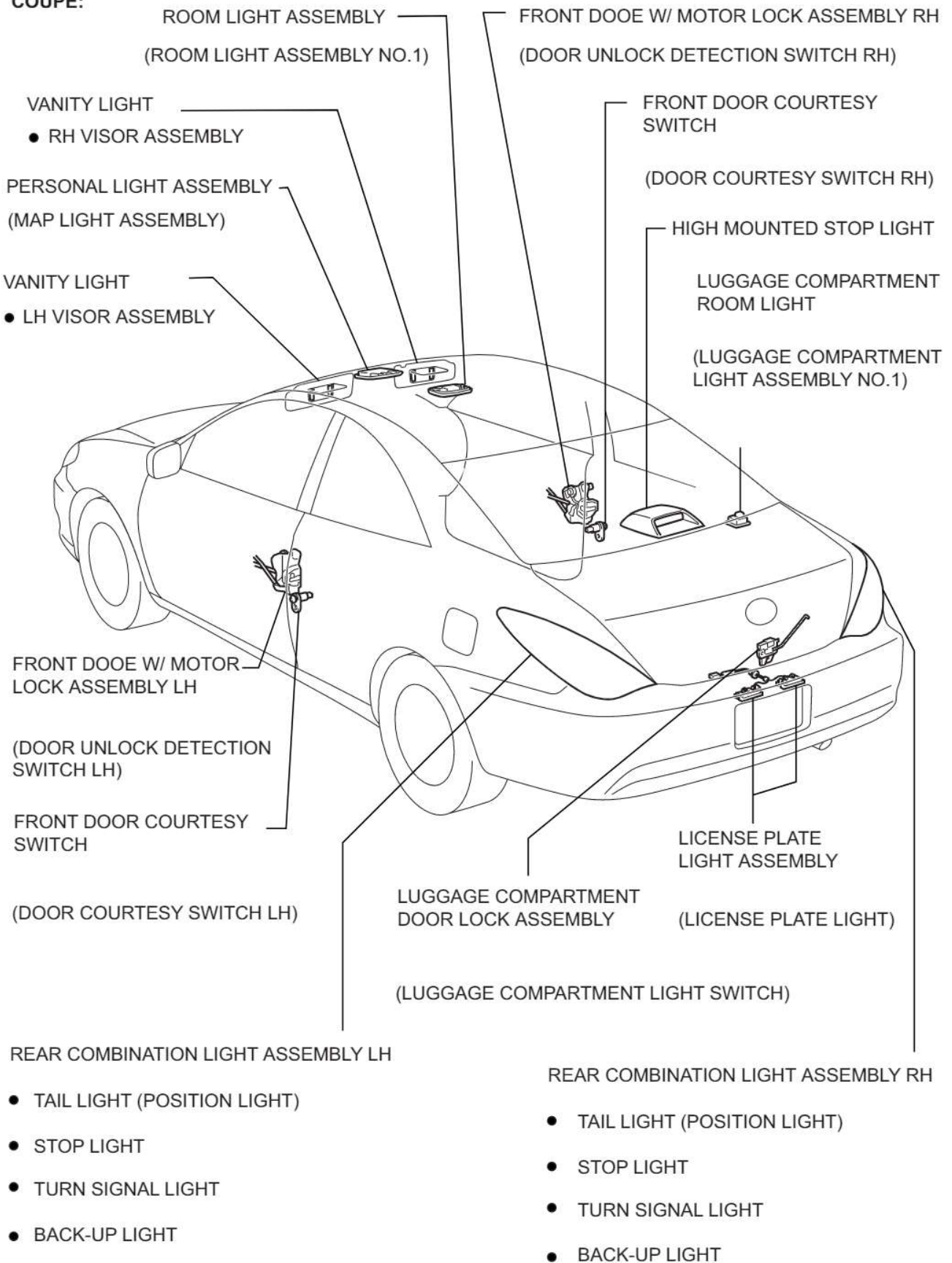
LIGHTING – LIGHTING SYSTEM

PARTS LOCATION



H

E109138E04

LIGHTING – LIGHTING SYSTEM**LI-3****COUPE:**

H

E109139E04

LI-4

LIGHTING – LIGHTING SYSTEM

CONVERTIBLE:

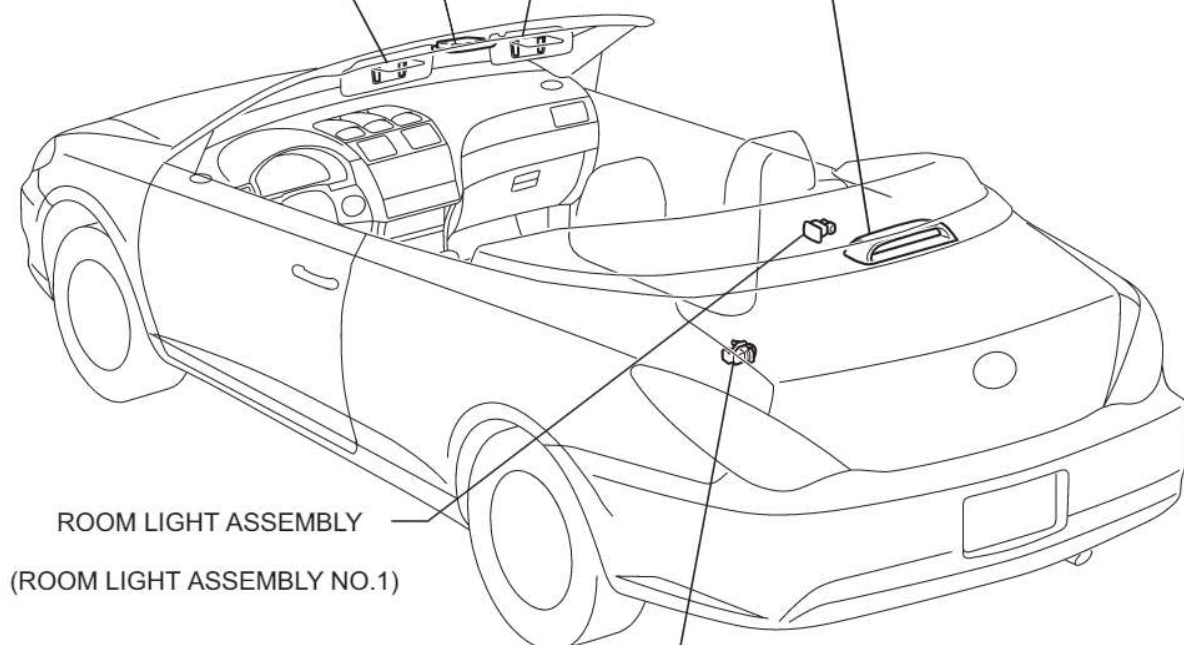
PERSONAL LIGHT ASSEMBLY
(MAP LIGHT ASSEMBLY)

VANITY LIGHT

(RH VISOR ASSEMBLY)

VANITY LIGHT
(LH VISOR ASSEMBLY)

HIGH MOUNTED STOP LIGHT



ROOM LIGHT ASSEMBLY
(ROOM LIGHT ASSEMBLY NO.1)

LUGGAGE COMPARTMENT ROOM LIGHT
(LUGGAGE COMPARTMENT LIGHT ASSEMBLY NO.1)

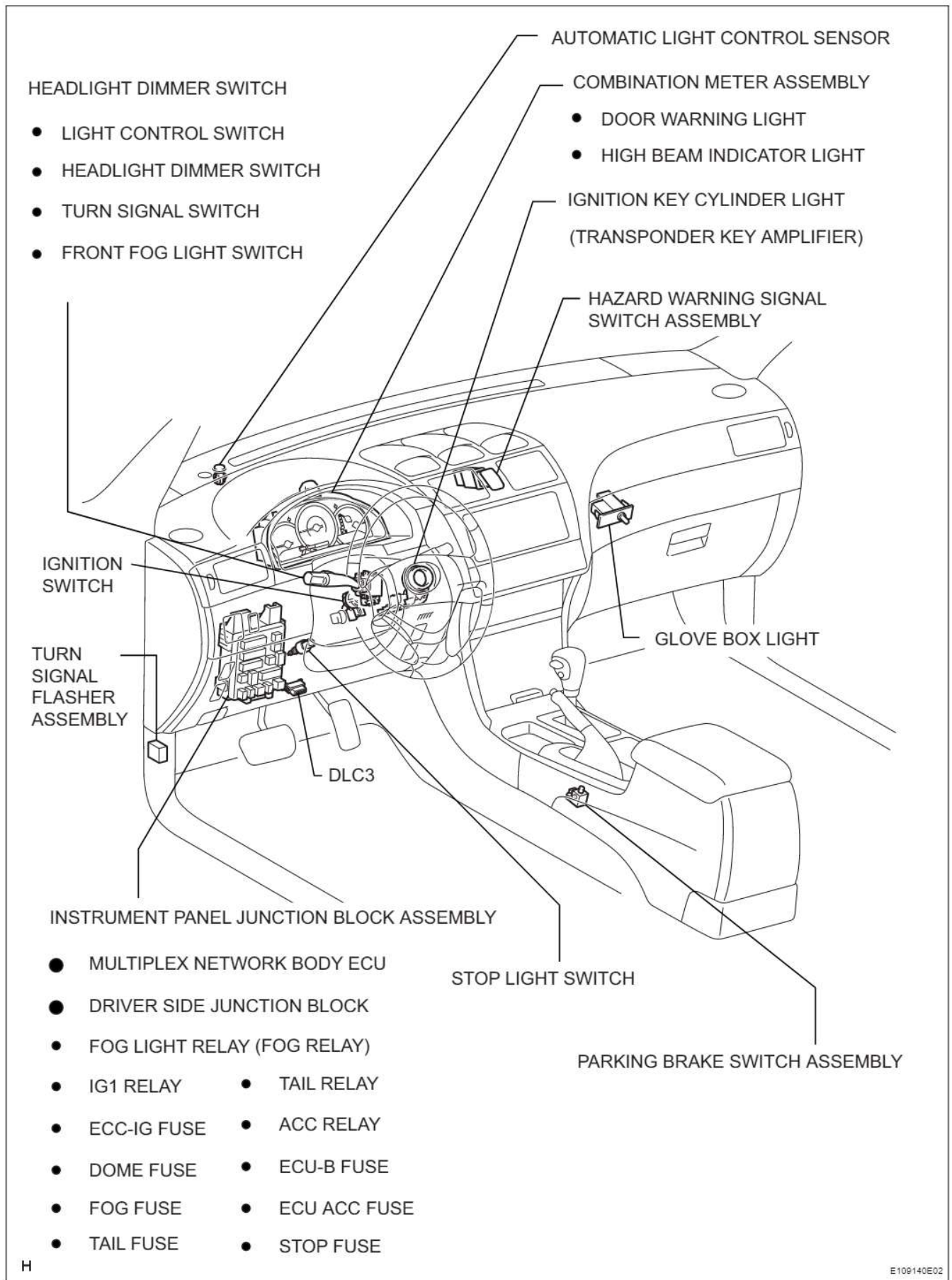
LI

H

E109456E02

LIGHTING – LIGHTING SYSTEM

LI-5

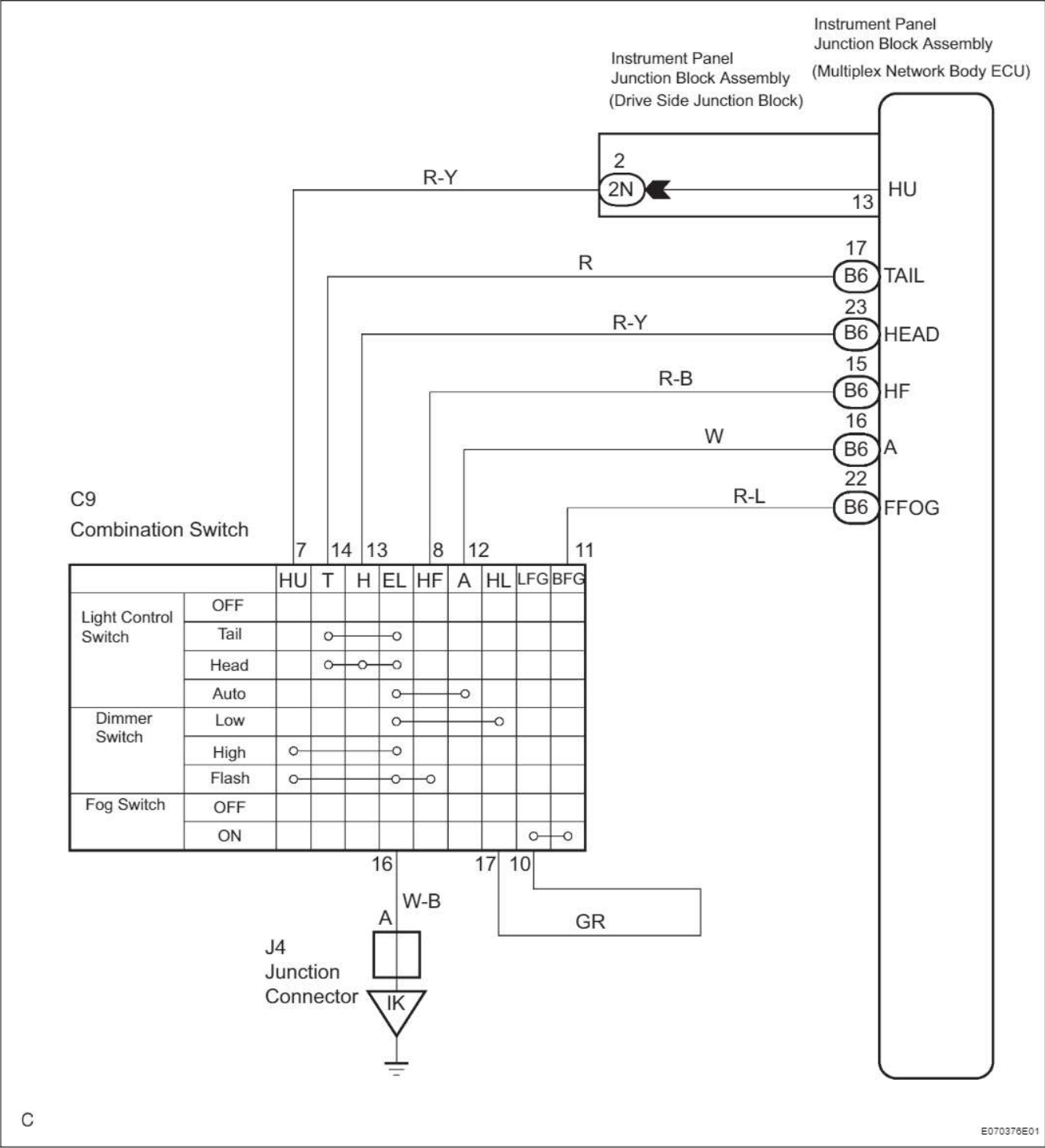


LI

Light Control Switch Circuit

DESCRIPTION
This circuit detects the state of the headlight dimmer switch.

WIRING DIAGRAM



LI-64

LIGHTING – LIGHTING SYSTEM

1 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

- (a) Disconnect the B6 from the instrument panel junction block assembly.

Multiplex Network Body ECU

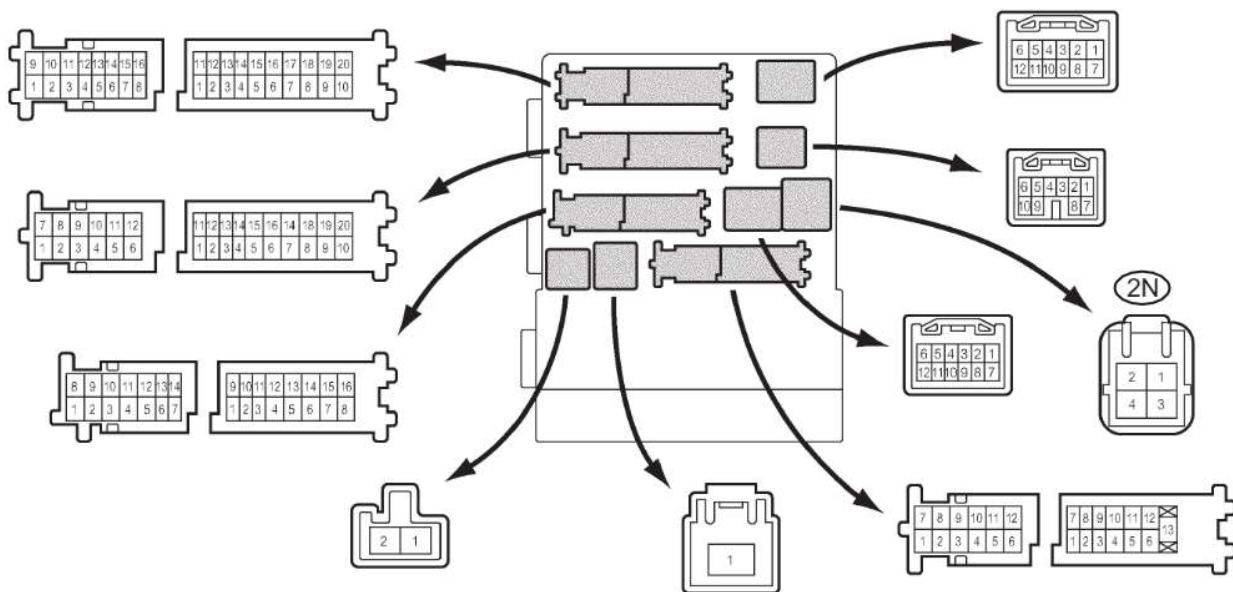
Wire Harness View:



E068632E08

- (b) Disconnect the 2N connector from the instrument panel junction block assembly.

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



E068612E14

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

Standard resistance

Tester connection	Condition	Specified condition
2N-2 - Body ground	Headlight dimmer switch LOW → HIGH	10 kΩ or higher → Below 1 Ω
B6-15 - Body ground	Headlight dimmer switch LOW → FLASH	10 kΩ or higher → Below 1 Ω
B6-16 - Body ground	Light control switch OFF → AUTO	10 kΩ or higher → Below 1 Ω
B6-17 - Body ground	Light control switch OFF → TAIL	10 kΩ or higher → Below 1 Ω
B6-22 - Body ground	Front fog light switch OFF → ON	10 kΩ or higher → Below 1 Ω
B6-23 - Body ground	Light control switch OFF → HEAD	10 kΩ or higher → Below 1 Ω

NG

Go to step 2

LIGHTING – LIGHTING SYSTEM

LI-65

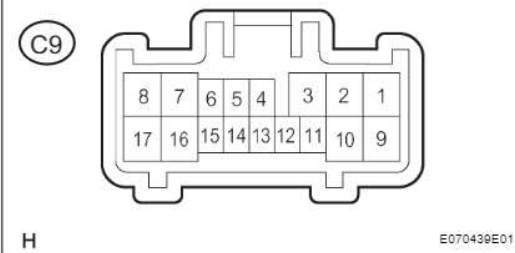
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2

INSPECT HEADLIGHT DIMMER SWITCH ASSEMBLY

Connector Front View:



(a) Inspect light control switch (when headlight is malfunctioning).

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

Standard resistance

Tester connection	Switch operation	Specified resistance
12 - 16 13 - 16 14 - 16	OFF	10 k Ω or higher
14 - 16	TAIL	Below 1 Ω
13 - 16 14 - 16	HEAD	Below 1 Ω
12 - 16	AUTO	Below 1 Ω

(b) Inspect headlight dimmer switch (when FLASH or HI BEAM is malfunctioning).

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

Standard resistance

Tester connection	Switch operation	Specified resistance
7 - 16 8 - 16	FLASH	Below 1 Ω
16 - 17	LOW BEAM	Below 1 Ω
7 - 16	HI BEAM	Below 1 Ω

(c) Inspect front fog light switch (when fog light is malfunctioning).

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

Standard resistance

Tester connection	Switch operation	Specified resistance
10 - 11	OFF	10 k Ω or higher
10 - 11	ON	Below 1 Ω

NG

REPLACE HEADLIGHT DIMMER SWITCH ASSEMBLY

OK

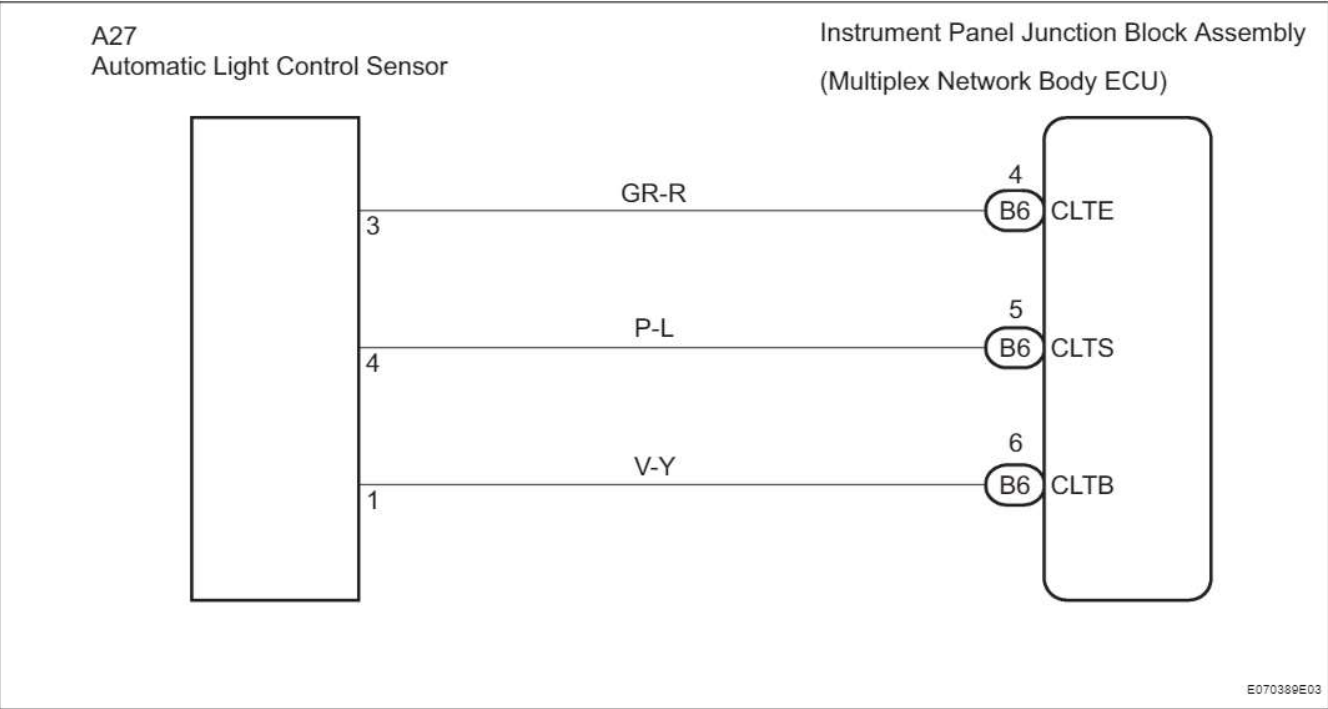
REPAIR OR REPLACE HARNESS OR CONNECTOR

Automatic Light Control Sensor Circuit

DESCRIPTION

The multiplex network body ECU receives a signal from the automatic light control sensor.
HINT:
A DTC code is output when the automatic light control sensor is malfunctioning or there is an open or short circuit in the automatic light control sensor (See pageLI-26).

WIRING DIAGRAM



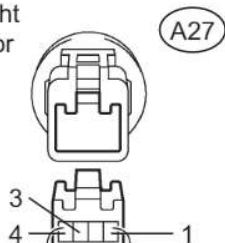
LIGHTING – LIGHTING SYSTEM

LI-67

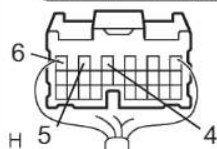
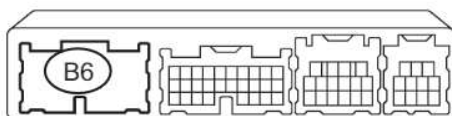
1 CHECK HARNESS AND CONNECTOR (MULTIPLEX NETWORK BODY ECU - AUTOMATIC LIGHT CONTROL SENSOR)

Wire Harness View:

Automatic Light Control Sensor



Multiplex Network Body ECU



E070393E01

- Disconnect the automatic light control sensor connector and B6 connector of the multiplex network body ECU.
- Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
CLTE (A27-3) - CLTE (B6-4)	Always	Below 1 Ω
CLTS (A27-4) - CLTS (B6-5)	Always	Below 1 Ω
CLTB (A27-1) - CLTB (B6-6)	Always	Below 1 Ω
CLTE (B6-4) - Body ground	Always	10 k Ω or higher
CLTS (B6-5) - Body ground	Always	10 k Ω or higher
CLTB (B6-6) - Body ground	Always	10 k Ω or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

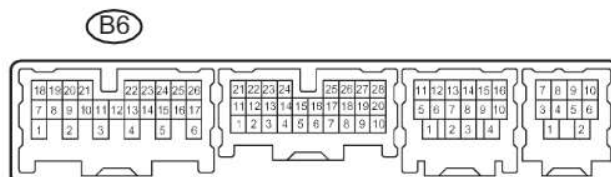
OK

2 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

- Reconnect the automatic light control sensor connector and B6 connector of the multiplex network body ECU.

Multiplex Network Body ECU

Wire Harness View:



E068632E08

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

Standard voltage

Tester connection	Condition	Specified voltage
CLTE (B6-4) - CLTB (B6-6)	Ignition switch OFF → ON	Below 1 V → 10 to 14 V

NG

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

LI-68**LIGHTING – LIGHTING SYSTEM**

A button with a downward-pointing chevron shape and the text "OK" inside.

REPLACE AUTOMATIC LIGHT CONTROL SENSOR

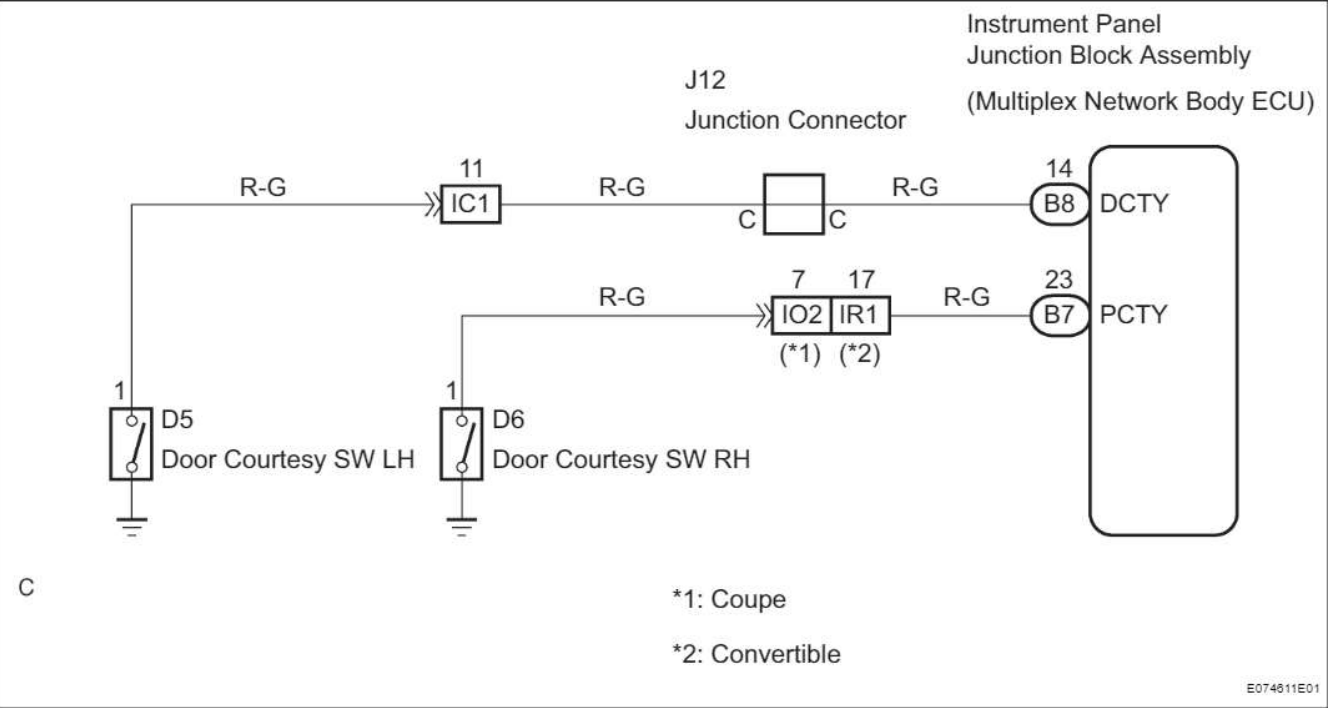
LI

Door Courtesy Switch Circuit

DESCRIPTION

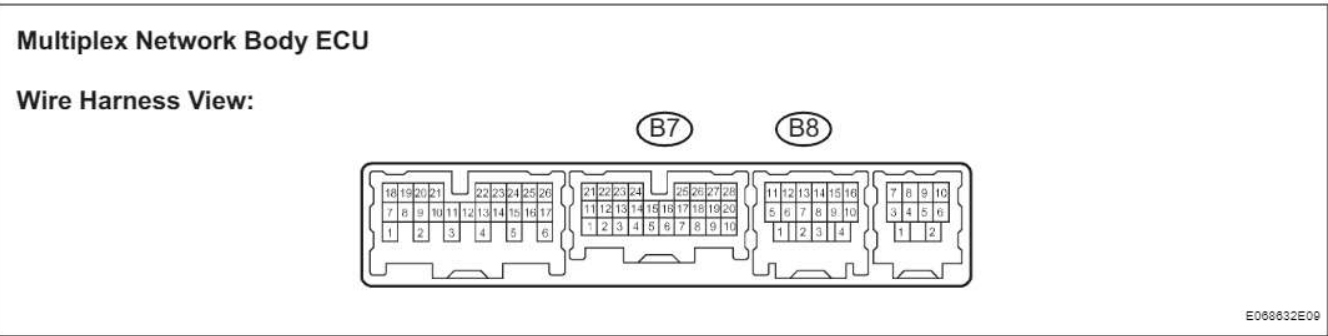
The multiplex network body ECU detects the condition of the door courtesy switch assembly.

WIRING DIAGRAM



1 CHECK HARNESS AND CONNECTOR (COURTESY LIGHT SWITCH - INSTRUMENT PANEL J/B)

(a) Disconnect the B7 and B8 connectors from the instrument panel junction block assembly.



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

Standard resistance

Tester connection	Condition	Specified condition
B7-23 - Body ground	Front passenger door is open	Below 1 Ω
	Front passenger door is closed	10 kΩ or higher

LI-70

LIGHTING – LIGHTING SYSTEM

Tester connection	Condition	Specified condition
B8-14 - Body ground	Front driver door is open	Below 1 Ω
	Front driver door is closed	10 k Ω or higher

NG

Go to step 2

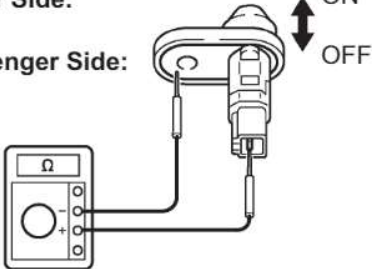
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT COURTESY LIGHT SWITCH

Driver Side:

Passenger Side:



E071371E03

- (a) Remove the courtesy light switch.
- (b) Measure the resistance according to the value(s) in the table below.
- Standard resistance

Tester connection	Condition	Specified condition
1 - Switch body	OFF (When shaft is pressed)	10 k Ω or higher
1 - Switch body	ON (When shaft is not pressed)	Below 1 Ω

NG

REPLACE COURTESY LIGHT SWITCH

OK

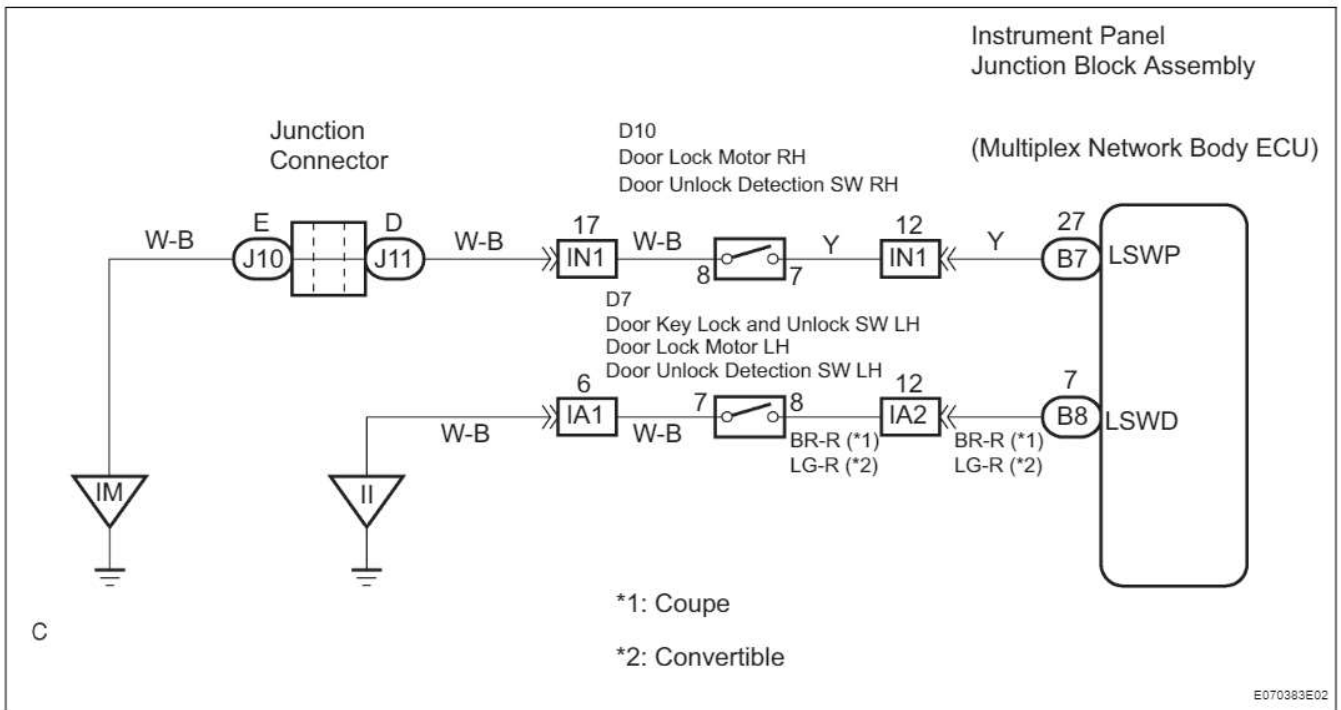
REPAIR OR REPLACE HARNESS OR CONNECTOR (EACH OF COURTESY SWITCH CIRCUIT)

Door LOCK Position Circuit

DESCRIPTION

This circuit detects the state of the door lock detection sensor and sends it to the multiplex network body ECU.

WIRING DIAGRAM



HINT:

Before this procedure, check that the wireless door lock system operation is normal.

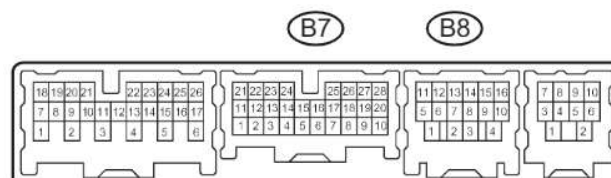
1 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

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

LI

Multiplex Network Body ECU

Wire Harness View:



Standard voltage

Tester connection	Condition	Specified condition
B7-27 - Body ground	Front passenger door locked	Below 1 V
	Front passenger door unlocked	10 to 14 V

LI-72

LIGHTING – LIGHTING SYSTEM

Tester connection	Condition	Specified condition
B8-7 - Body ground	Front driver door locked	Below 1 V
	Front driver door unlocked	10 to 14 V

NG

GO TO POWER DOOR LOCK CONTROL SYSTEM

OK

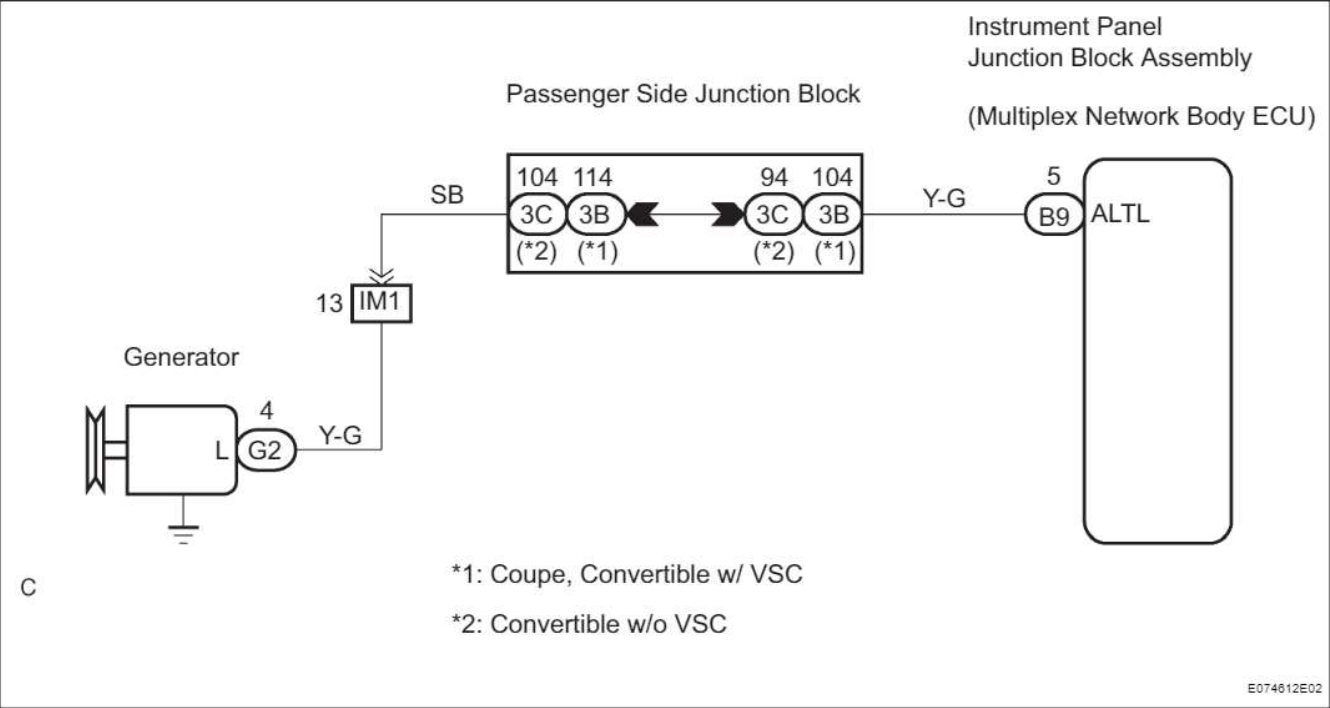
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEMS SYMPTOMS TABLE

Generator Signal Circuit

DESCRIPTION

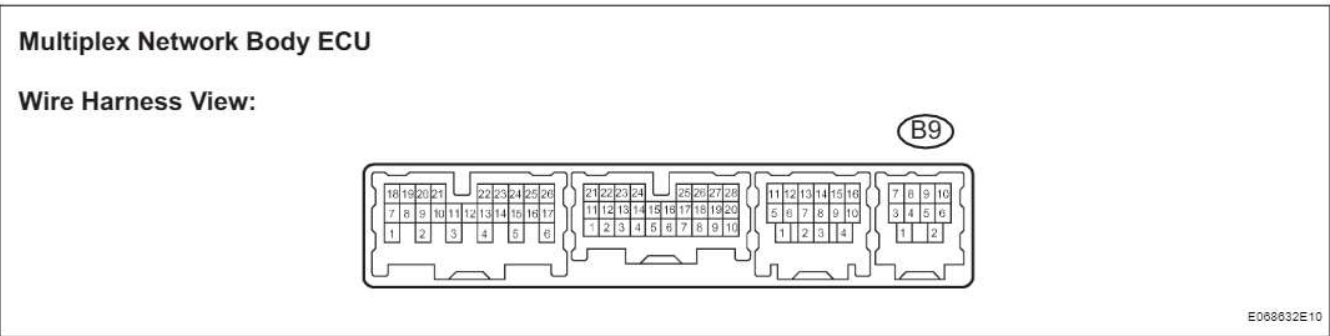
The multiplex network body ECU receives an engine condition signal via a generator.

WIRING DIAGRAM



1 CHECK INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

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



Standard voltage

Tester connection	Condition	Specified condition
B9-5 - Body ground	Engine running	10 to 14 V

NG

Go to step 2

LI-74

LIGHTING – LIGHTING SYSTEM

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT GENERATOR ASSEMBLY

(a) Inspect generator assembly (See page CH-10 for 2AZ-FE, See page CH-11 for 3MZ-FE).

NG

CHECK AND REPLACE GENERATOR ASSEMBLY

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (GENERATOR ASSEMBLY - MULTIPLEX NETWORK BODY ECU)



LIGHTING – LIGHTING SYSTEM**LI-75****Illumination Circuit****DESCRIPTION**

The multiplex network body ECU controls the following.

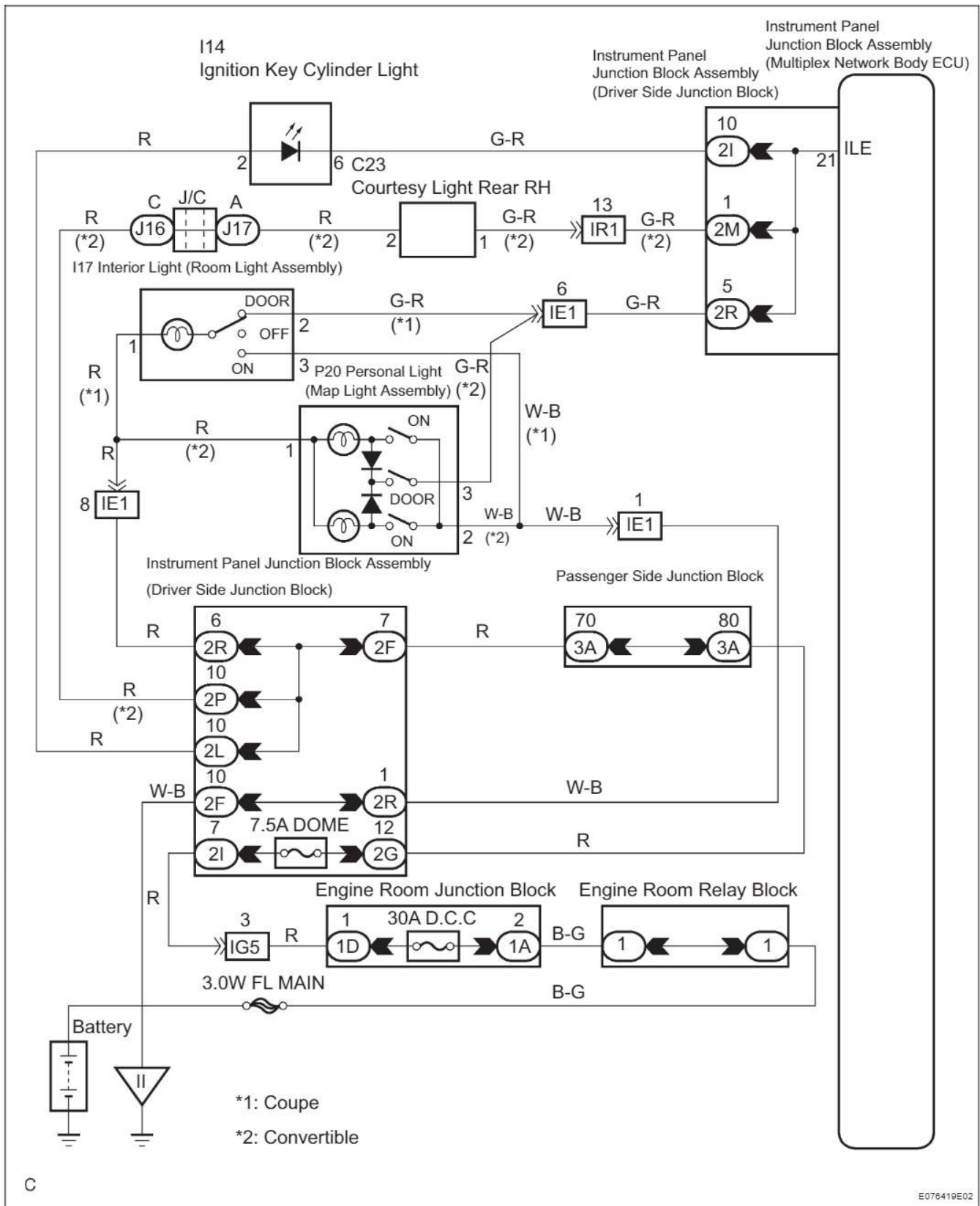
1. Transponder key amplifier (Key cylinder light)
2. Room light assembly No.1
3. Map light assembly (Convertible only)

LI

LI-76

LIGHTING – LIGHTING SYSTEM

WIRING DIAGRAM



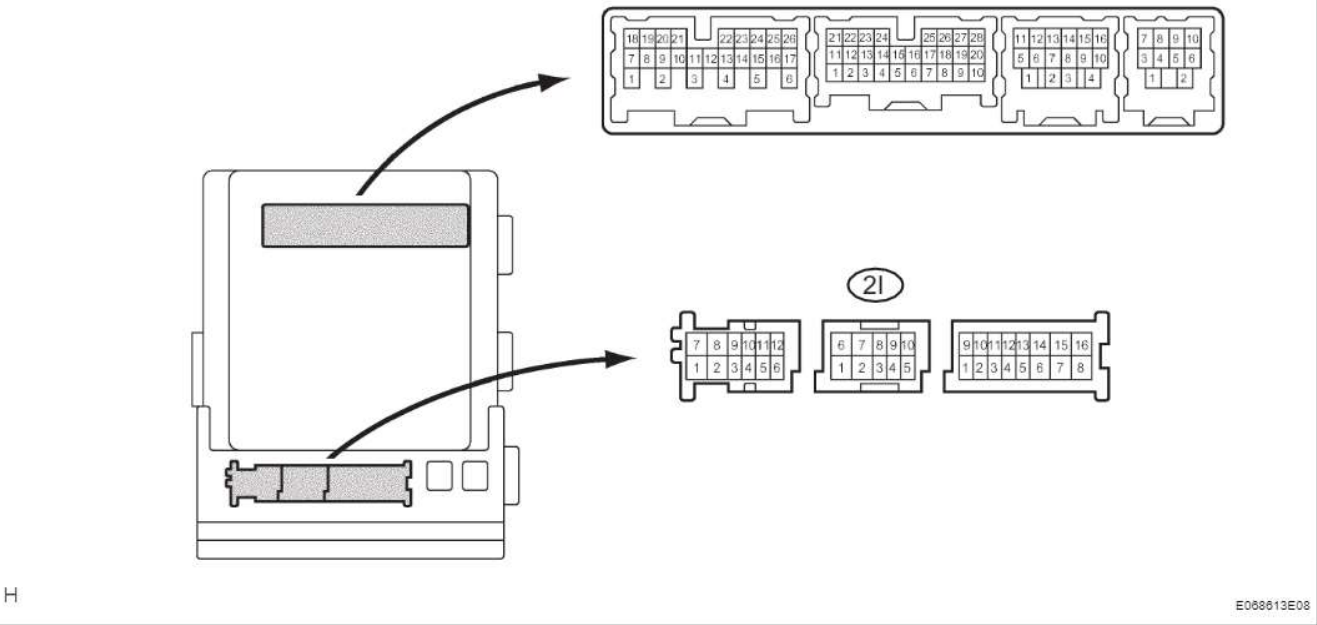
E076419E02

1

CHECK HARNESS AND CONNECTOR

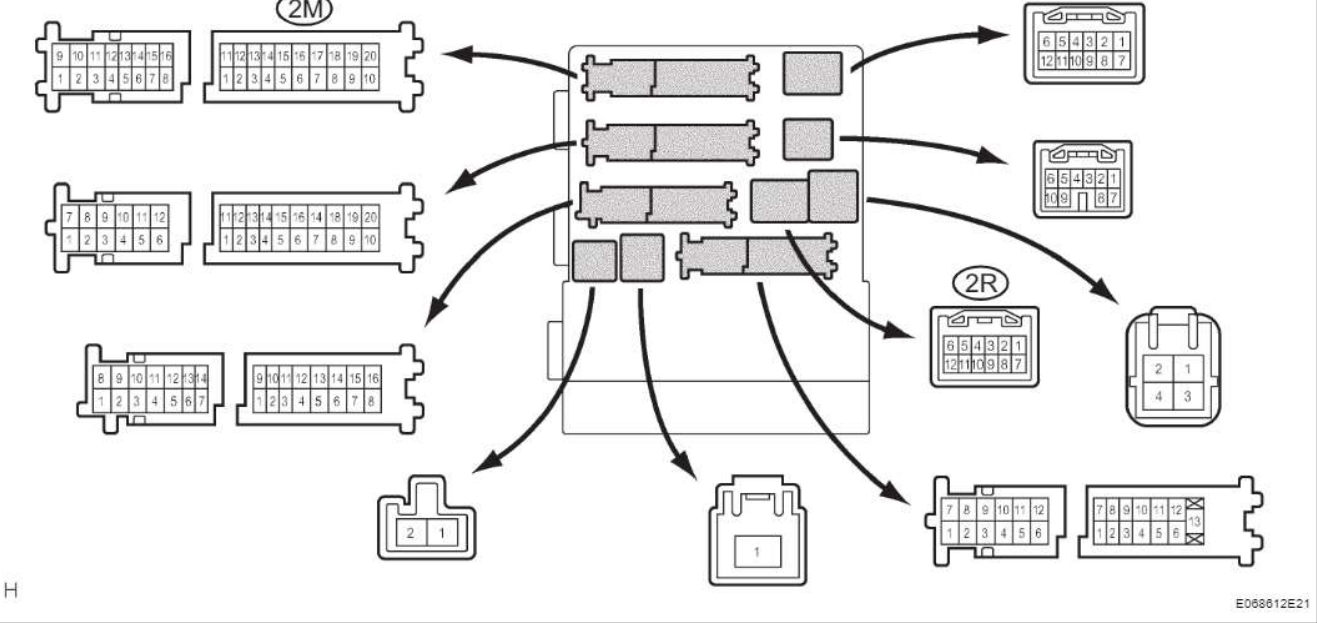
- (a) Disconnect the 2I connector from the instrument panel junction block assembly.

Instrument Panel Junction Block Assembly Back Side Wire Harness View:



- (b) Disconnect the 2M and 2R connectors from the instrument panel junction block assembly.

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



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

LI-78

LIGHTING – LIGHTING SYSTEM

Standard voltage

Tester connection	Condition	Specified condition
2I-10 - Body ground	Always	10 to 14 V
2M-1 - Body ground	Always	10 to 14 V
2R-5 - Body ground	Interior light switch is in the DOOR position	10 to 14 V

NG

Go to step 2

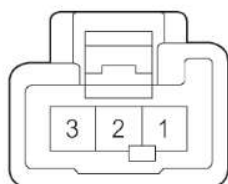
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2

INSPECT INTERIOR LIGHT

Connector Front View:



I17

E069434E02

(a) Coupe:

Inspect room light assembly No.1.

- (1) Remove the room light assembly No.1.
- (2) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Switch operation	Specified resistance
1 - 2 1 - 3	OFF	10 kΩ or higher

- (3) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, then check that the light comes on when the switch is in the DOOR position.

OK:

Light comes on.

- (4) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 3, then check that the light comes on when the switch is in the ON position.

OK:

Light comes on.

(b) Convertible:

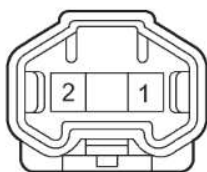
Inspect courtesy light rear RH.

- (1) Remove the courtesy light rear RH.
- (2) Connect the positive (+) lead from the battery to one of the terminals and the negative (-) lead to the other terminal, then check that the light comes on.

OK:

Light comes on.

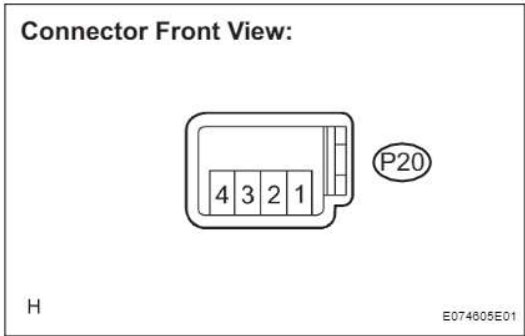
Connector Front View:



C23

E069342E03

LIGHTING – LIGHTING SYSTEM



- (c) Convertible:
Inspect map light assembly.
- (1) Remove the map light assembly.
 - (2) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Switch operation	Specified condition
1 - 2 1 - 3	OFF	10 kΩ or higher

- (3) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, then check that the light comes on when the switch is in the ON position.

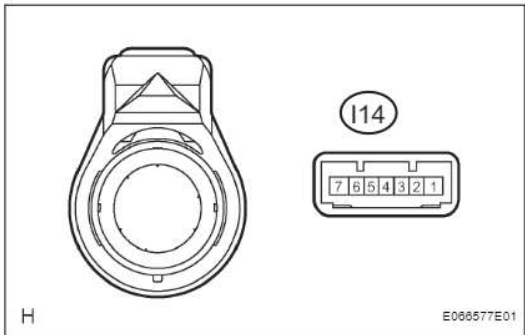
OK:

Light comes on.

- (4) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 3, then check that the light comes on when the switch is in the DOOR position.

OK:

Light comes on.



- (d) Inspect ignition key cylinder light.
- (1) Remove the ignition key cylinder light.
 - (2) Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 6, then check that the light comes on.

OK:

Light comes on.

NG → REPLACE INTERIOR LIGHT

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR

LI

LI-80

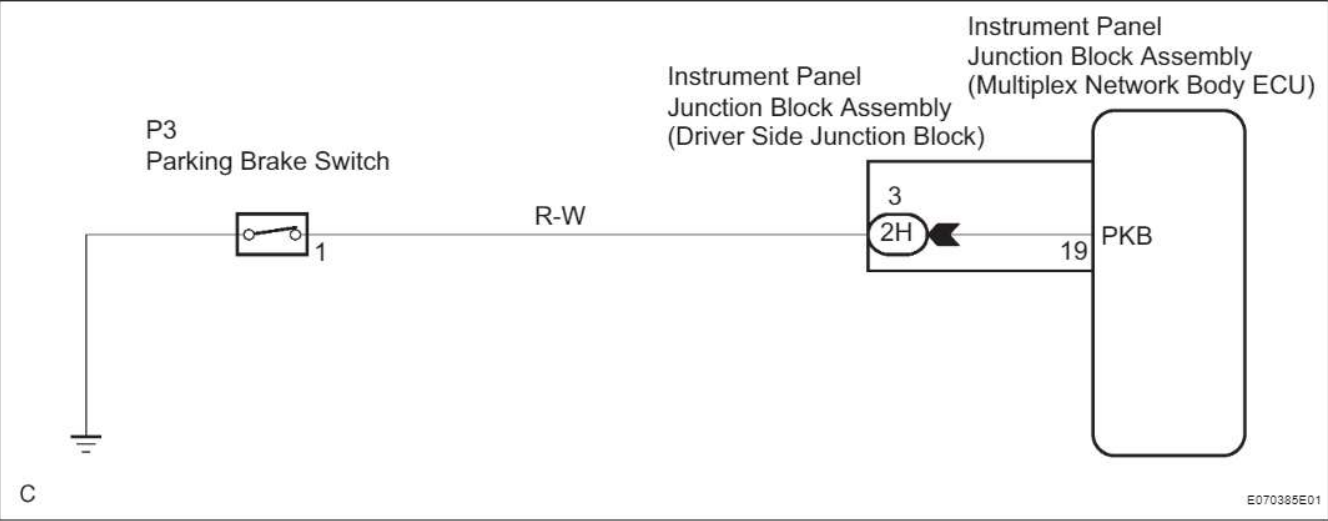
LIGHTING – LIGHTING SYSTEM

Parking Brake Switch Circuit

DESCRIPTION

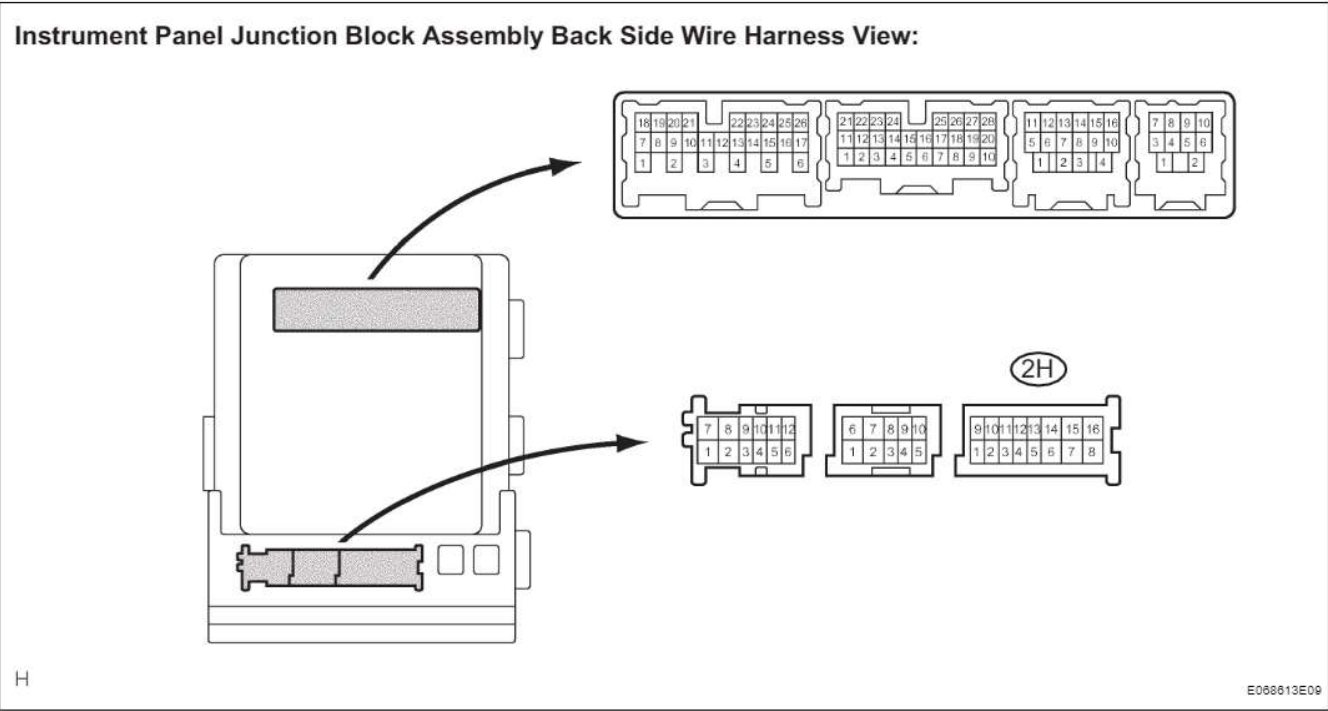
The multiplex network body ECU receives the parking brake switch signal.

WIRING DIAGRAM



1 CHECK HARNESS AND CONNECTOR (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY - BODY GROUND)

(a) Disconnect the 2H connector from the instrument panel junction block assembly.



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

Standard resistance

Tester connection	Condition	Specified condition
2H-3 - Body ground	Shaft of parking brake switch is pressed	10 kΩ or higher
2H-3 - Body ground	Shaft of parking brake switch is not pressed	Below 1 Ω

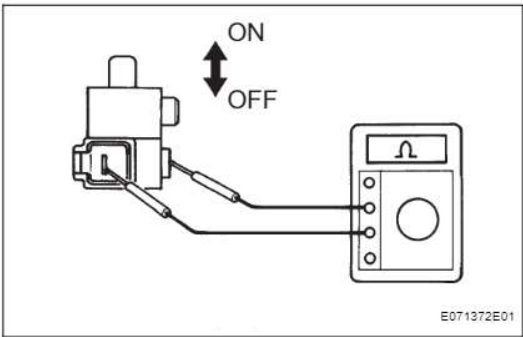
NG

Go to step 2

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT PARKING BRAKE SWITCH ASSEMBLY



- (a) Remove the parking brake switch.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified resistance
1 - Switch body	OFF (When shaft is pressed)	10 kΩ or higher
1 - Switch body	ON (When shaft is not pressed)	Below 1 Ω

NG

REPLACE PARKING BRAKE SWITCH ASSEMBLY

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (PARKING BRAKE SWITCH CIRCUIT)

LI-82

LIGHTING – LIGHTING SYSTEM

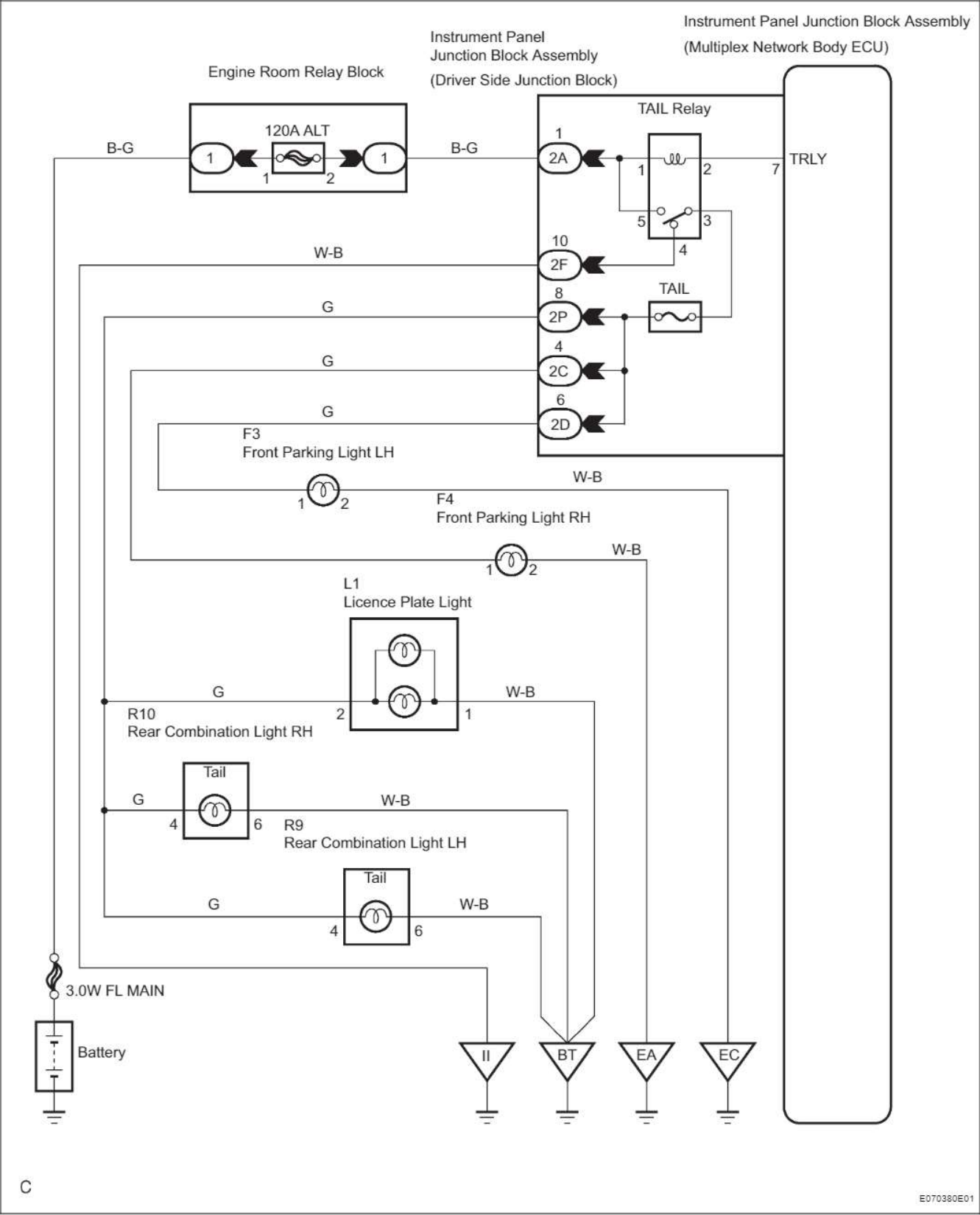
Taillight Relay Circuit

DESCRIPTION

The multiplex network body ECU controls the TAIL relay when a signal is received from the headlight dimmer switch assembly.

LIGHTING – LIGHTING SYSTEM

WIRING DIAGRAM



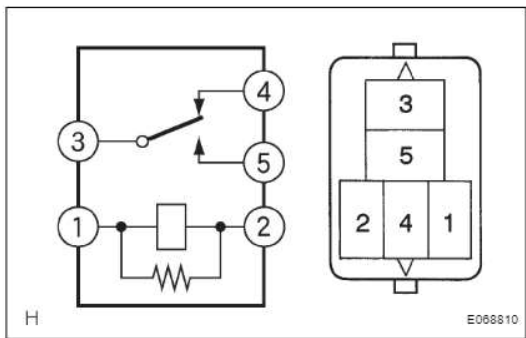
LI

LI-84

LIGHTING – LIGHTING SYSTEM

1

INSPECT RELAY



- (a) Inspect TAIL relay continuity.
(1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Specified condition
3 - 5	10 k Ω or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)
3 - 4	10 k Ω or higher (When battery voltage is applied to terminals 1 - 2)

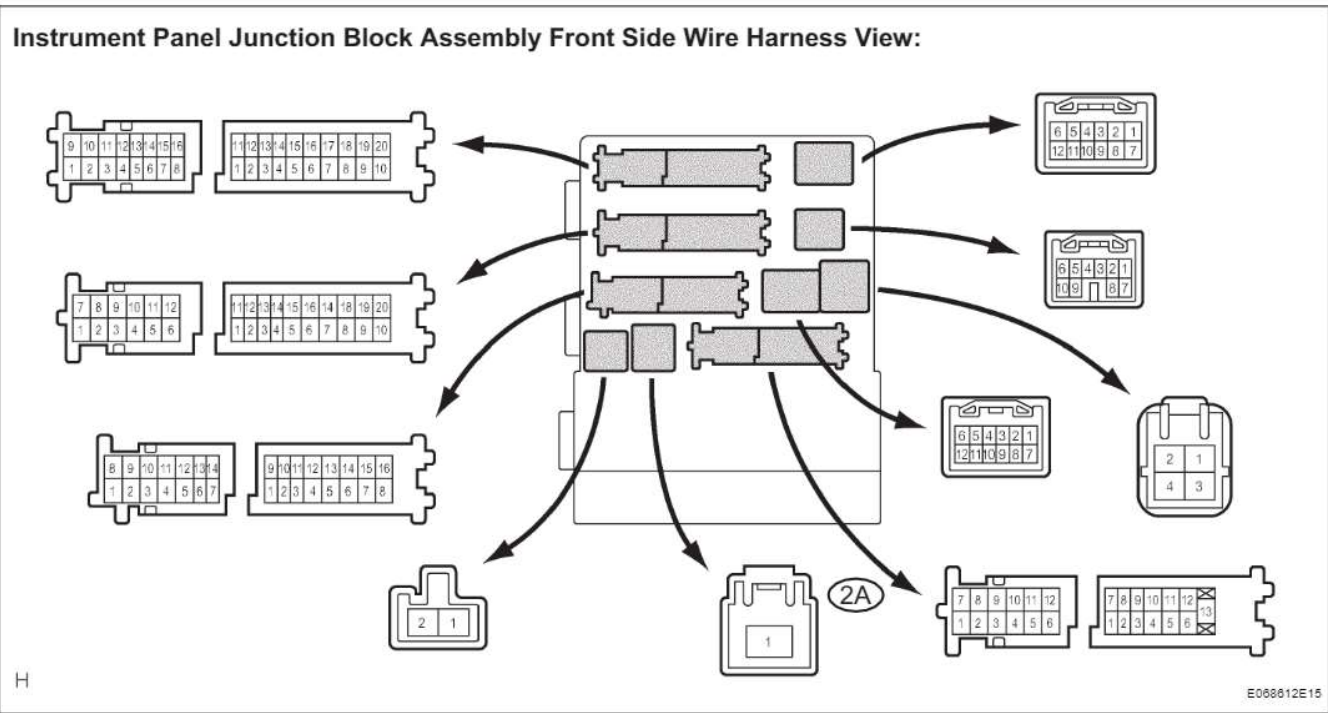
NG **REPLACE RELAY**

OK

2

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (POWER SOURCE CIRCUIT)

- (a) Disconnect the 2A connector from the instrument panel junction block assembly.



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

Standard voltage

Tester connection	Condition	Specified condition
2A-1 - Body ground	Always	10 to 14 V

LIGHTING – LIGHTING SYSTEM

LI-85

NG

REPAIR OR REPLACE HARNESS OR
CONNECTOR (BATTERY - INSTRUMENT
PANEL JUNCTION BLOCK ASSEMBLY)

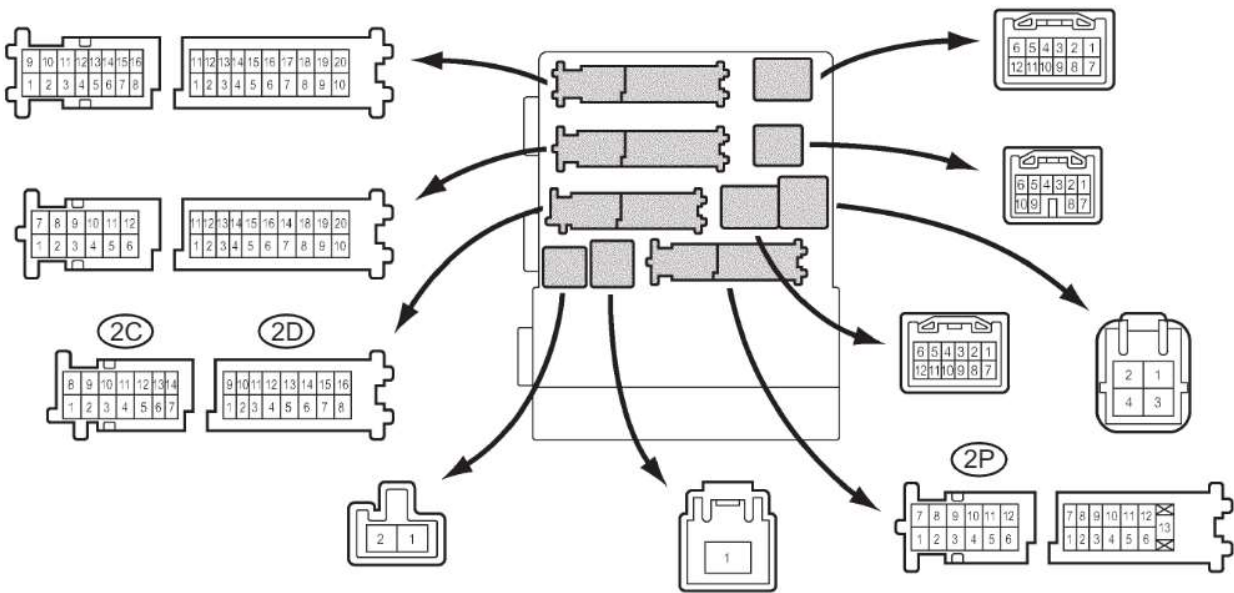
OK

3

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

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

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



Standard voltage

Tester connection	Condition	Specified condition
2C-4 - Body ground	Light control switch OFF	Below 1V
	Light control switch TAIL	10 to 14 V
2D-6 - Body ground	Light control switch OFF	Below 1V
	Light control switch TAIL	10 to 14 V
2P-8 - Body ground	Light control switch OFF	Below 1V
	Light control switch TAIL	10 to 14 V

NG

PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN IN PROBLEM SYMPTOMS TABLE

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (EACH OF TAILLIGHT CIRCUIT)

LI-86

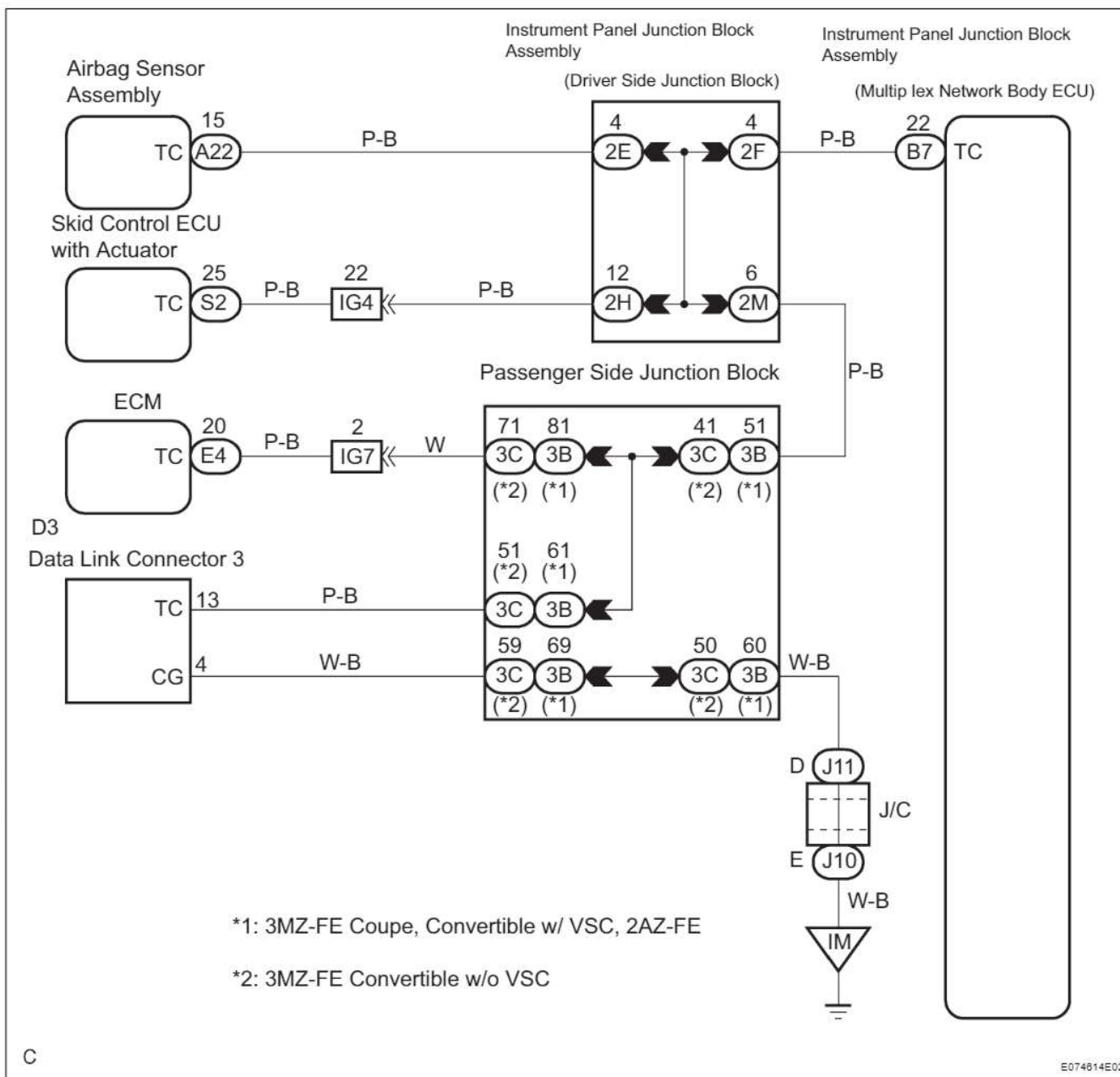
LIGHTING – LIGHTING SYSTEM

TC and CG Terminal Circuit

DESCRIPTION

Connecting terminals TC and CG of the DLC3 causes the ECU to display the DTC by blinking the DOOR warning light.

WIRING DIAGRAM

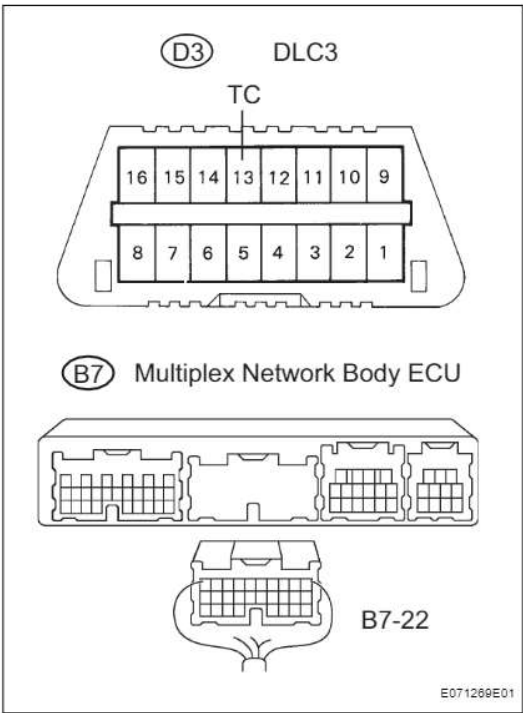


HINT:

When each warning light stays blinking, a ground short in the wiring of terminal TC of the DLC3 or an internal ground short in each ECU is suspected.

LIGHTING – LIGHTING SYSTEM

1 CHECK HARNESS AND CONNECTOR (DLC3 - MULTIPLEX NETWORK BODY ECU)



- (a) Turn the ignition switch to the LOCK position.
- (b) Disconnect the B7 connector of the multiplex network body ECU.
- (c) Measure the resistance according to the value(s) in the table below.

Standard resistance

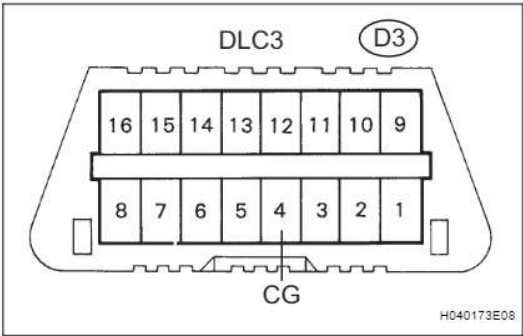
Tester connection	Condition	Specified condition
D3-13(TC) - B7-22(TC)	Always	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR (TC of DLC3 - TC of MULTIPLEX NETWORK BODY ECU)

OK

2 CHECK HARNESS AND CONNECTOR (CG of DLC3 - BODY GROUND)



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

Standard resistance

Tester connection	Condition	Specified condition
D3-4(CG) - Body ground	Always	Below 1 Ω

NG

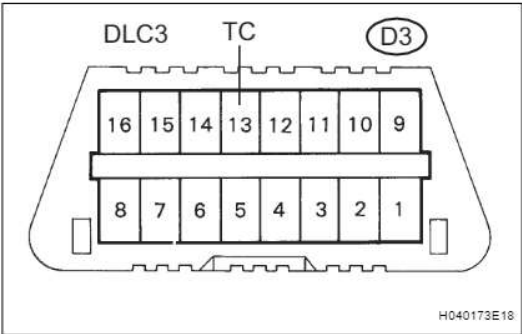
REPAIR OR REPLACE HARNESS OR CONNECTOR (CG of DLC3 - BODY GROUND)

OK

LI-88

LIGHTING – LIGHTING SYSTEM

3 CHECK HARNESS AND CONNECTOR (TC of DLC3 - BODY GROUND)



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

Standard resistance

Tester connection	Condition	Specified condition
D3-13(TC) - Body ground	Always	10 kΩ or higher

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

LI-14

LIGHTING – LIGHTING SYSTEM

PROBLEM SYMPTOMS TABLE

Proceed to troubleshooting of each circuit in the table below.

1. HEADLIGHT AND TAIL LIGHT SYSTEM

Symptom	Suspected area	See page
"Low beam" does not come on (One side).	1. HEAD LH LWR fuse, HEAD RH LWR fuse	LI-2
	2. Bulb	LI-86
	3. Headlight relay circuit	LI-34
	4. Wire harness or connector	-
"Low beam" does not come on (Both sides).	1. MAIN fuse, HEAD LH LWR fuse, HEAD RH LWR fuse	LI-2
	2. Bulb	LI-86
	3. Light control switch circuit	LI-60
	4. Headlight relay circuit	LI-34
	5. Instrument panel junction block assembly	-
"High beam" does not come on (One side).	1. HEAD LH UPR fuse, HEAD RH UPR fuse	LI-2
	2. Bulb	LI-2
	3. DRL relay circuit	LI-42
	4. Wire harness or connector	-
"High beam" does not come on (Both sides).	1. MAIN fuse, HEAD LH UPR fuse, HEAD RH UPR fuse	LI-2
	2. Bulb	LI-86
	3. Light control switch circuit	LI-60
	4. Headlight relay circuit	LI-34
	5. DRL relay circuit	LI-42
	6. Instrument panel junction block assembly	-
"Flash" does not come on. (Low beam and High Beam are normal)	1. Light control switch circuit	LI-60
	2. Instrument panel junction block assembly	-
Headlight is dark.	1. Bulb	LI-86
	2. Wire harness or connector	-
Tail light does not come on (All).	1. TAIL fuse	LI-2
	2. Light control switch circuit	LI-60
	3. TAIL relay circuit	LI-116
	4. Ignition switch circuit	LI-29
	5. Door courtesy switch circuit	LI-66
	6. Instrument panel junction block assembly	-
Only one tail light comes on.	1. Bulb	LI-93
	2. Wire harness or connector	-
Daytime running light system does not operate.	1. Light control switch circuit	LI-60
	2. Generator signal circuit	LI-70
	3. Parking brake switch circuit	LI-77
	4. Ignition switch circuit	LI-29
	5. DRL relay circuit	LI-42
	6. Instrument panel junction block assembly	-

2. AUTOMATIC LIGHT CONTROL SYSTEM

Symptom	Suspected area	See page
Automatic light control system does not operate.	1. Light control switch circuit	LI-60
	2. Ignition switch circuit	LI-29
	3. Automatic light control sensor circuit	LI-63
	4. Instrument panel junction block assembly	-

LIGHTING – LIGHTING SYSTEM

LI-15

3. LIGHT AUTO TURN OFF SYSTEM

Symptom	Suspected area	See page
Light auto turn off system does not operate.	1. Light control switch circuit	LI-60
	2. Ignition switch circuit	LI-29
	3. Door courtesy switch circuit	LI-66
	4. Instrument panel junction block assembly	-

4. FOG LIGHT SYSTEM

Symptom	Suspected area	See page
Front fog light does not come on with light control switch in the TAIL or HEAD position.	1. FOG fuse	LI-2
	2. FOG relay	LI-117
	3. TAIL relay	LI-116
	4. Light control switch circuit	LI-60
	5. Front fog light circuit	LI-52
	6. Instrument panel junction block assembly	-
Only one front fog light does not come on.	1. Bulb	LI-91
	2. Wire harness or connector	-

5. TURN SIGNAL AND HAZARD WARNING SYSTEM

Symptom	Suspected area	See page
"Hazard" and "Turn" do not come on.	1. HAZ fuse	LI-2
	2. GAUGE fuse	LI-2
	3. IG1 relay	LI-29
	4. Ignition switch	LI-29
	5. Turn signal flasher relay	LI-113
	6. Wire harness or connector	-
Hazard warning light does not come on. (Turn is normal)	1. Hazard warning switch	LI-20
	2. Wire harness or connector	-
Turn signal does not come on. (Hazard is normal)	1. Headlight dimmer switch (turn signal switch)	LI-20
	2. Wire harness or connector	-
Turn signal does not come on in one direction.	1. Headlight dimmer switch (turn signal switch)	LI-20
	2. Wire harness or connector	-
Only one bulb does not come on.	1. Bulb (Front)	LI-86
	2. Bulb (Rear)	LI-93
	3. Wire harness or connector	-

LI

6. STOP LIGHT SYSTEM

Symptom	Suspected area	See page
Stop light does not operate (All).	1. STOP fuse	LI-2
	2. Stop light switch	LI-110
	3. Wire harness or connector	-
Only one stop light does not operate.	1. Bulb	LI-93
	2. Wire harness or connector	-

7. ILLUMINATED ENTRY SYSTEM

Symptom	Suspected area	See page
Illuminated entry of multiplex network body ECU control does not operate (All).	1. Ignition switch circuit	LI-29
	2. Door lock position circuit	LI-68
	3. Door courtesy switch circuit	LI-66
	4. Illumination circuit	LI-72
	5. Instrument panel junction block assembly	-

LI-16

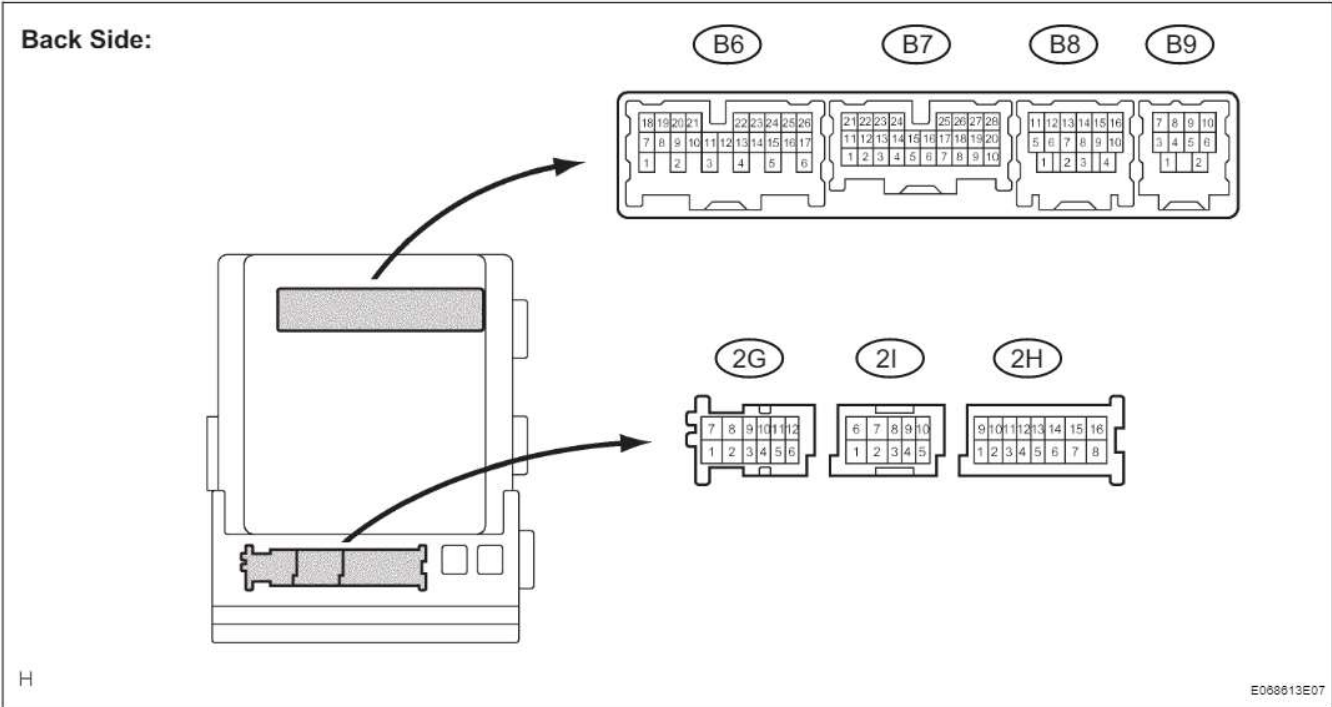
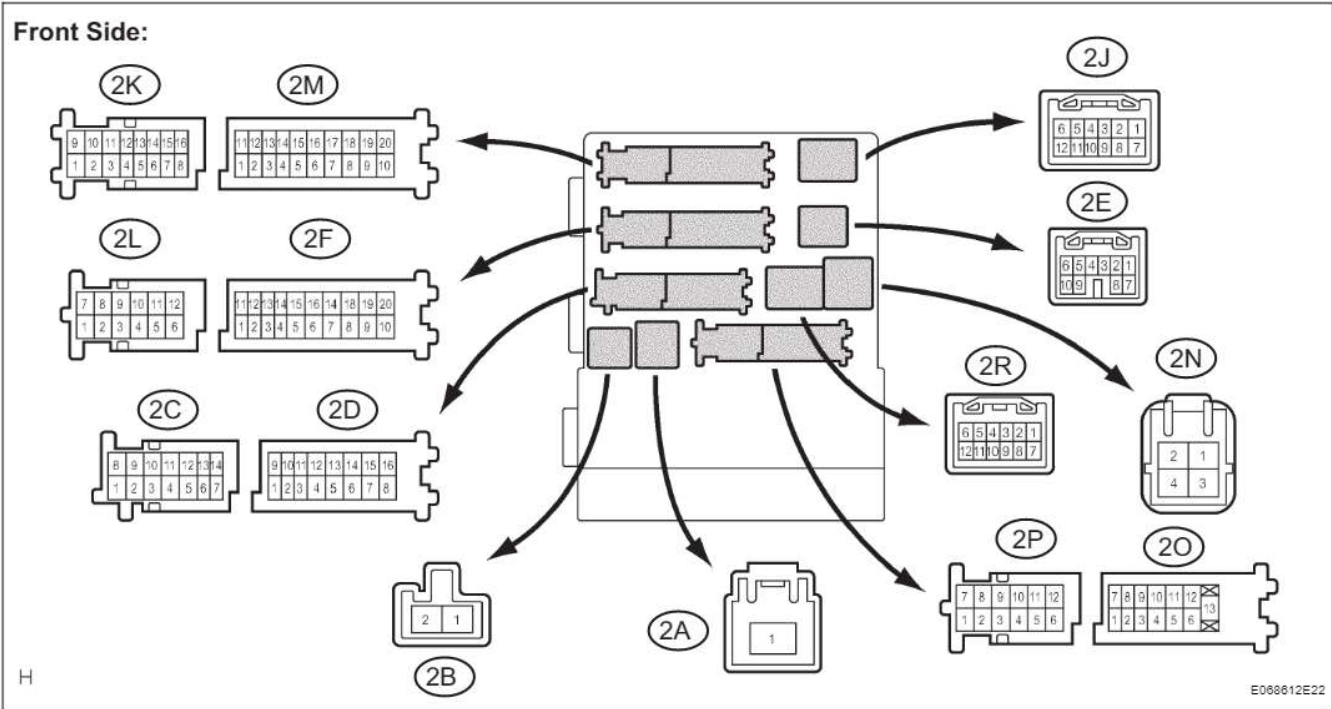
LIGHTING – LIGHTING SYSTEM

8. OTHERS

Symptom	Suspected area	See page
Vanity light does not operate.	1. Bulb	LI-106
	2. Wire harness or connector	-
Back up light does not come on (All).	1. GAUGE 1 fuse	LI-93
	2. IG1 relay	LI-29
	3. Back up light switch assembly (M/T)	LI-111
	4. Park/neutral position switch (U151E)	AX-121
	5. Park/neutral position switch (U250E)	AX-122
	6. Wire harness or connector	-
Luggage compartment light does not come on.	1. Bulb	LI-103
	2. DOME fuse	LI-2
	3. Wire harness or connector	-
	4. Instrument panel junction block assembly	-

TERMINALS OF ECU

1. INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY
(MULTIPLEX NETWORK BODY ECU)



Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specified Condition
ACC, IG (2A-1) - GND1 (2F-10)	B-G - W-B	Battery (Power source circuit)	Always	10 to 14 V

LI-18

LIGHTING – LIGHTING SYSTEM

Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specified Condition
FOG (2C-1) - GND1 (2F-10)	G-R - W-B	Front right fog light circuit	- Light control switch is in the TAIL position and fog light switch is in the ON position - Light control switch is in the OFF position	10 to 14 V - Below 1 V
TRLY (2C-4) - GND1 (2F-10)	G - W-B	Front right parking light circuit	- Light control switch is in the TAIL position - Light control switch is in the OFF position	10 to 14 V - Below 1 V
HRLY (2D-3) - GND1 (2F-10)	R-B - W-B	HEAD Relay (HEAD signal)	- Light control switch is in the OFF or TAIL position - Light control switch is in the HEAD position	10 to 14 V - Below 1 V
FOG (2D-5) - GND1 (2F-10)	G-R - W-B	Front left fog light circuit	- Light control switch is in the TAIL position and fog light switch is in the ON position - Light control switch is in the OFF position	10 to 14 V - Below 1 V
TRLY (2D-6) - GND1 (2F-10)	G - W-B	Front left parking light circuit	- Light control switch is in the TAIL position - Light control switch is in the OFF position	10 to 14 V - Below 1 V
DRL (2D-9) - GND1 (2F-10)	R - W-B	DRL Relay (DRL signal)	- Ignition switch is in the ON position and engine is running - Ignition switch is in the OFF position	- Below 1 V 10 to 14 V
BECU (2F-1) - GND1 (2F-10)	W-R - W-B	Battery (B+ circuit)	Always	10 to 14 V
GND1 (2F-10) - Body ground	W-B - Body ground	Body ground	Always	Below 1 V
PKB (2H-3) - GND1 (2F-10)	R-W - W-B	Parking brake switch	- Parking brake is ON - Parking brake is released	- Below 1 V 10 to 14 V
ILE (2I-10) - GND1 (2F-10)	G-R - W-B	Key cylinder light (Illumination signal)	- Key cylinder light is OFF - Key cylinder light is ON	10 to 14 V - Below 1 V
TRLY (2L-3) - GND1 (2F-10)	G - W-B	TAIL relay (TAIL signal)	- Light control switch is in the OFF position - Light control switch is in the TAIL position and fog light switch is in the ON position	- Below 1 V 10 to 14 V
ILE (2M-1) - GND1 (2F-10) (*2)	G-R - W-B	Room light illumination (Illumination signal)	- Room light is OFF - Room light is ON	10 to 14 V - Below 1 V
GND2 (2M-9) - GND1 (2F-10)	W-B - W-B (*1) BR - W-B (*2)	Body ground	Always	Below 1 V
HU (2N-2) - GND1 (2F-10)	R-Y - W-B	Headlight dimmer switch (HIGH signal)	- Headlight dimmer switch is in the LOW position - Headlight dimmer switch is in the HIGH position	10 to 14 V - Below 1 V
TRLY (2P-8) - GND1 (2F-10)	G - W-B	Rear tail light circuit	- Tail and license plate light is ON - Tail and license plate light is OFF	10 to 14 V - Below 1 V
ILE (2R-5) - GND1 (2F-10)	G-R - W-B	Room light illumination (Illumination signal)	- Room light is OFF - Room light is ON	10 to 14 V - Below 1 V
CLTE (B6-4) - GND1 (2F-10)	GR-R - W-B	Automatic light control sensor (Ground circuit)	Always	Below 1 V
CLTS (B6-5) - GND1 (2F-10)	P-L - W-B	Automatic light control sensor (Signal circuit)	Ignition switch is in the ON position	Signal wave form
CLTB (B6-6) - GND1 (2F-10)	V-Y - W-B	Automatic light control sensor (Power source circuit)	- Ignition switch is OFF - Ignition switch is in the ON position	- Below 1 V 10 to 14 V

LIGHTING – LIGHTING SYSTEM

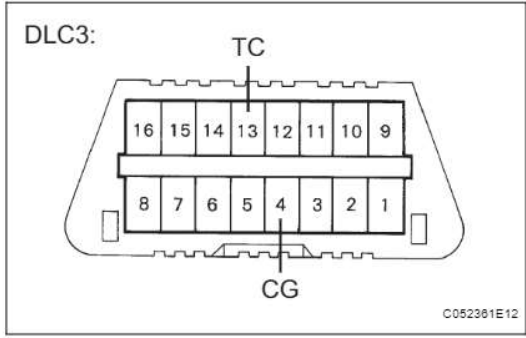
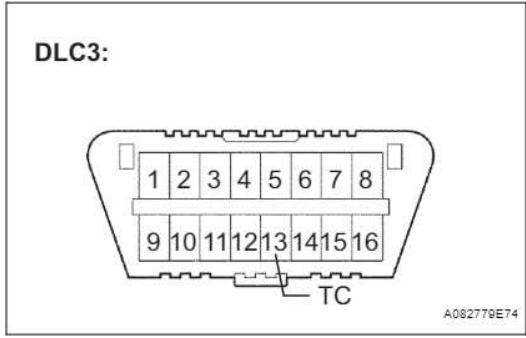
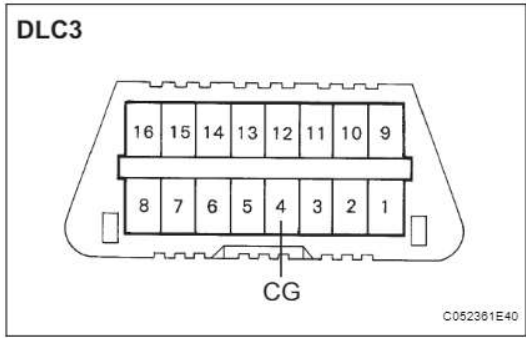
LI-19

Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specified Condition
HF (B6-15) - GND1 (2F-10)	R-B - W-B	Headlight dimmer switch (FLASH signal)	- Headlight dimmer switch is in the OFF position - Headlight dimmer switch is in the FLASH position	10 to 14 V - Below 1 V
A (B6-16) - GND1 (2F-10)	W - W-B	Light control switch (AUTO signal)	- Light control switch is in the OFF position - Light control switch is in the AUTO position	10 to 14 V - Below 1 V
TAIL (B6-17) - GND1 (2F-10)	R - W-B	Light control switch (TAIL signal)	- Light control switch is in the OFF position - Light control switch is in the TAIL position	10 to 14 V - Below 1 V
FFOG (B6-22) - GND1(2F-10)	R-L - W-B	Front fog light switch (Front fog light signal)	- Fog light switch is in the OFF position - Fog light switch is in the ON position	10 to 14 V - Below 1 V
HEAD (B6-23) - GND1 (2F-10)	R-Y - W-B	Light control switch (HEAD signal)	- Light control switch is in the OFF position - Light control switch is in the HEAD position	- Below 1 V 10 to 14 V
HIND (B7-6) - GND1 (2F-10)	LG - W-B (*1) R-L - W-B (*2)	HIGH BEAM indicator light circuit	- HIGH BEAM indicator comes on - HIGH BEAM indicator goes off	10 to 14 V - Below 1 V
AJAR (B7-9) - GND1 (2F-10)	G-R - W-B (*1) LG - W-B (*2)	DOOR warning light circuit	- DOOR warning light comes on - DOOR warning light goes off	- Below 1 V 10 to 14 V
PCTY (B7-23) - GND1 (2F-10)	R-G - W-B	Courtesy switch (Front right door circuit)	- Front right door is open - Front right door is closed	- Below 1 V 10 to 14 V
LGCY (B7-25) - GND1 (2F-10)	G-R - W-B (*1) R - W-B (*2)	Courtesy switch (Luggage compartment door circuit)	- Luggage compartment door is open - Luggage compartment door is closed	- Below 1 V 10 to 14 V
BCYL (B7-26) - GND1 (2F-10)	G - W-B	Luggage compartment light circuit	- Luggage compartment light is ON - Luggage compartment light is OFF	- Below 1 V 10 to 14 V
LSWP (B7-27) - GND1 (2F-10)	Y - W-B	Door lock position switch (Front right door circuit)	- Front right door is in the unlock position - Front right door is in the lock position	- Below 1 V 10 to 14 V
LSWD (B8-7) - GND1 (2F-10)	BR-R - W-B (*1) LG-R - W-B (*2)	Door lock position switch (Front left door circuit)	- Front left door is in the unlock position - Front left door is in the lock position	- Below 1 V 10 to 14 V
DCTY (B8-14) - GND1 (2F-10)	R-G - W-B	Courtesy switch (Front left door circuit)	- Front left door is open - Front left door is closed	- Below 1 V 10 to 14 V
ALTL (B9-5) - GND1 (2F-10)	Y-G - W-B	Generator Signal circuit	- Engine is stopped - Engine is running	- Below 1 V 10 to 14 V
FFGO (B9-7) - GND1 (2F-10)	V-G - W-B (*1) R-Y - W-B (*2)	Front fog relay (Front fog circuit)	- Front fog light is in the OFF position - Front fog light is in the ON position	10 to 14 V - Below 1 V

HINT:

*1: Coupe

*2: Convertible



DIAGNOSIS SYSTEM

1. CHECK THE DLC3

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

Standard resistance

Tester connection	Condition	Specified condition
4 - Body ground	Always	Below 1 Ω

If the resistance is not as specified, inspect the TC terminal circuit (See pageLI-83).

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

Standard voltage

Tester connection	Condition	Specified condition
13 - Body ground	Ignition Switch ON	10 to 14 V

If the resistance is not as specified, inspect the TC terminal circuit (See pageLI-83).

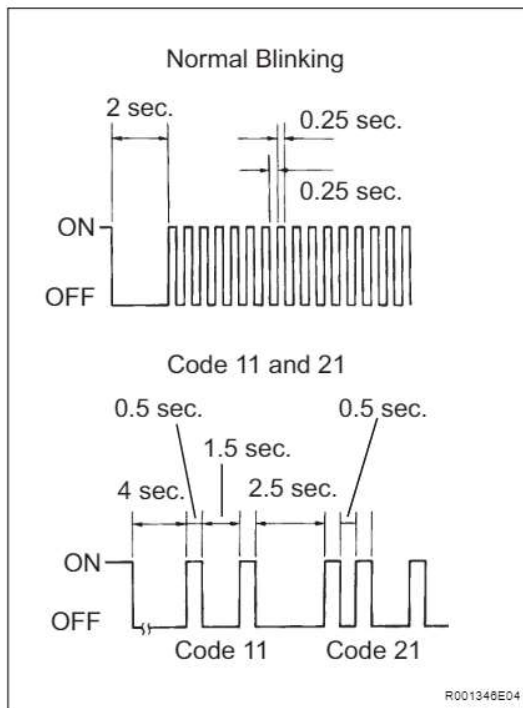
DTC CHECK / CLEAR

1. DTC CHECK

- (a) Checking DTCs.
- (1) Using SST, connect terminals TC and CG of the DLC3.
- SST 09843-18040**
- (2) Turn the ignition switch to the ON position.
- (3) Read the DTC from the DOOR warning light on the combination meter.

HINT:

- If more than 1 malfunction is detected at the same time, the lowest numbered code will be displayed first.
- If no code appears, inspect the TC terminal circuit (See pageLI-83) or combination meter (See pageME-11).
- As an example, the blinking patterns for the normal system code and codes 11 and 21 are shown on the left.

LIGHTING – LIGHTING SYSTEM**LI-21**

- (4) Codes are explained in the code table. (See page [LI-19](#))
- (5) After completing the check, disconnect terminal TC and CG of the DLC3, and turn off the display.

LI-22

LIGHTING – LIGHTING SYSTEM

DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the suspected area listed for that code in the table below, and proceed to the appropriate page.

LIGHTING SYSTEM

DTC No.	Detection Item	Suspected Area	See page
41	Body ECU Switch Circuit Diagnosis	1. Door unlock detection switch 2. Luggage compartment door opener switch 3. Engine hood courtesy switch (*1) 4. Headlight dimmer switch assembly 5. Harness or connector 6. Instrument panel junction block assembly (Multiplex network body ECU)	LI-21
44	Light Sensor Circuit Malfunction	1. Automatic light control sensor 2. Harness or connector 3. Instrument panel junction block assembly (Multiplex network body ECU)	LI-26

*1: w/ Theft deterrent system

INSPECTION

1. INSPECT HAZARD WARNING SIGNAL SWITCH ASSEMBLY

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

Resistance

Tester connection	Switch operation	Specified resistance
5 - 6	OFF	10 k Ω or higher
5 - 7	OFF	Below 1 Ω
5 - 6	ON	Below 1 Ω
5 - 7	ON	10 k Ω or higher

- (b) Connect the positive (+) lead from the battery to terminal 8 and the negative (-) lead to terminal 9, then check that the illumination comes on.

OK:

Illumination comes on.

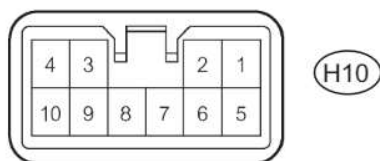
2. INSPECT LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY

- (a) Check the courtesy light switch.
(1) Measure the resistance according to the value(s) in the table below.

Resistance

Tester connection	Condition	Specified resistance
2 - Body ground	Back door is closed	10 k Ω or higher
2 - Body ground	Back door is open	Below 1 Ω

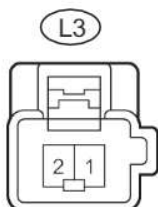
Connector Front View:



H

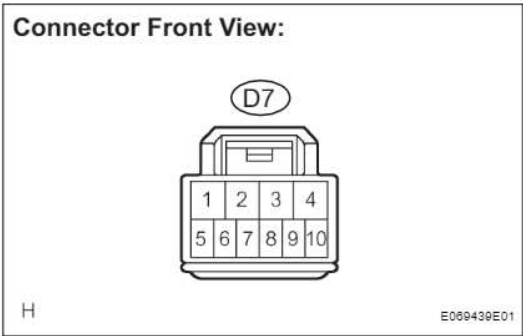
I035771E01

Connector Front View:



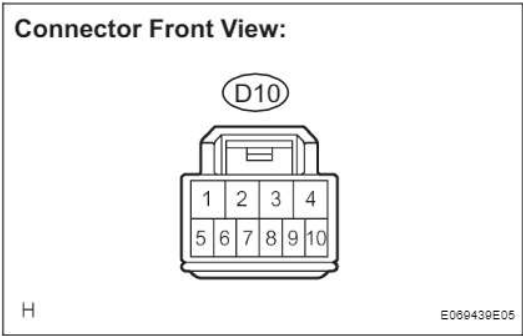
H

E069185E01



3. INSPECT FRONT DOOR W/MOTOR LOCK ASSEMBLY LH
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Door operation	Specified condition
7 - 8	Driver's side door is unlocked	Below 1 Ω
7 - 8	Driver's side door is locked	10 kΩ or higher



4. INSPECT FRONT DOOR W/MOTOR LOCK ASSEMBLY RH
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Door operation	Specified condition
7 - 8	Passenger's side door is unlocked	Below 1 Ω
7 - 8	Passenger's side door is locked	10 kΩ or higher

LI-24

LIGHTING – LIGHTING SYSTEM

DTC	41	Body ECU Switch Circuit Diagnosis
-----	----	-----------------------------------

DESCRIPTION

The following explains when this DTC is output:
This DTC is not output when the switches are operated but fail to make contact. It is only output when the switches are stuck or held on. For example, this code is output when checking the DTC while the switches are on:

System is normal:

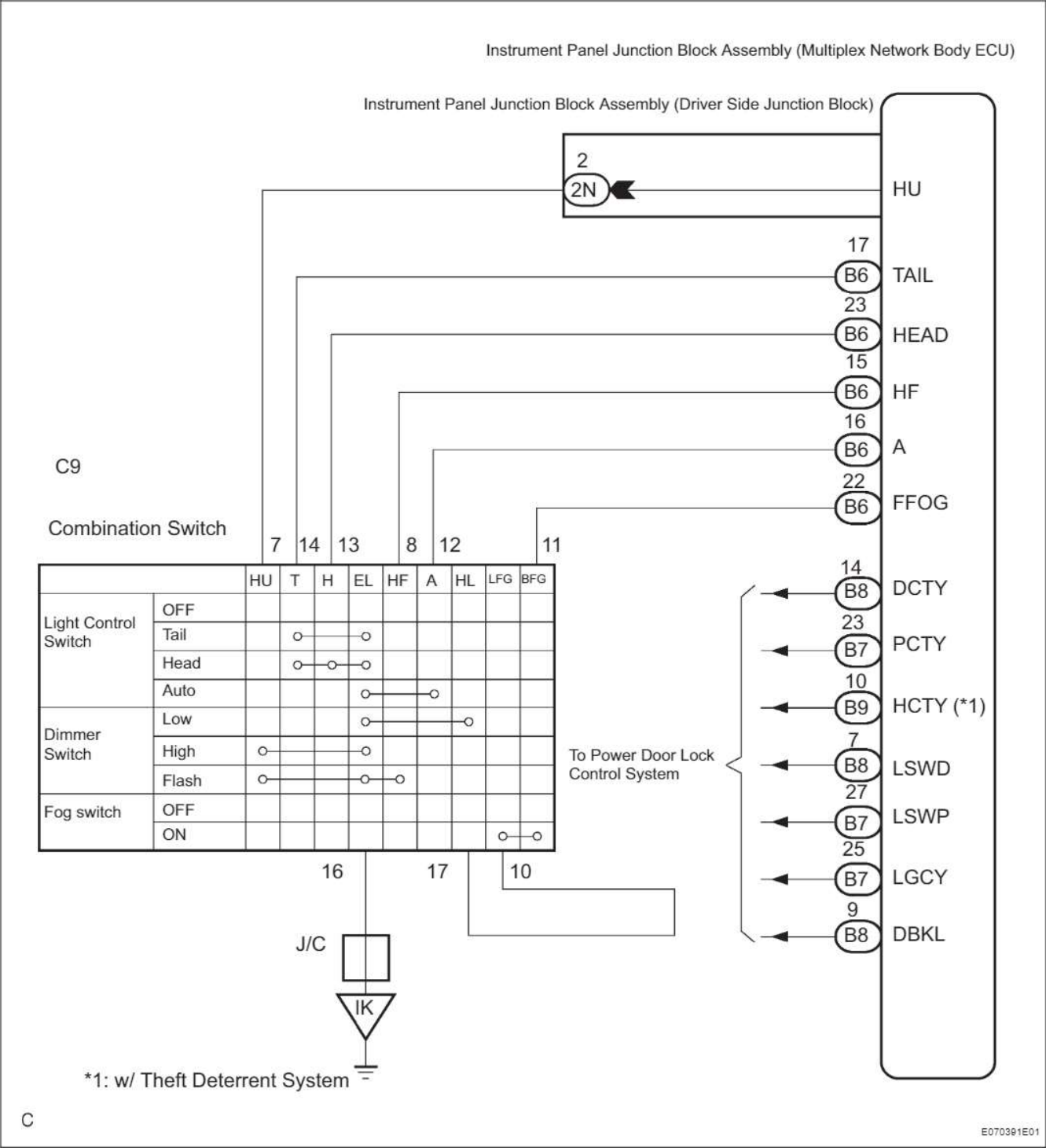
1. DTC is output during DTC check with the switches on.
2. DTC is not output during DTC check with the switches off.
Inspect the switches and replace if necessary. If there is no problem with the switches, inspect the wire harness.

DTC No.	DTC Detecting Condition	Trouble Area
41	Switch is stuck	• Door unlock detection switch (See page) • Luggage compartment door opener switch (See page) • Engine hood courtesy switch (*1) (See page) • Headlight dimmer switch assembly • Harness or connector • Instrument panel junction block assembly (Multiplex network body ECU)

*1: w/ Theft deterrent system



WIRING DIAGRAM



1

OPERATION CHECK

- (a) Check that the headlight and fog light systems are normal.
- OK:**
- Normal operation.**

LI-26

LIGHTING – LIGHTING SYSTEM

Result

Result	Proceed to
NG	A
OK (When the power door lock control system inspection is not completed.)	B
OK (When the power door lock control system inspection is completed.)	C

B

GO TO POWER DOOR LOCK CONTROL SYSTEM

C

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

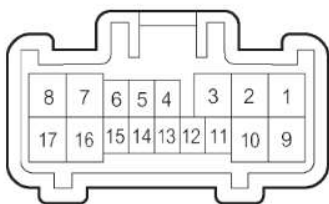
A

2

INSPECT HEADLIGHT DIMMER SWITCH ASSEMBLY

Connector Front View:

C9



H

E070439E02

(a) Inspect light control switch.

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

Standard resistance

Tester connection	Switch operation	Specified resistance
12 - 16 13 - 16 14 - 16	OFF	10 k Ω or higher
14 - 16	TAIL	Below 1 Ω
13 - 16 14 - 16	HEAD	Below 1 Ω
12 - 16	AUTO	Below 1 Ω

(b) Inspect headlight dimmer switch.

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

Standard resistance

Tester connection	Switch operation	Specified resistance
7 - 16 8 - 16	FLASH	Below 1 Ω
16 - 17	LOW BEAM	Below 1 Ω
7 - 16	HI BEAM	Below 1 Ω

(c) Inspect front fog light switch.

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

Standard resistance

Tester connection	Switch operation	Specified resistance
10 - 11	OFF	10 k Ω or higher
10 - 11	ON	Below 1 Ω

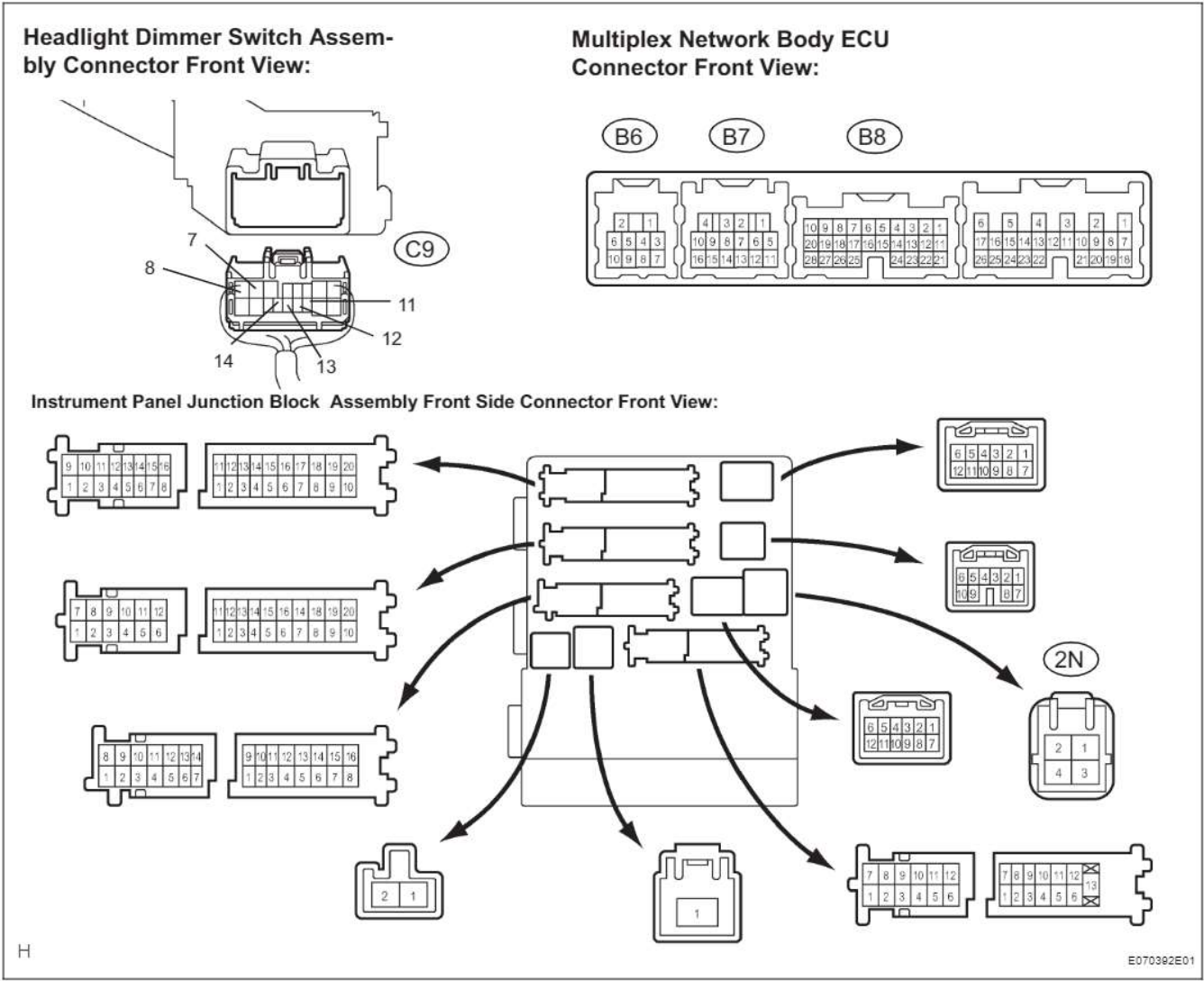
NG

REPLACE HEADLIGHT DIMMER SWITCH ASSEMBLY

OK

3 CHECK HARNESS AND CONNECTOR (HEADLIGHT DIMMER SWITCH - INSTRUMENT PANEL JUNCTION BLOCK)

- (a) Disconnect the headlight dimmer switch connector and instrument panel junction block assembly connector.



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

Standard resistance

Tester connection	Condition	Specified condition
C9-7 - 2N-2	Always	Below 1 Ω
C9-8 - B6-15	Always	Below 1 Ω
C9-11 - B6-22	Always	Below 1 Ω
C9-12 - B6-16	Always	Below 1 Ω
C9-13 - B6-23	Always	Below 1 Ω
C9-14 - B6-17	Always	Below 1 Ω
C9-7 - Body ground	Always	10 kΩ or higher
C9-8 - Body ground	Always	10 kΩ or higher
C9-11 - Body ground	Always	10 kΩ or higher
C9-12 - Body ground	Always	10 kΩ or higher

LI-28

LIGHTING – LIGHTING SYSTEM

Tester connection	Condition	Specified condition
C9-13 - Body ground	Always	10 kΩ or higher
C9-14 - Body ground	Always	10 kΩ or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

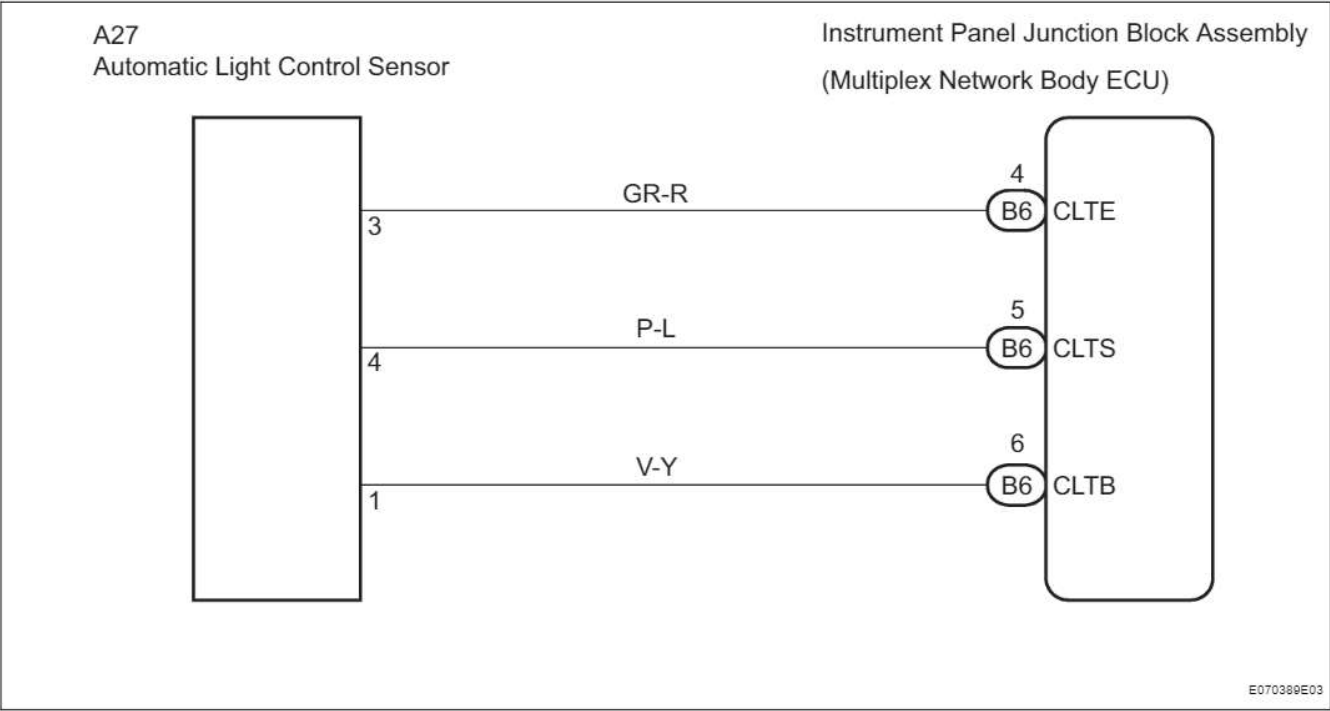
DTC	44	Light Sensor Circuit Malfunction
-----	----	----------------------------------

DESCRIPTION

This DTC is output when a failure in the light sensor circuit is detected.

DTC No.	DTC Detecting Condition	Trouble Area
44	- Malfunction of automatic light control sensor - Open or short in automatic light control sensor circuit	- Automatic light control sensor - Harness or connector - Multiplex network body ECU

WIRING DIAGRAM



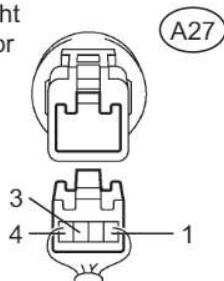
LI-30

LIGHTING – LIGHTING SYSTEM

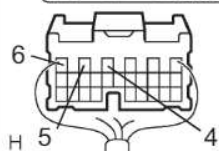
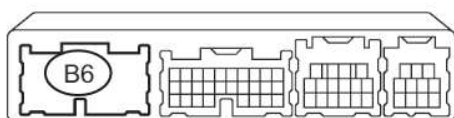
1 CHECK HARNESS AND CONNECTOR (MULTIPLEX NETWORK BODY ECU - AUTOMATIC LIGHT CONTROL SENSOR)

Wire Harness View:

Automatic Light Control Sensor



Multiplex Network Body ECU



E070393E01

- Disconnect the automatic light control sensor connector and B6 connector of the multiplex network body ECU.
- Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified Condition
CLTE (A27-3) - CLTE (B6-4)	Always	Below 1 Ω
CLTS (A27-4) - CLTS (B6-5)	Always	Below 1 Ω
CLTB (A27-1) - CLTB (B6-6)	Always	Below 1 Ω
CLTE (B6-4) - Body ground	Always	10 k Ω or higher
CLTS (B6-5) - Body ground	Always	10 k Ω or higher
CLTB (B6-6) - Body ground	Always	10 k Ω or higher
	Always	10 k Ω or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

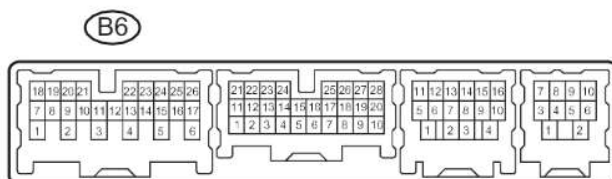
OK

2 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

- Reconnect the automatic light control sensor connector and B6 connector of the multiplex network body ECU.

Multiplex Network Body ECU

Wire Harness View:



E068832E08

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

Standard voltage

Tester connection	Condition	Specified voltage
CLTE (B6-4) - CLTB (B6-6)	Ignition switch OFF	Below 1 V
	Ignition switch ON	10 to 14 V

NG

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

LIGHTING – LIGHTING SYSTEM**LI-31****OK****REPLACE AUTOMATIC LIGHT CONTROL SENSOR****LI**

LI-32

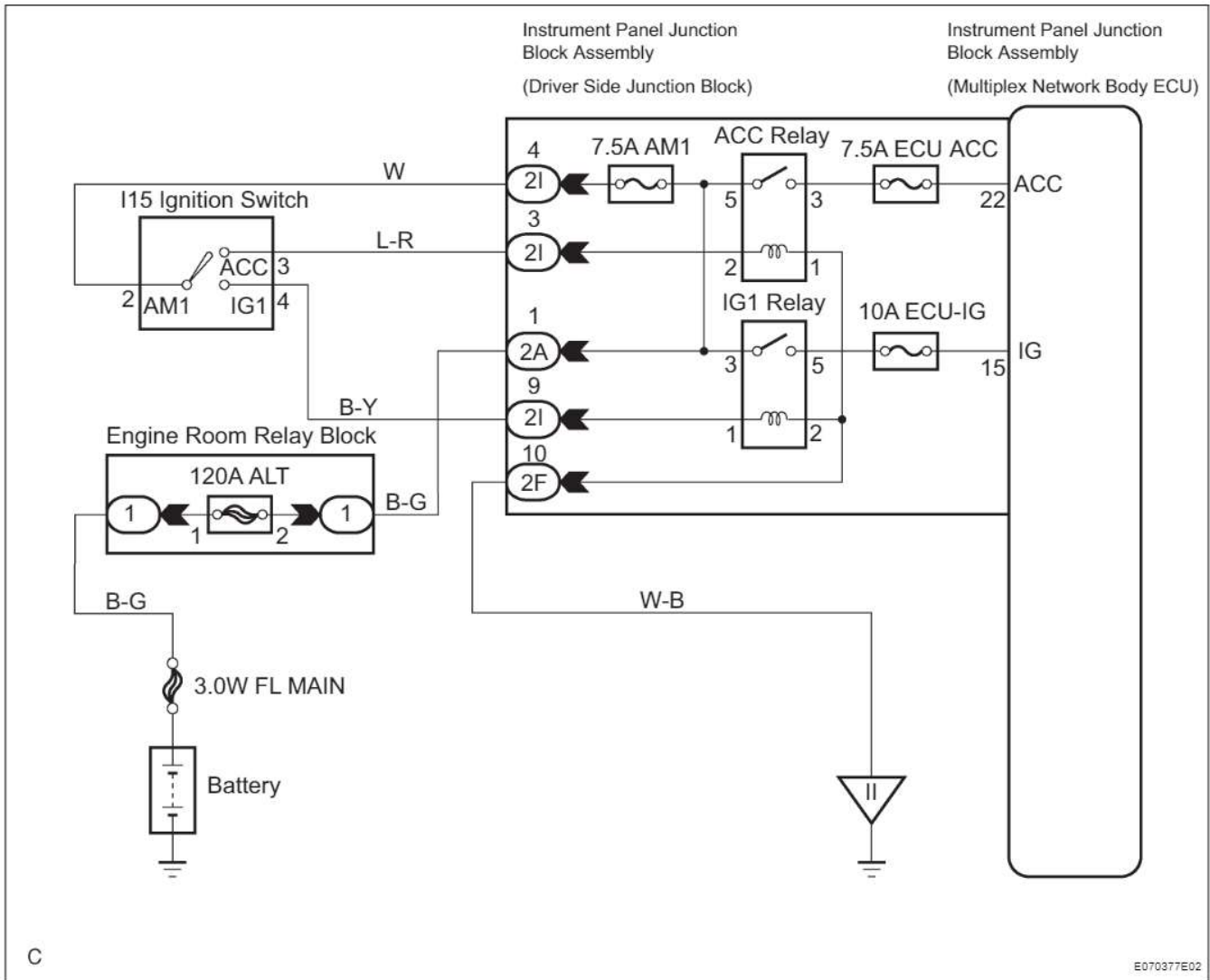
LIGHTING – LIGHTING SYSTEM

Ignition Switch Circuit

DESCRIPTION

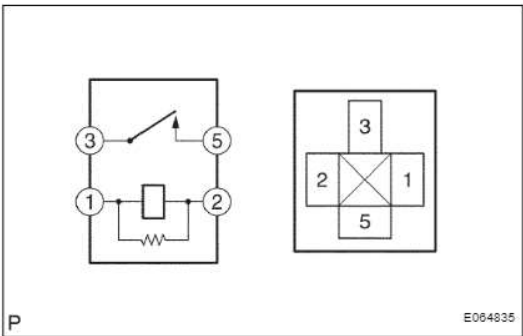
This circuit detects the state of the ignition switch and sends it to the multiplex network body ECU.

WIRING DIAGRAM



1

INSPECT RELAY



- (a) Inspect ACC relay and IG1 relay continuity.
(1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)

NG

REPLACE RELAY

OK

2

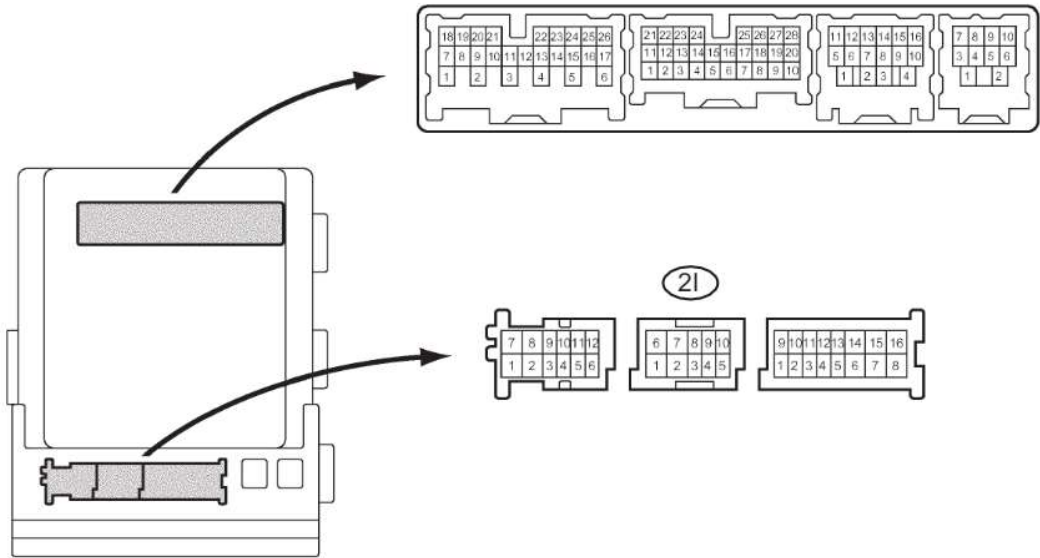
INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (ACC, IG)

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

Standard

Tester connection	Condition	Specified condition
2I-3 - 2F-10	Ignition switch OFF → ACC, ON	Below 1 V → 10 to 14 V
2I-9 - 2F-10	Ignition switch OFF → ON	Below 1 V → 10 to 14 V

Instrument Panel Junction Block Assembly Back Side Wire Harness View:



NG

Go to step 3

LI-34

LIGHTING – LIGHTING SYSTEM

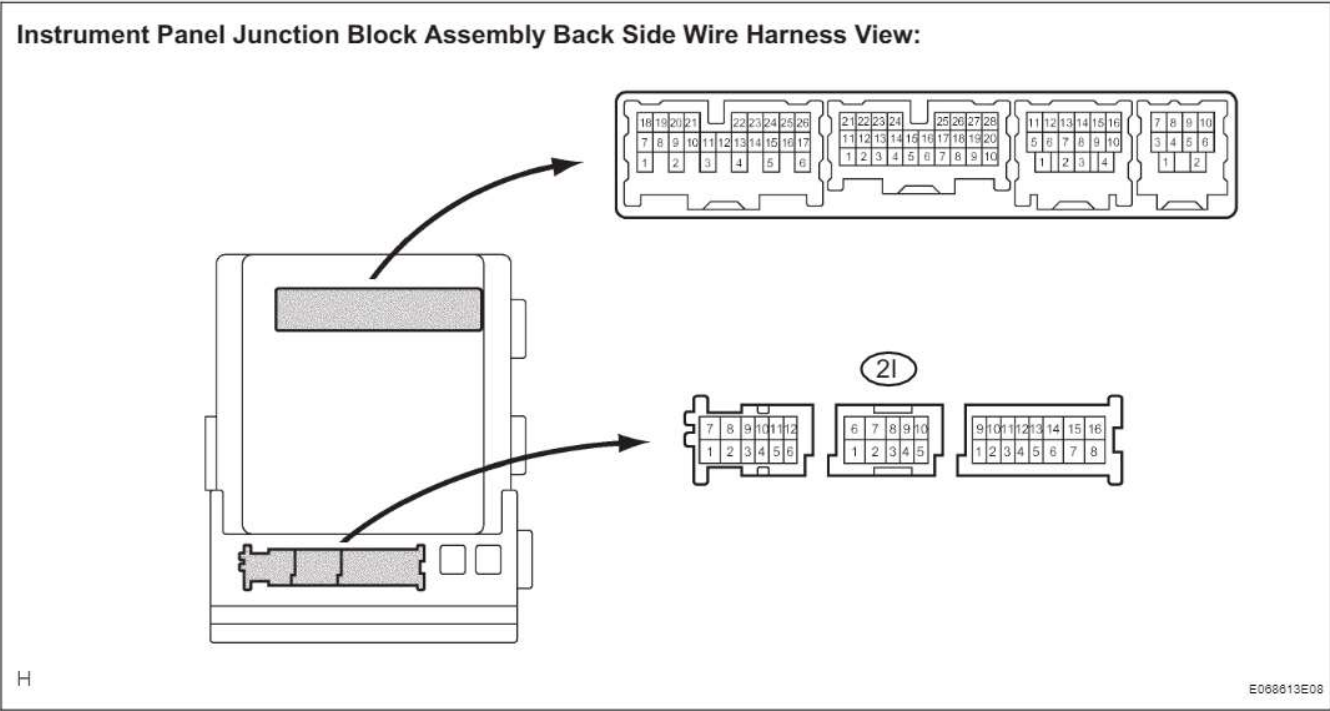
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

3

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (POWER SOURCE CIRCUIT)

- (a)
- Disconnect the 2A connector from the instrument panel junction block assembly.

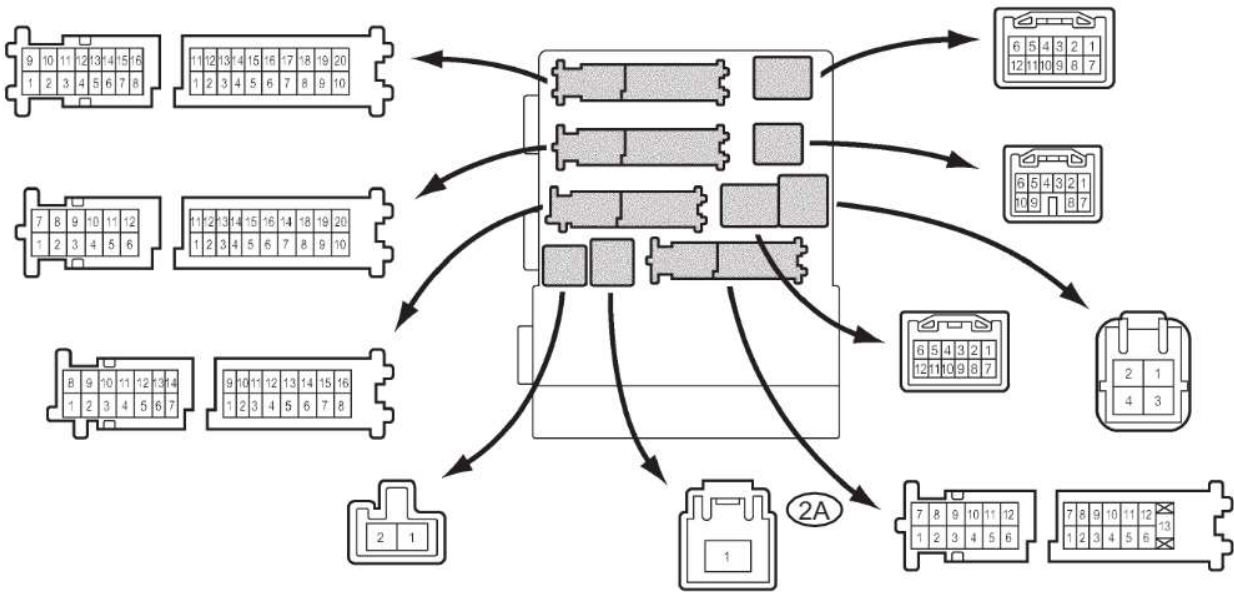


- (b)
- Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
2A-1 - Body ground	Always	10 to 14 V

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



NG

REPAIR OR REPLACE HARNESS OR CONNECTOR (BATTERY - INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY)

OK

4

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

- (a) Measure the voltage according to the value(s) in the table below.
- Standard voltage**

Tester connection	Condition	Specified condition
2I-4 - Body ground	Always	10 to 14 V

NG

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

OK

5

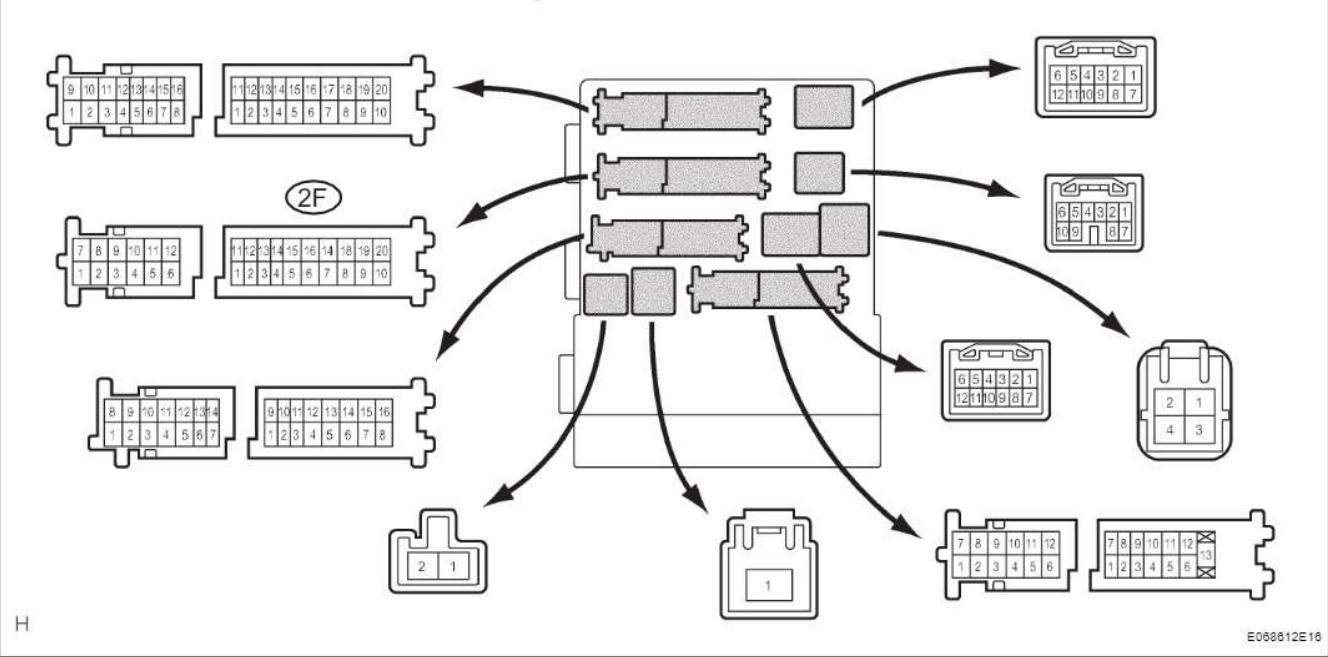
CHECK HARNESS AND CONNECTOR (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY - BODY GROUND)

- (a) Disconnect the 2F connector from the instrument panel junction block assembly.

LI-36

LIGHTING – LIGHTING SYSTEM

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



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

Tester connection	Condition	Specified condition
2F-10 - Body ground	Always	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR (GROUND CIRCUIT)

OK

LI REPAIR OR REPLACE HARNESS OR CONNECTOR (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY - IGNITION SWITCH)

LIGHTING – LIGHTING SYSTEM

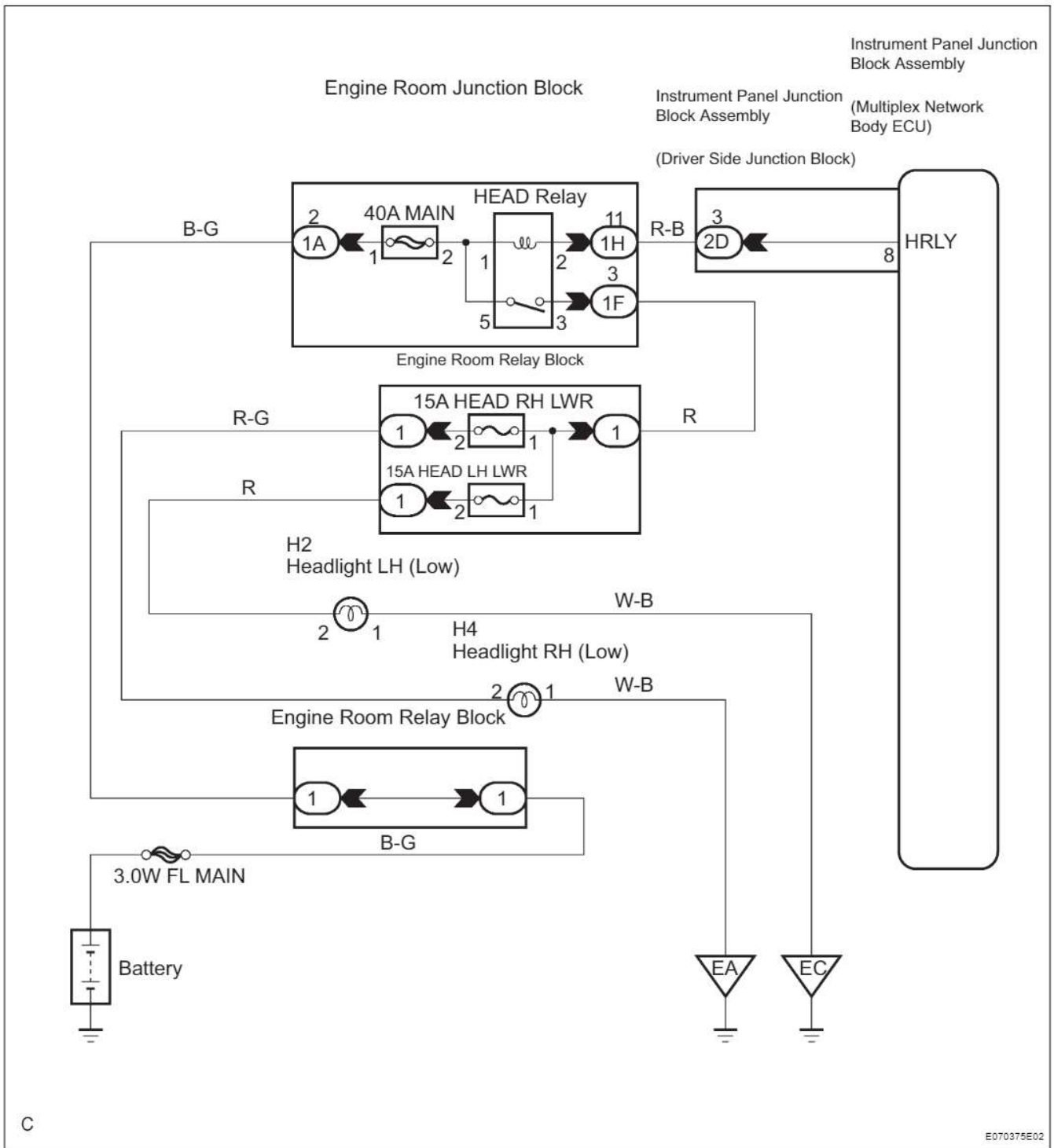
LI-37

Headlight Relay Circuit

DESCRIPTION

The multiplex network body ECU controls the HEAD relay when a signal is received from the headlight dimmer switch assembly.

WIRING DIAGRAM



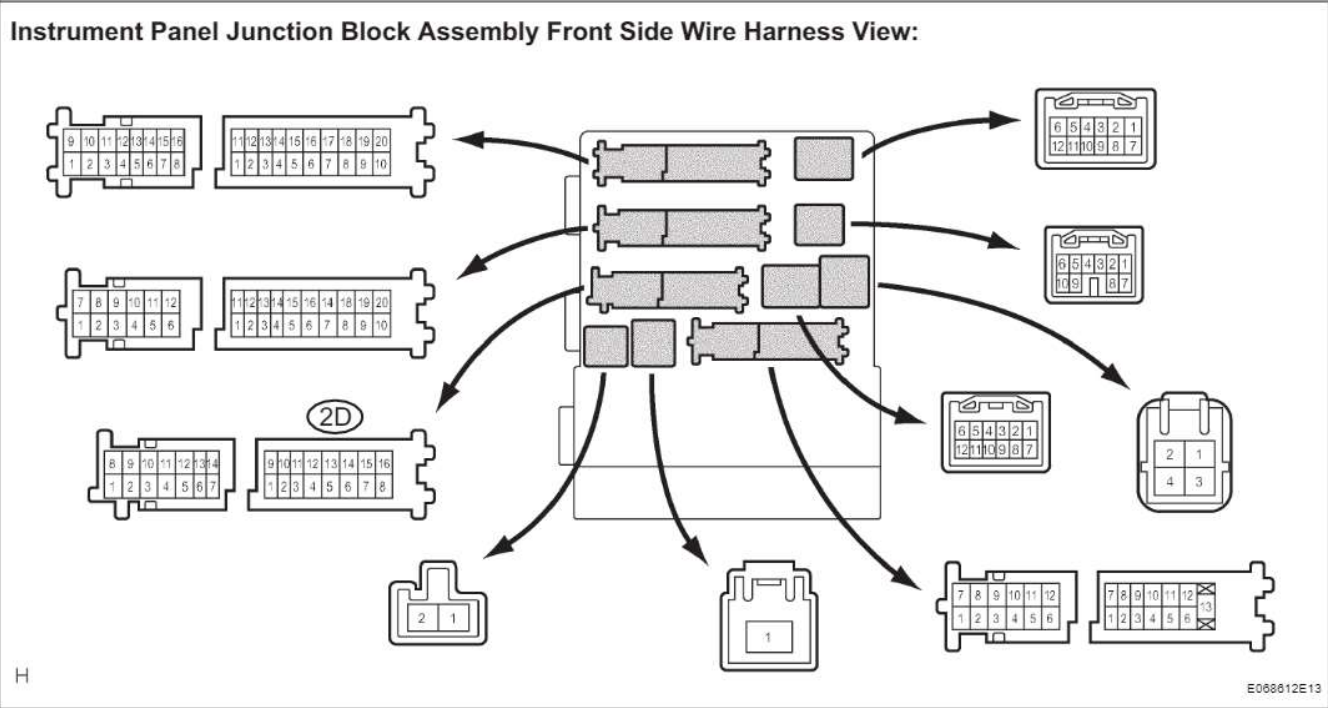
LI-38

LIGHTING – LIGHTING SYSTEM

1

INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

- (a)
- Disconnect the 2D connector from the instrument panel junction block assembly.



- (b)
- Using a service wire, connect 2D-3 of the wire harness side and body ground.

OK:
Headlight comes on.

NG

Go to step 2

OK

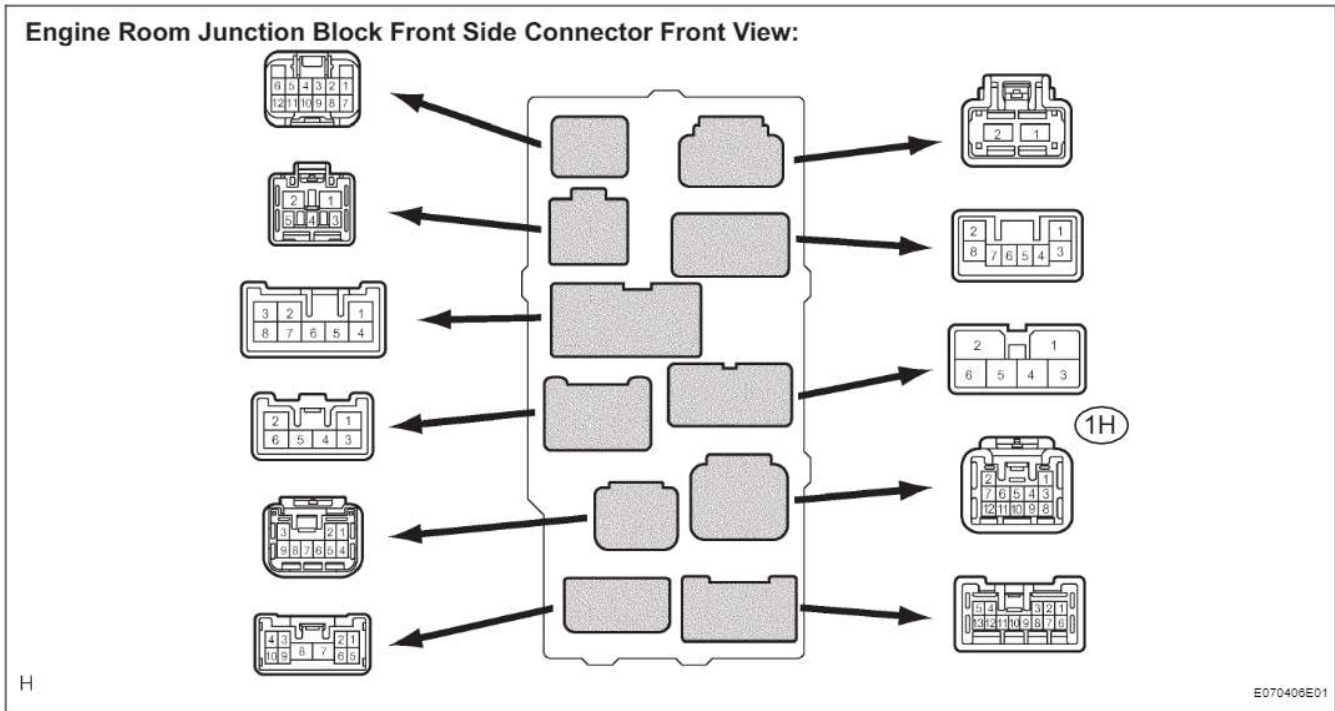
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2

INSPECT ENGINE ROOM J/B

- (a)
- Disconnect the 1H connector from the instrument panel junction block assembly.

LIGHTING – LIGHTING SYSTEM



- (b) Using a service wire, connect 1H-11 of the engine room J/B and body ground.
- OK:
Headlight comes on.

NG → Go to step 3

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR (ENGINE ROOM J/B - INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY)

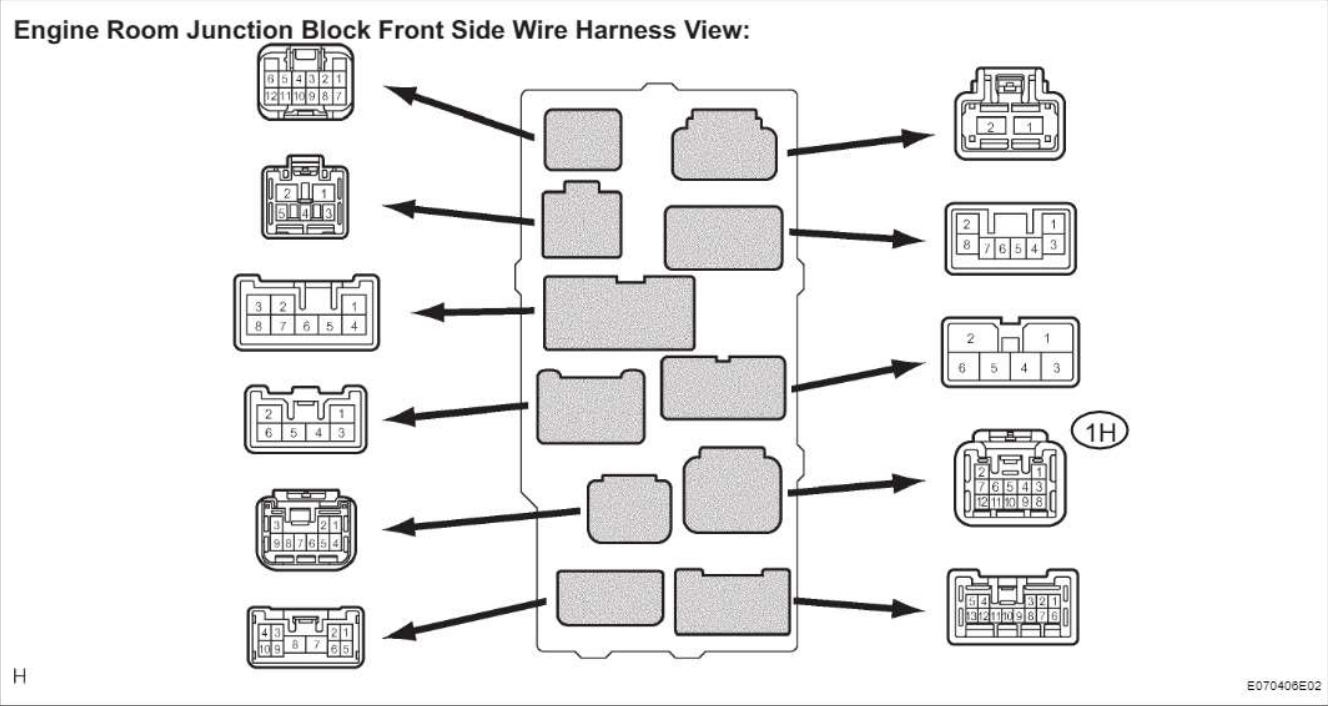
3	INSPECT ENGINE ROOM J/B
---	-------------------------

LI

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

LI-40

LIGHTING – LIGHTING SYSTEM



Standard voltage

Tester connection	Condition	Specified voltage (V)
1H-11 - Body ground	Always	10 to 14 V

NG

Go to step 6

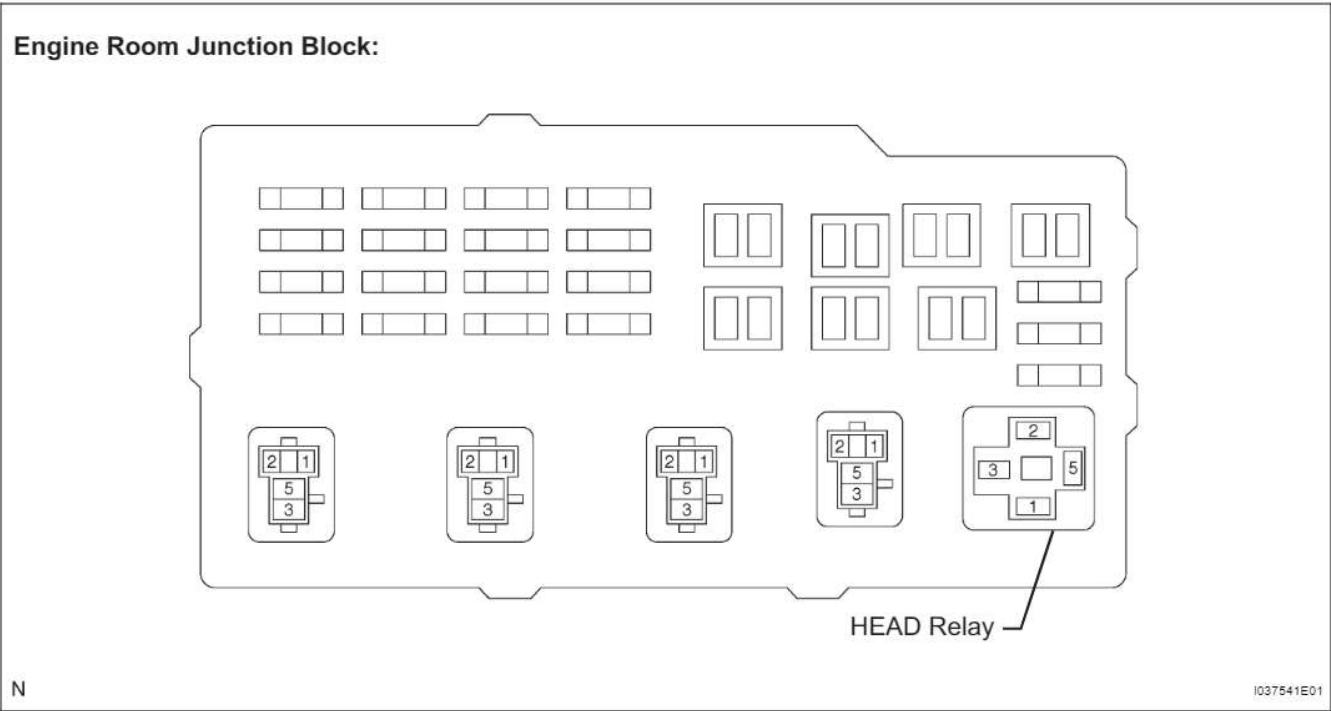
OK

4

INSPECT ENGINE ROOM J/B

(a) Remove the HEAD relay from the engine room J/B.





- (b) Using a service wire, connect terminals 5 and 3 of the HEAD relay in the engine room J/B.
- OK:
Headlight comes on.

NG → Go to step 5

OK

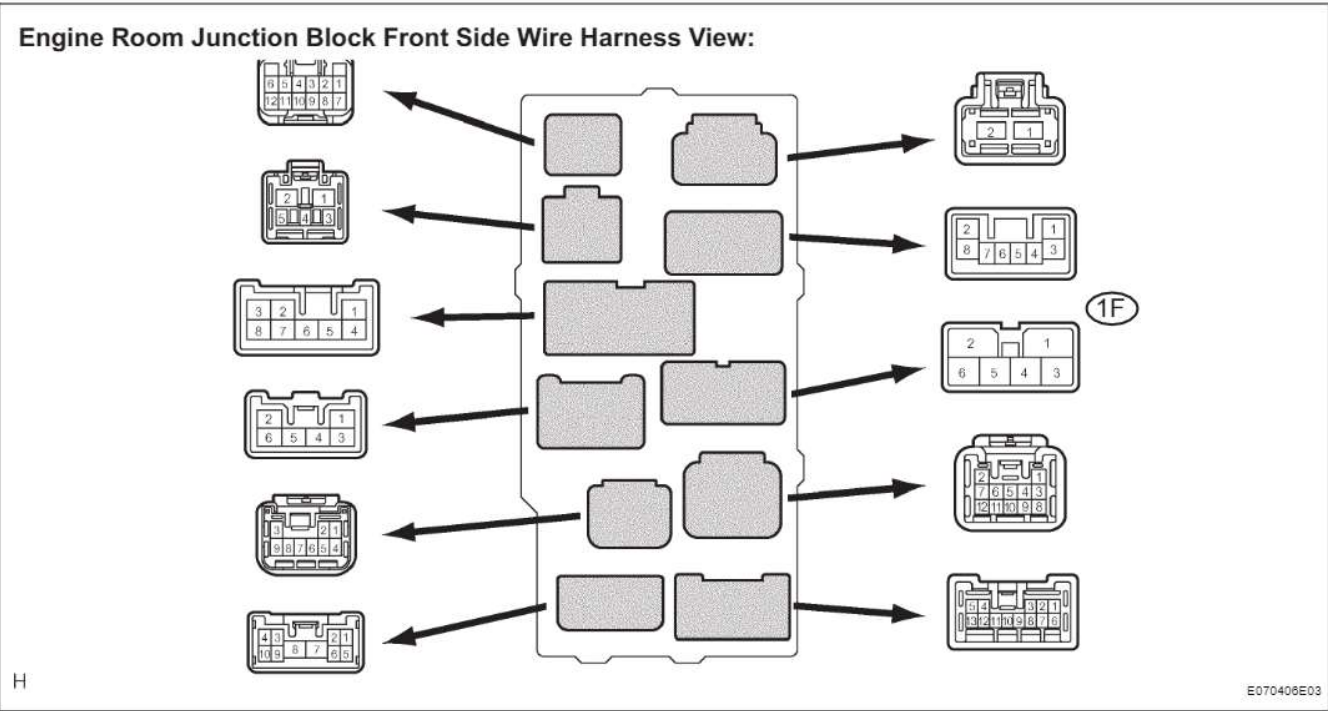
REPLACE HEADLIGHT RELAY

5 INSPECT ENGINE ROOM J/B

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

LI-42

LIGHTING – LIGHTING SYSTEM



Standard voltage

Tester connection	Condition	Specified voltage (V)
1F-3 - Body ground	Always	10 to 14 V

OK

NG

REPLACE ENGINE ROOM J/B

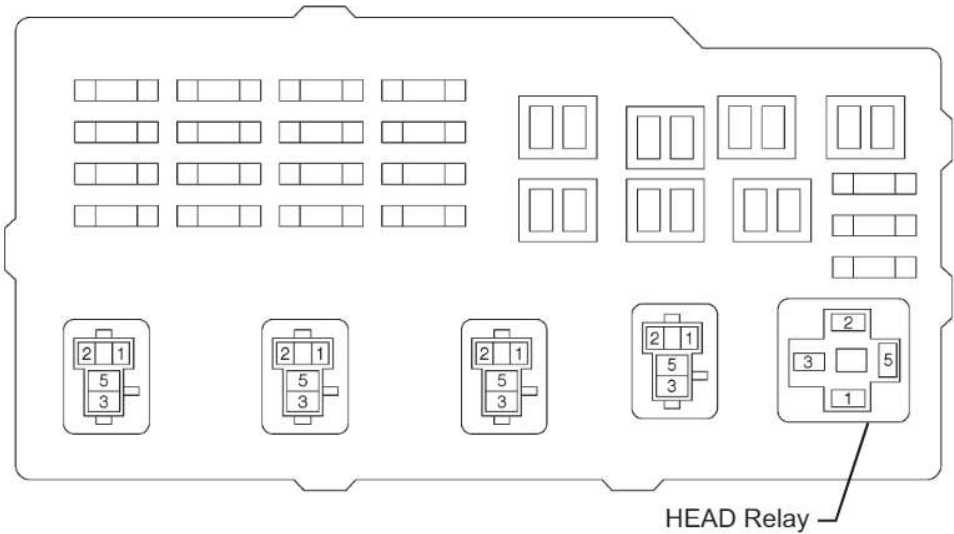
REPAIR OR REPLACE HARNESS OR CONNECTOR (EACH OF HEADLIGHT CIRCUIT)

LI

6INSPECT ENGINE ROOM J/B

- (a) Remove the HEAD relay from the engine room J/B.

Engine Room Junction Block:



N

I037541E01

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

Tester connection	Condition	Specified voltage (V)
1 - Body ground	Always	10 to 14 V

OK

NG

Go to step 7

REPLACE HEADLIGHT RELAY

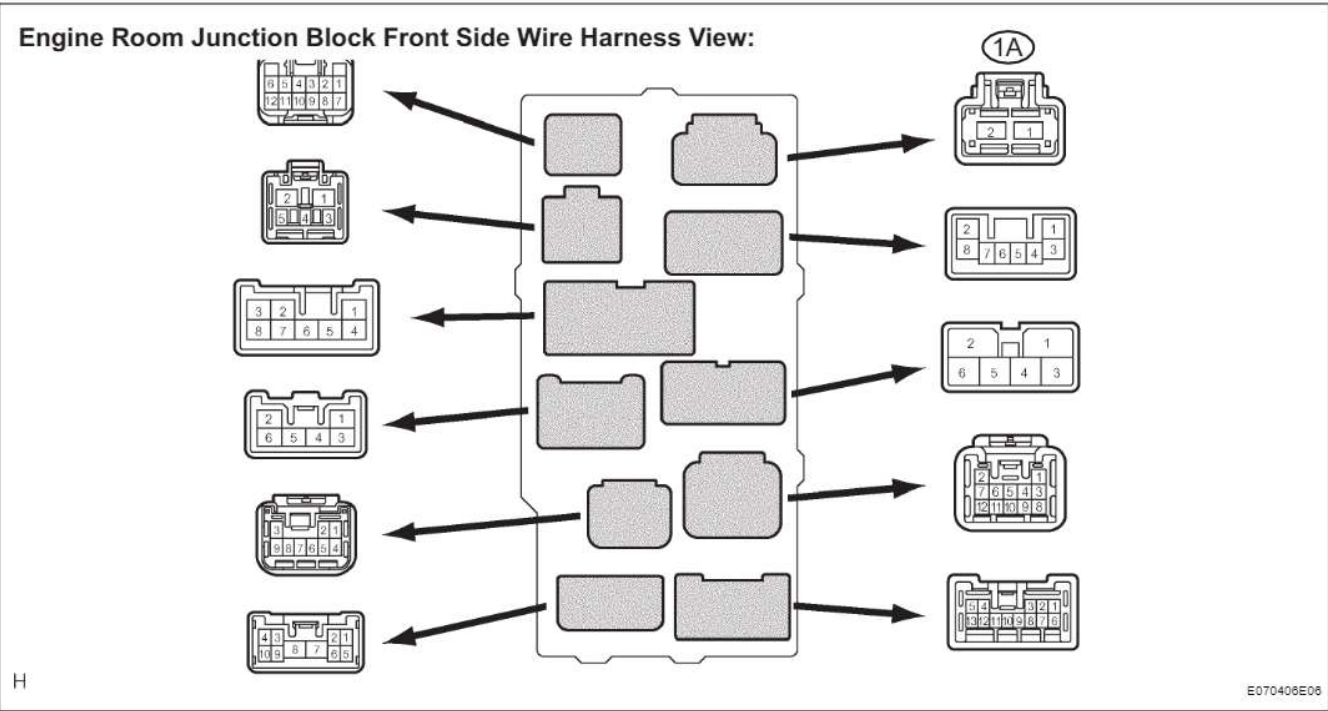
7

CHECK HARNESS AND CONNECTOR (POWER SOURCE CIRCUIT)

- (a) Disconnect the 1A connector from the engine room junction block assembly.

LI-44

LIGHTING – LIGHTING SYSTEM



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

Standard voltage

Tester connection	Condition	Specified voltage (V)
1A-2 - Body ground	Always	10 to 14 V

OK

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

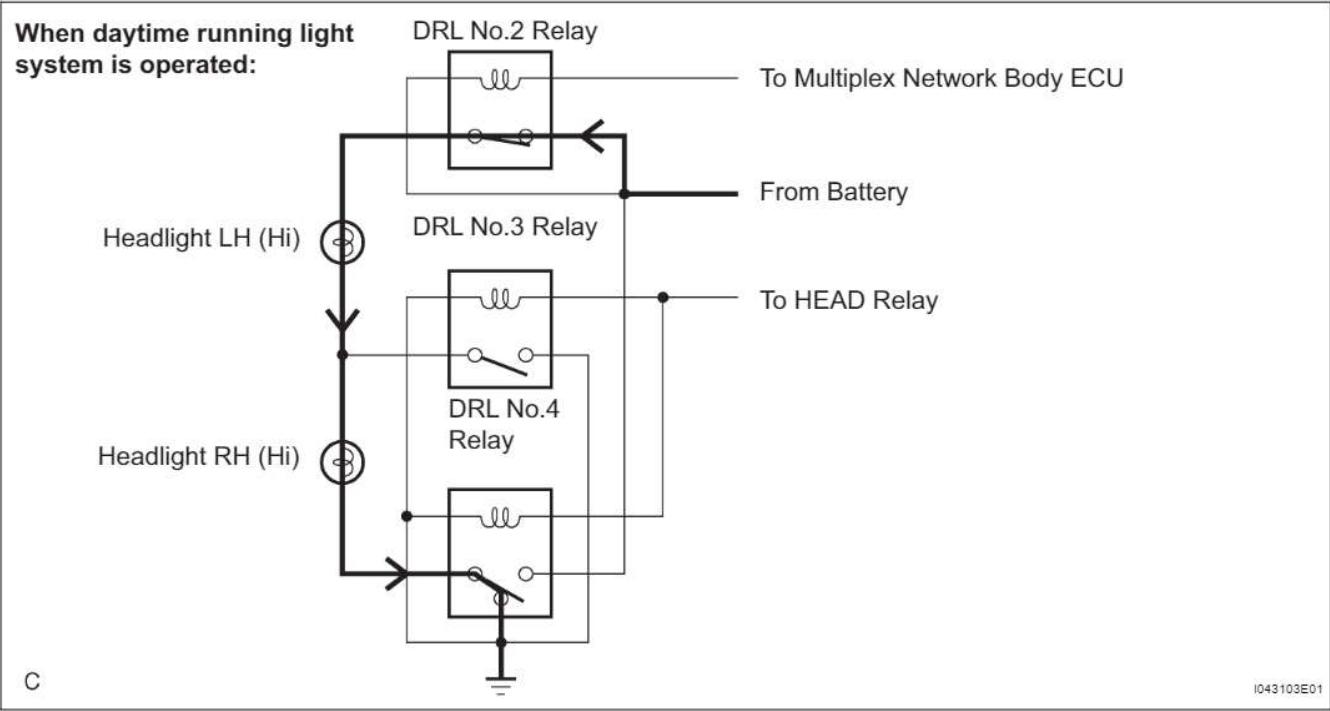
REPLACE ENGINE ROOM J/B

LI

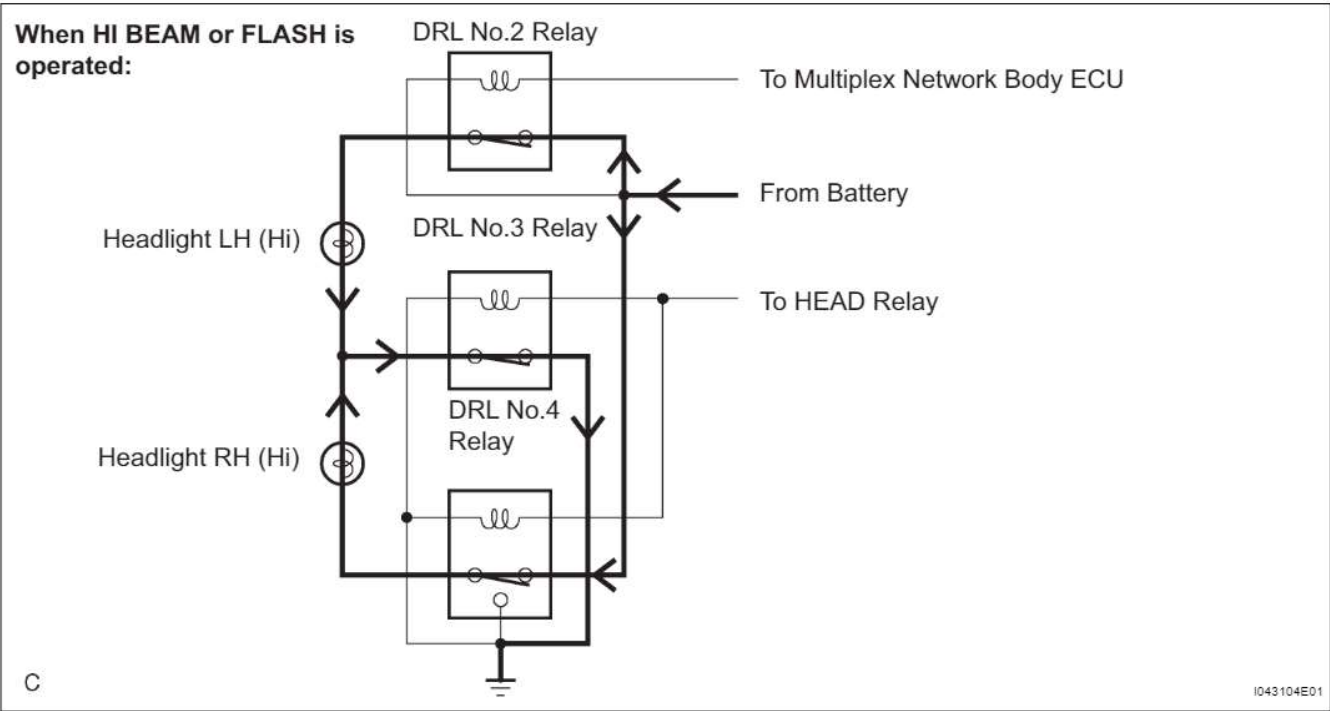
DRL Relay Circuit

DESCRIPTION

The multiplex network body ECU controls DRL No.2, No.3 and No.4 relays.
The headlight (High) is connected in serial when the daytime running light system operates.



The headlight (High) is connected in parallel when the HI BEAM or FLASH operates.

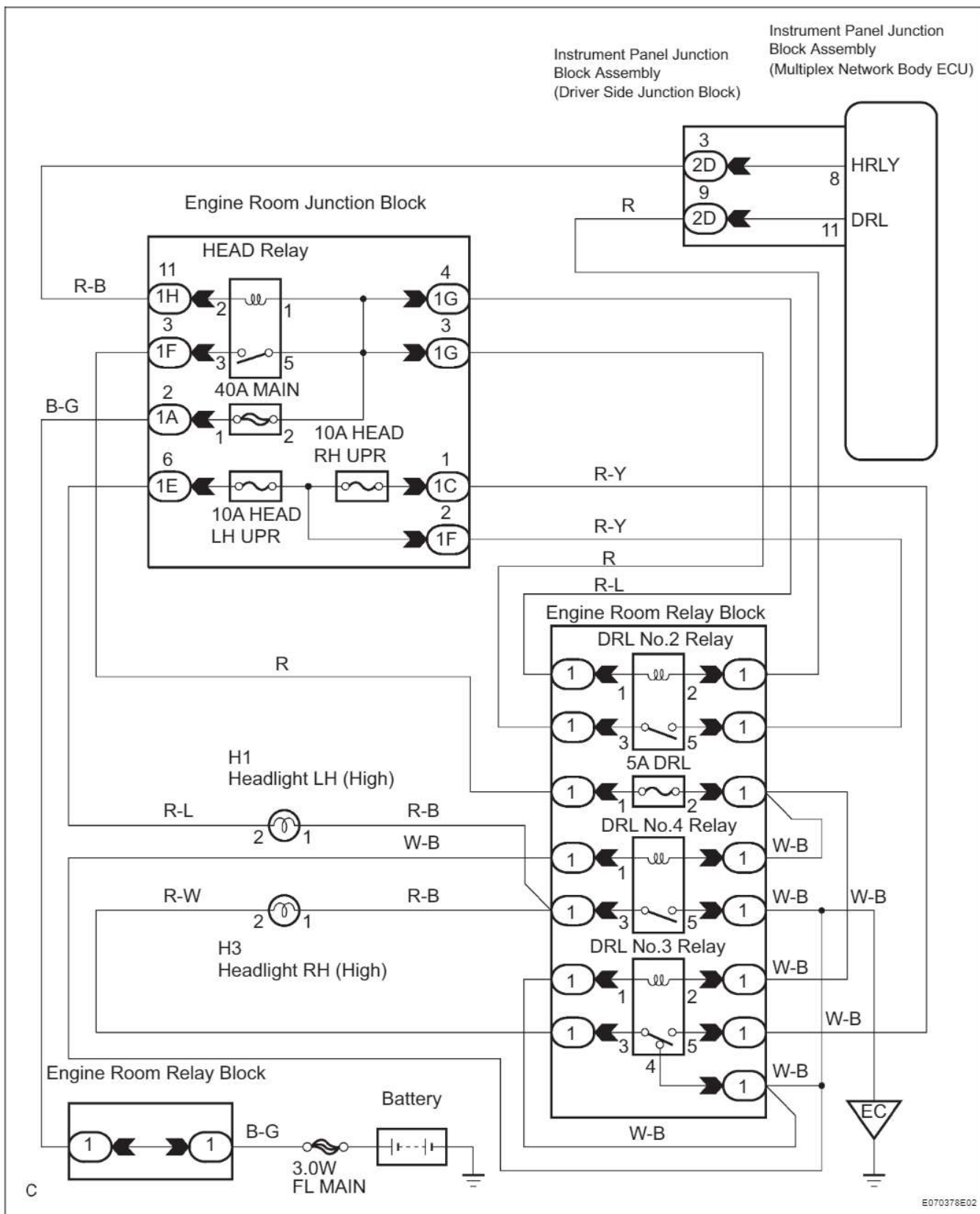


LI

LI-46

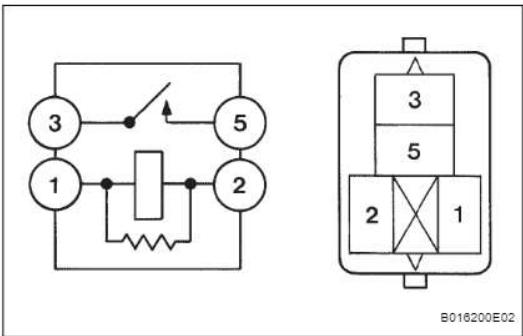
LIGHTING – LIGHTING SYSTEM

WIRING DIAGRAM



LIGHTING – LIGHTING SYSTEM

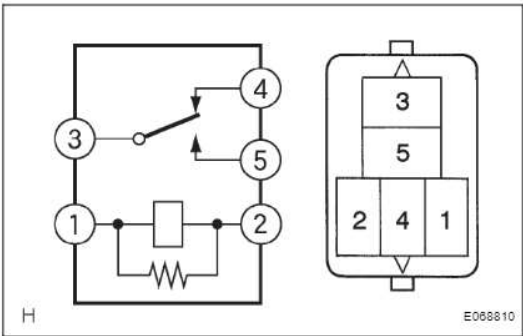
1 INSPECT RELAY



- (a) Inspect DRL No.2 and No.4 relay continuity.
(1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)



- (b) Inspect DRL No.3 relay continuity.
(1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)
3 - 4	10 kΩ or higher (When battery voltage is applied to terminals 1 - 2)

NG

REPLACE RELAY

OK

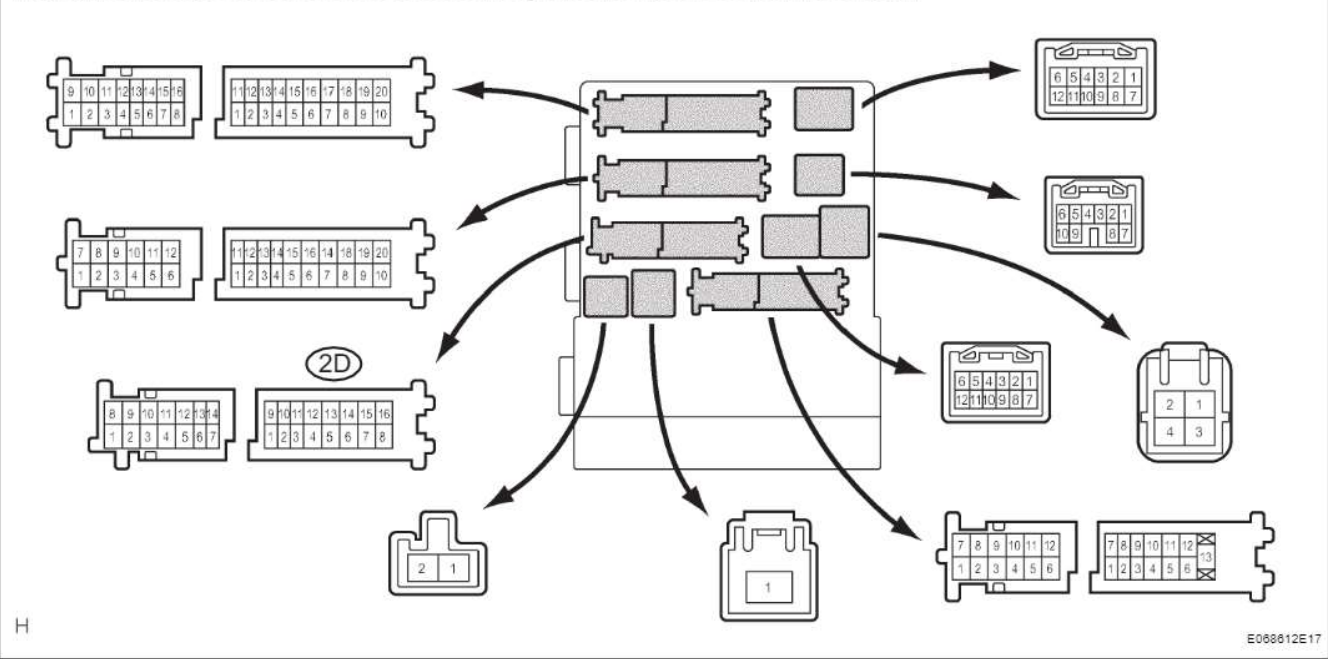
2 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

- (a) Disconnect the 2D connector from the instrument panel junction block assembly.

LI-48

LIGHTING – LIGHTING SYSTEM

Instrument Panel Junction Block Assembly Front Side Wire Harness View:



- (b) Using a service wire, connect 2D-9 of the wire harness side and body ground.

OK:
Headlight (high beam) comes on.

NG → Go to step 3

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

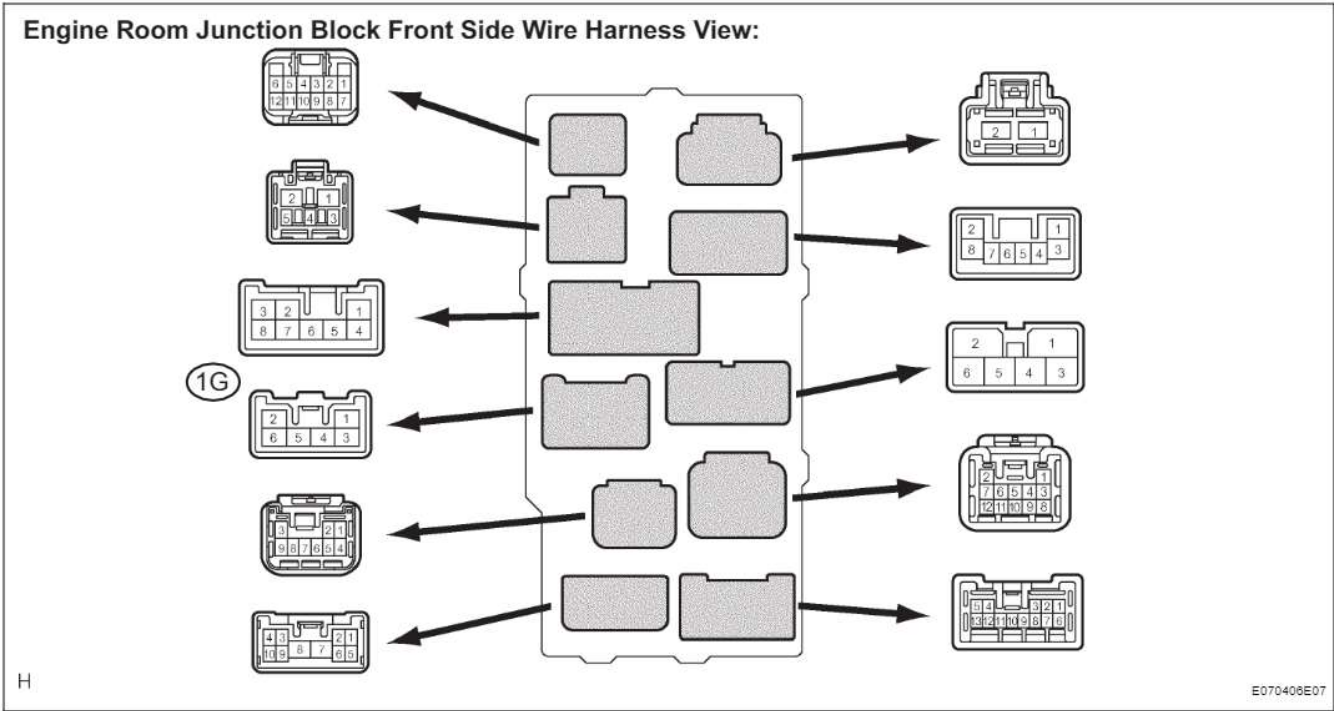
3

INSPECT ENGINE ROOM J/B

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

LIGHTING – LIGHTING SYSTEM

LI-49



Standard voltage

Tester connection	Condition	Specified voltage (V)
1G-3 - Body ground	Always	10 to 14 V
1G-4 - Body ground	Always	10 to 14 V

NG → Go to step 4

OK

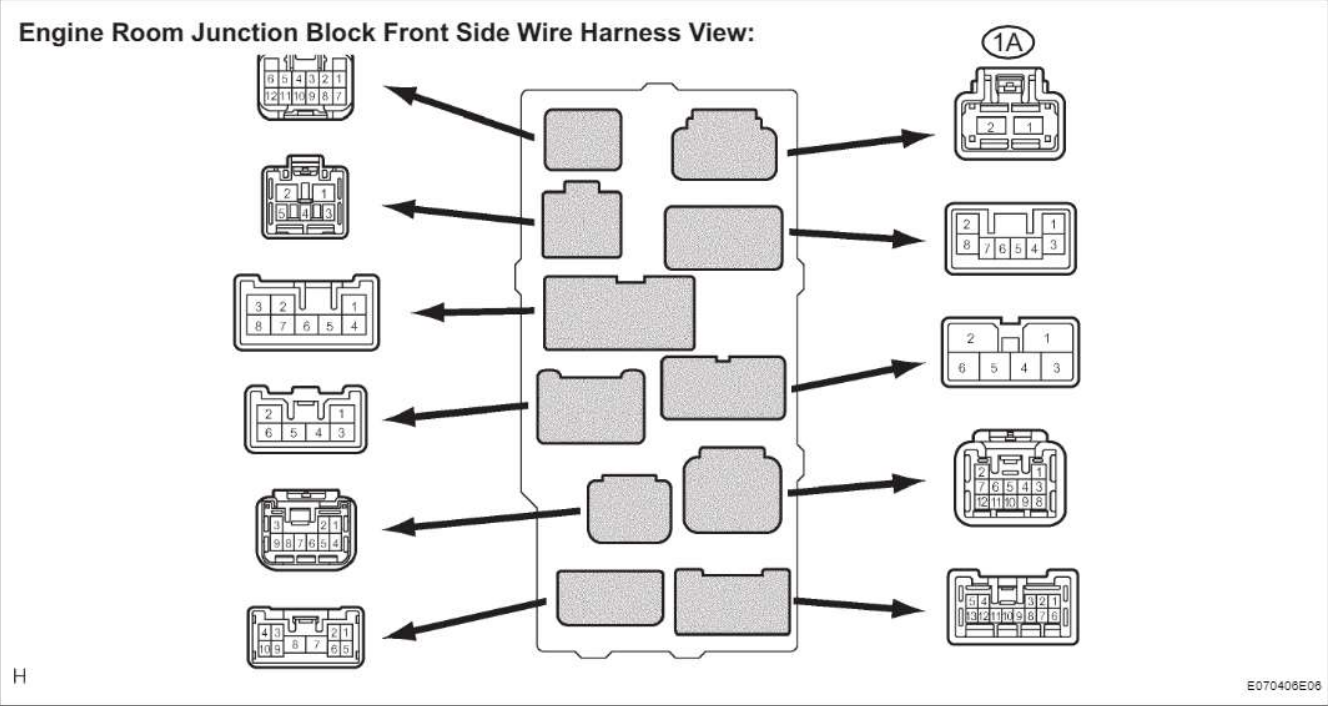
REPAIR OR REPLACE HARNESS OR CONNECTOR OR ENGINE ROOM J/B (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY - ENGINE ROOM J/B)

4 CHECK HARNESS AND CONNECTOR (POWER SOURCE CIRCUIT)

- (a) Disconnect the 1A connector from the engine room junction block assembly.

LI-50

LIGHTING – LIGHTING SYSTEM



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

Tester connection	Condition	Specified voltage (V)
1A-2 - Body ground	Always	10 to 14 V

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

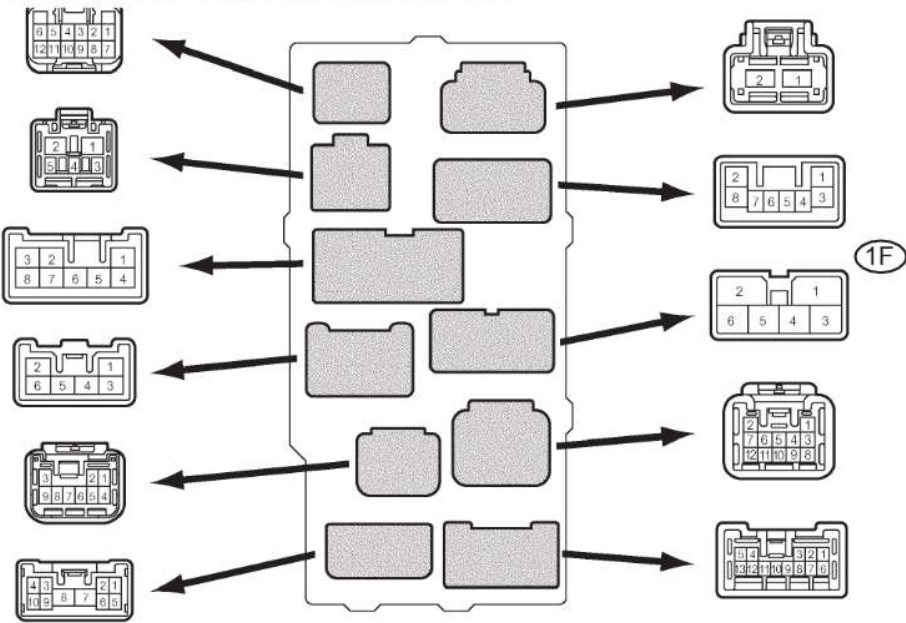
5	INSPECT ENGINE ROOM J/B
---	-------------------------

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

LIGHTING – LIGHTING SYSTEM

LI-51

Engine Room Junction Block Front Side Wire Harness View:



Standard voltage

Tester connection	Condition	Specified voltage (V)
1F-2 - Body ground	Headlight dimmer switch LOW	Below 1 V
	Headlight dimmer switch FLASH	10 to 14 V

NG

Go to step 7

OK

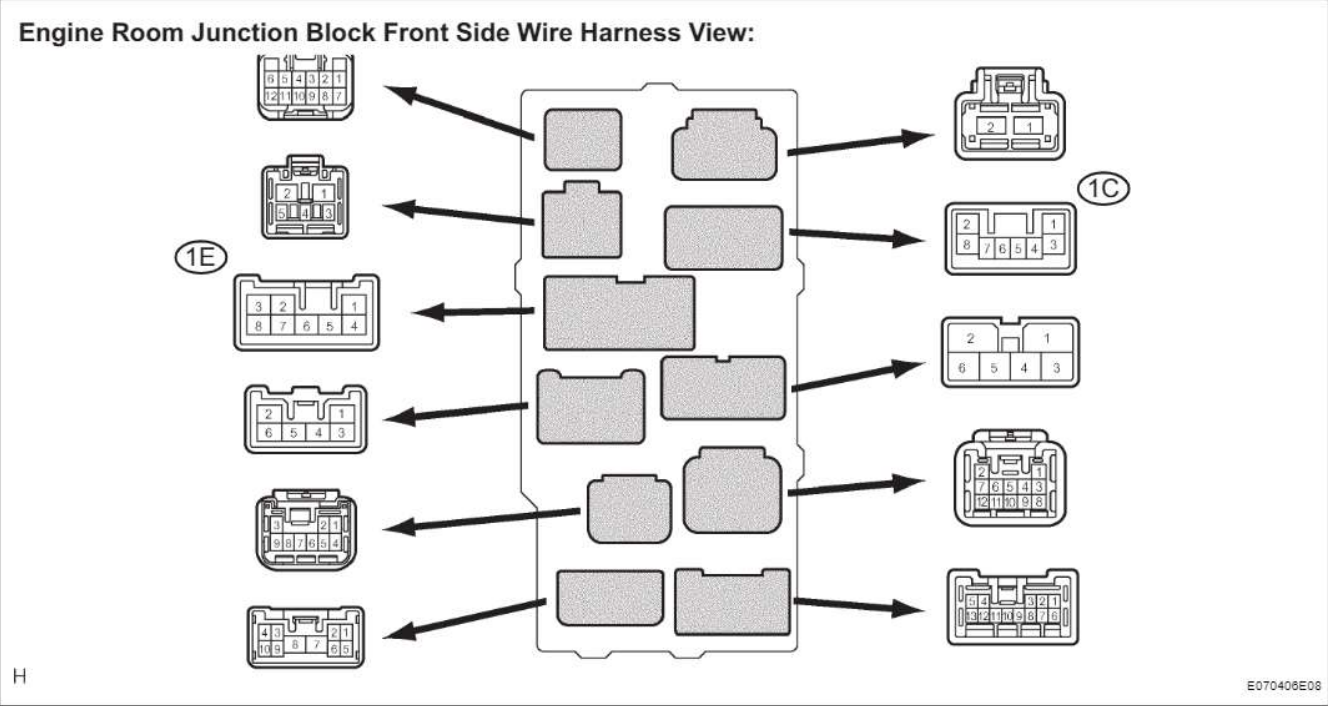
6	INSPECT ENGINE ROOM J/B
---	-------------------------

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

LI

LI-52

LIGHTING – LIGHTING SYSTEM



Standard voltage

Tester connection	Condition	Specified voltage (V)
1C-1 - Body ground	Headlight dimmer switch LOW	Below 1 V
	Headlight dimmer switch FLASH	10 to 14 V
1E-6 - Body ground	Headlight dimmer switch LOW	Below 1 V
	Headlight dimmer switch FLASH	10 to 14 V

NG → REPLACE ENGINE ROOM J/B

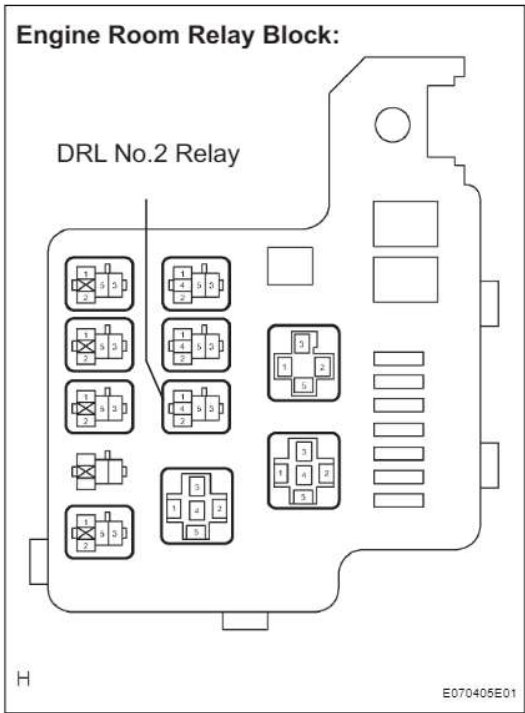
OK

LI

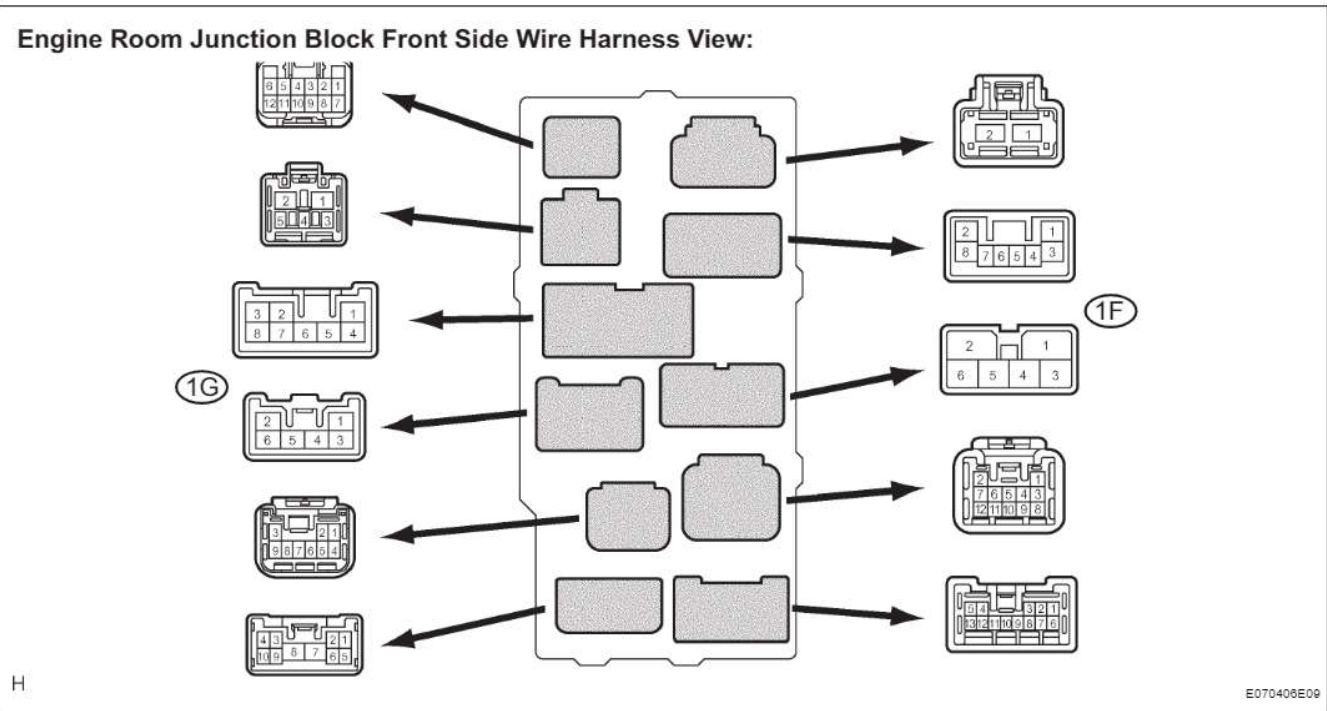
REPAIR OR REPLACE HARNESS OR CONNECTOR OR ENGIEN ROOM RELAY BLOCK (EACH OF HEADLIGHT CIRCUIT)

7

CHECK HARNESS AND CONNECTOR



- (a) Remove the DRL No.2 relay from the engine room relay block.
- (b) Disconnect the 1G and 1F connectors of the engine room junction block.



- (c) Using a service wire, connect the DRL No.2 terminals 3 and 5.
- (d) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified resistance
1G-3 - 1F-2	Always	Below 1 Ω

LI-54

LIGHTING – LIGHTING SYSTEM

Tester connection	Condition	Specified resistance
1F-2 - Body ground	Always	10 kΩ or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE ENGINE ROOM J/B

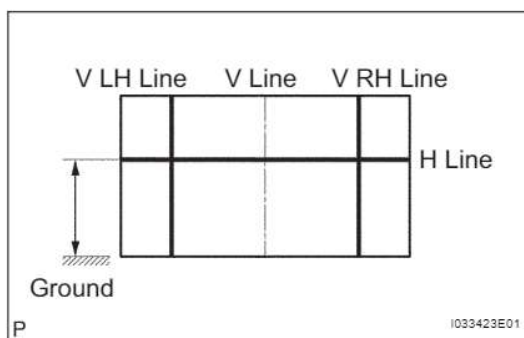


ADJUSTMENT

1. HEADLIGHT AIMING ADJUSTMENT

HINT:

- Perform aim adjustment with low-beam.
 - Since the low-beam light and the high-beam light move as a unit, aiming the low-beam light will correct the high-beam light.
- (a) Prepare vehicle in the following conditions.
- Check that any damage or deformation does not exist on the body around the headlights.
 - Fuel tank is full.
 - The tire inflation pressure is at the specified level (See page).
 - Vehicle is parked on a level surface.
 - A person having an average weight (68 kg (149.91 lb)) sits in the driver's seat.
 - Vehicle is bounced up and down to stabilize the suspension to the normal position.



- (b) Prepare a thick white paper (draw base lines).

HINT:

- Stand the paper against a wall.
- The base lines differ for "Low-beam inspection" and "High-beam inspection".

- (1) V line (Vehicle center position)

Draw a vertical line down the center of the paper in order to align it with the center of the vehicle.

- (2) H line (Headlight height)

Draw a horizontal line across the paper at the same height from the ground as the center mark for the low-beam lights.

- (3) V LH line, V RH line (Center mark position of right and left headlights)

Draw vertical lines, for left and right, at the same position as the center mark for the low-beam lights.

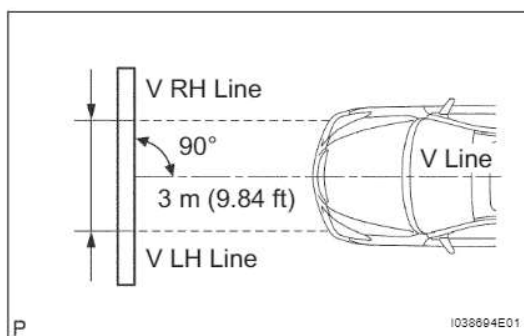
LI

- (c) Check the headlight aim.

- (1) Align the paper and vehicle.

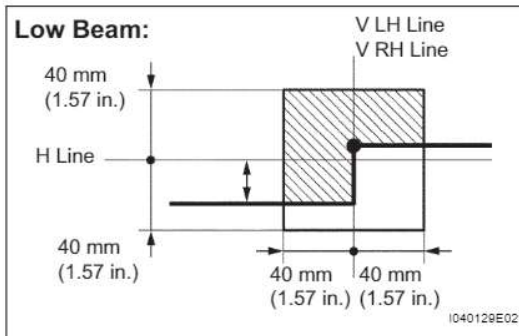
- Make the distance of 3 m (9.84 ft) between the headlights and the paper. Place the paper against a wall with the H line being at the same height as the center mark.
- Align the center of the vehicle with the V line on the paper, and ensure that the paper is at a 90° angle in accordance to the V line.

- (2) Start the engine.



LI-90

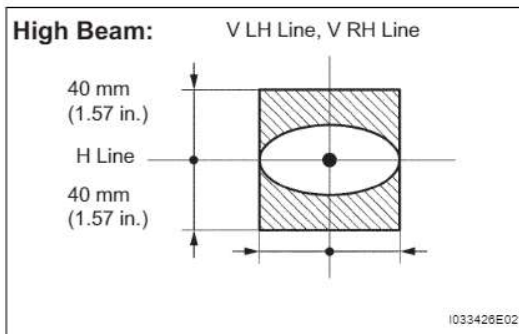
LIGHTING – HEADLIGHT ASSEMBLY



- (3) Turn on the headlights and check that the aim is within the specified values shown in the illustration for low beam.

NOTICE:

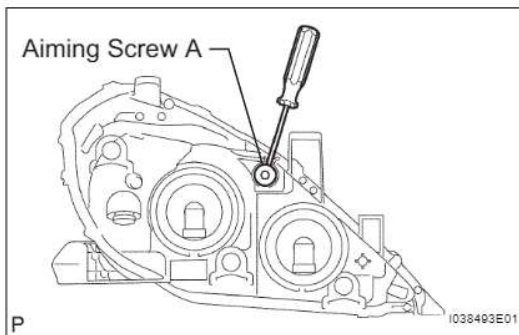
The headlight lens is made of synthetic resin, so it is easily damaged.



- (4) Turn on the headlights and check that the aim is within the specified values shown in the illustration for high beam.

NOTICE:

The headlight lens is made of synthetic resin, so it is easily damaged.



- (d) Adjust the aim in the vertical direction:
Using a screwdriver, adjust the headlight aim within the specified range by turning aiming screw A.

NOTICE:

- Adjust the headlight aim by turning the screw in the tightening direction.
- When the screw is tightened excessively, loosen it once and re-tighten it to adjust the headlight aim.

HINT:

The optical axis aim moves downward when turning the screwdriver clockwise, and it moves upward when turning the screwdriver counterclockwise.

INSTALLATION

1. INSTALL HEADLIGHT UNIT LH
2. INSTALL HEADLIGHT SOCKET COVER
3. INSTALL FRONT TURN SIGNAL LIGHT BULB
4. INSTALL FRONT TURN SIGNAL LIGHT SOCKET
5. INSTALL NO.2 HEADLIGHT BULB
6. INSTALL NO.1 HEADLIGHT BULB
7. INSTALL LH HEADLIGHT ASSEMBLY
8. INSTALL FRONT BUMPER COVER
9. INSTALL FRONT FENDER LINER RH
10. INSTALL FRONT FENDER LINER LH
11. INSTALL RADIATOR GRILLE SUB-ASSEMBLY
12. HEADLIGHT AIM ONLY

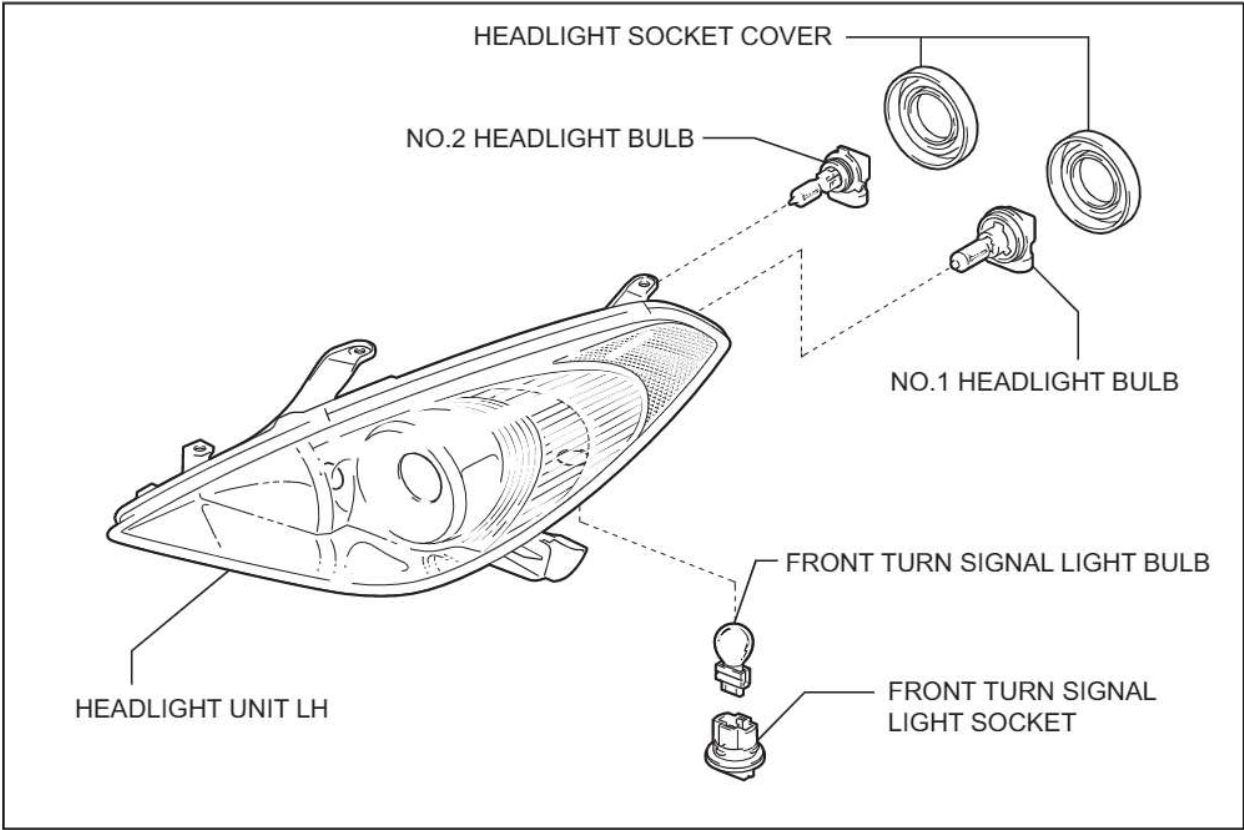
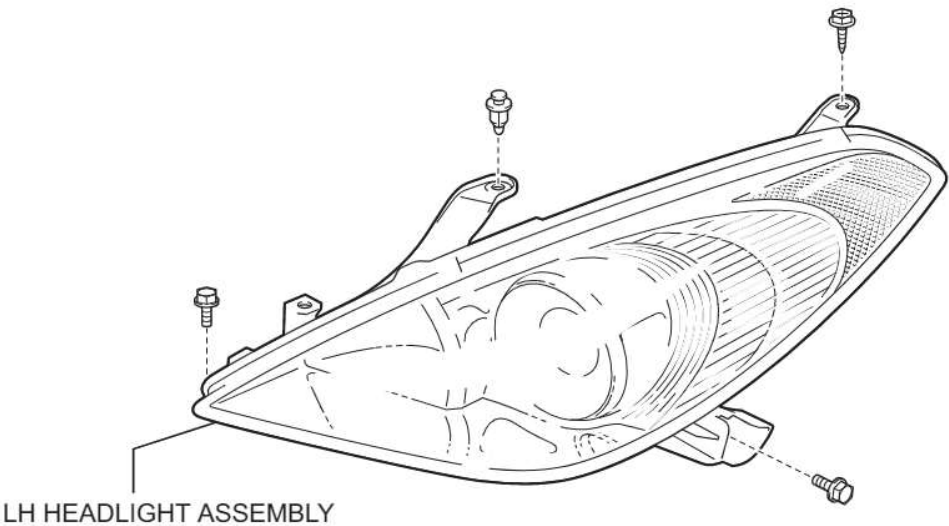
HINT:

See page [LI-88](#)

LI-86

LIGHTING – HEADLIGHT ASSEMBLY

HEADLIGHT ASSEMBLY
COMPONENTS



P

E109141E01

REMOVAL

HINT:

- COMPONENTS: (See page [LI-86](#)).
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.
- Installation is in the reverse order of removal.

1. REMOVE RADIATOR GRILLE SUB-ASSEMBLY

HINT:

See page [ET-1](#)

2. REMOVE FRONT FENDER LINER LH

HINT:

See page [ET-1](#)

3. REMOVE FRONT FENDER LINER RH

HINT:

See page [ET-1](#)

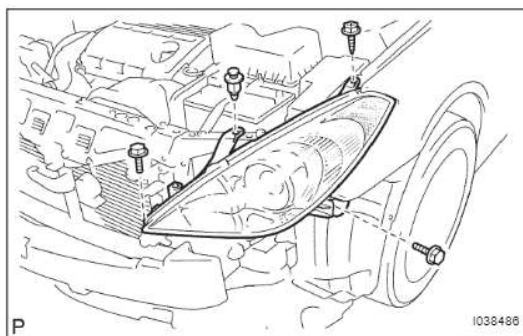
4. REMOVE FRONT BUMPER COVER

HINT:

See page [ET-1](#)

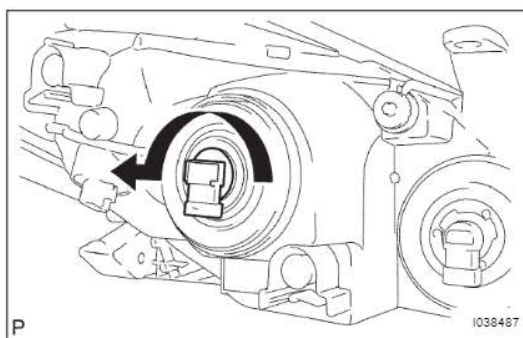
5. REMOVE LH HEADLIGHT ASSEMBLY

- Remove the 2 bolts, screw and the clip.
- Disconnect the connectors, and remove the LH headlight assembly.



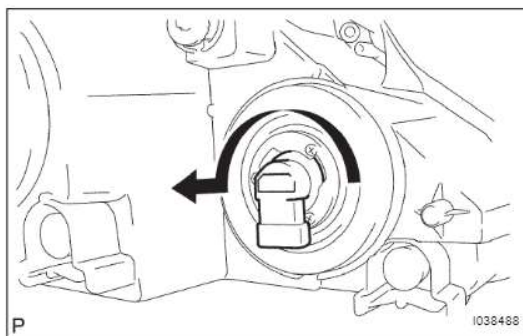
6. REMOVE NO.1 HEADLIGHT BULB

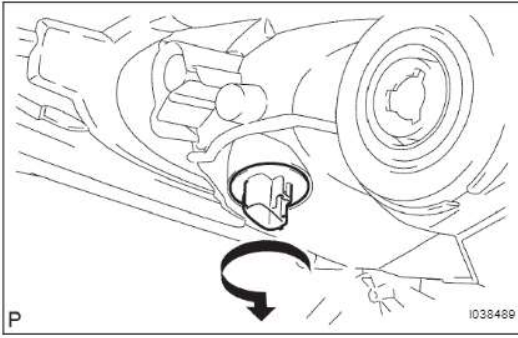
- Remove the headlight, No.1 bulb as shown in the illustration.



7. REMOVE NO.2 HEADLIGHT BULB

- Remove the headlight, No.2 bulb as shown in the illustration.



LI-88**LIGHTING – HEADLIGHT ASSEMBLY****8. REMOVE FRONT TURN SIGNAL LIGHT BULB**

- (a) Remove the front turn signal light socket as shown in the illustration.
- (b) Remove the turn signal light bulb from the front turn signal light socket.

9. REMOVE FRONT TURN SIGNAL LIGHT SOCKET**10. REMOVE HEADLIGHT SOCKET COVER****11. REMOVE HEADLIGHT UNIT LH**

INSTALLATION

1. **INSTALL FOG LIGHT UNIT LH**
2. **INSTALL FOG LIGHT BULB**
3. **INSTALL FOG LIGHT ASSEMBLY LH**
4. **INSTALL FRONT FENDER LINER LH**
5. **PUT VEHICLE THESE CONDITIONS**
HINT:
See page [LI-91](#)
6. **CHECK FOG LIGHT AIM**
HINT:
See page [LI-91](#)
7. **ADJUST FOG LIGHT AIM**
HINT:
See page [LI-91](#)

FOG LIGHT ASSEMBLY

REMOVAL

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.
- Installation is in the reverse order of removal.

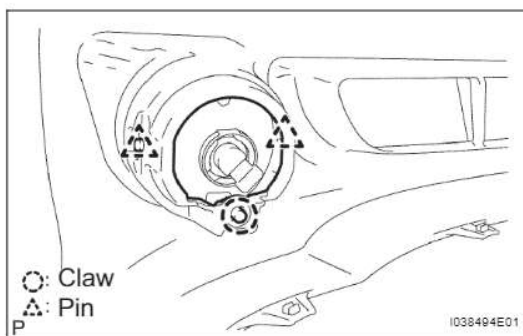
1. REMOVE FRONT FENDER LINER LH

HINT:

See page [ET-1](#)

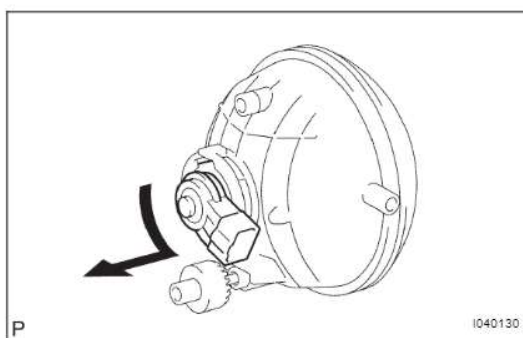
2. REMOVE FOG LIGHT ASSEMBLY LH

- (a) Disengage the claw and the 2 pins, and remove the fog light assembly LH.



3. REMOVE FOG LIGHT BULB

- (a) Remove the fog light bulb as shown in the illustration.



4. REMOVE FOG LIGHT UNIT LH

LI-92

LIGHTING – FOG LIGHT ASSEMBLY

ADJUSTMENT

1. PUT VEHICLE THESE CONDITIONS

- (a) Prepare vehicle in the following conditions.
- Check that any damage or deformation does not exist on the body around the fog lights.
 - Fuel tank is full.
 - The tire inflation pressure is at the specified level (See page SP-9).
 - Vehicle is parked on a level surface.
 - A person having an average weight (68 kg (149.91 lb)) sits in the driver's seat.
 - Vehicle is bounced up and down to stabilize the suspension to the normal position.

- (b) Prepare a thick white paper (draw base lines).

HINT:

Stand the paper against a wall.

- (1) V line (Vehicle center position)

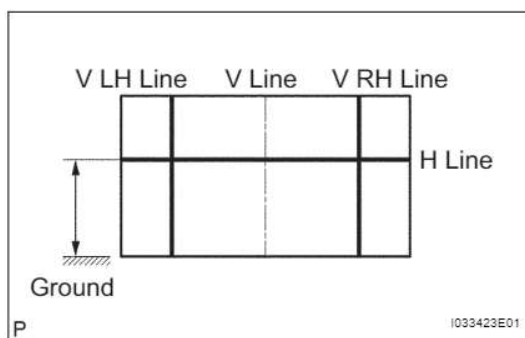
Draw a vertical line down the center of the paper in order to align it with the center of the vehicle.

- (2) H line (Fog light height)

Draw a horizontal line across the paper at the same height from the ground as the center mark for the fog lights.

- (3) V LH line, V RH line (Center mark position of right and left fog lights)

Draw vertical lines, for left and right, at the same position as the center mark for the fog lights.

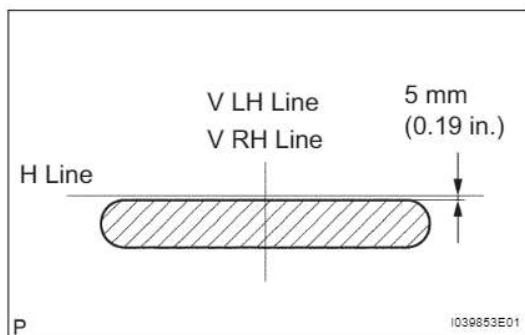
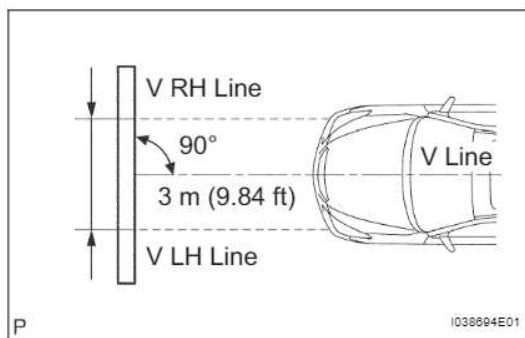


2. CHECK FOG LIGHT AIM

- (a) Check the fog light aim.

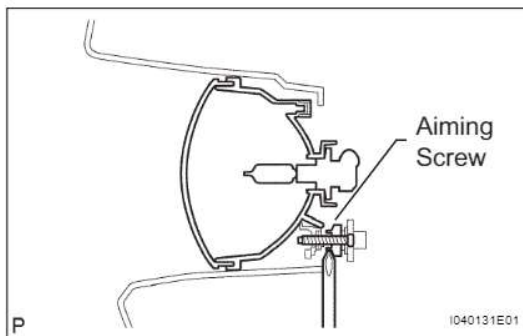
- (1) Align the paper and vehicle.

- Make the distance of 3 m (9.84 ft) between the fog lights and the paper. Place the paper against a wall with the H line being at the same height as the center mark.
- Align the center of the vehicle with the V line on the paper, and ensure that the paper is at a 90° angle in accordance to the V line.



- (2) Start the engine.

- (3) Turn on the fog lights and check that the aim is within the specified values shown in the illustration.

LIGHTING – FOG LIGHT ASSEMBLY**LI-93****3. ADJUST FOG LIGHT AIM**

- (a) Using a screwdriver, adjust the fog lights aim within the specified range by turning aiming screw.

HINT:

The optical aim moves upward when turning a screwdriver clockwise, while it moves downward when turning a screwdriver counterclockwise.

REAR COMBINATION LIGHT ASSEMBLY

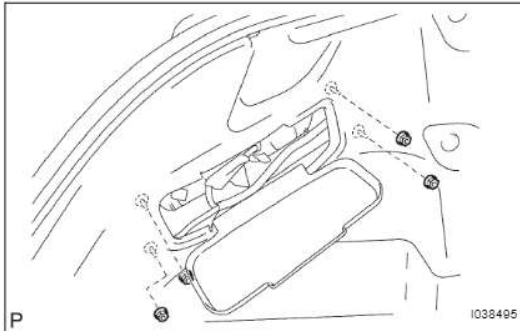
REMOVAL

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.
- Installation is in the reverse order of removal.

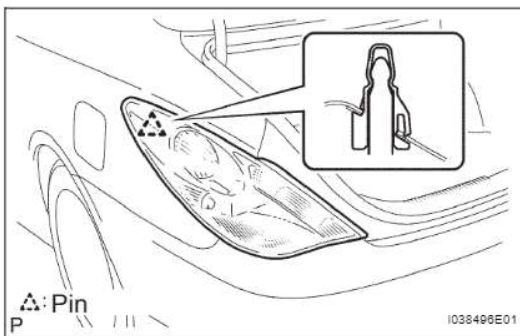
1. REMOVE REAR COMBINATION LIGHT ASSEMBLY LH

- (a) Disconnect the connector, and remove the 4 nuts.



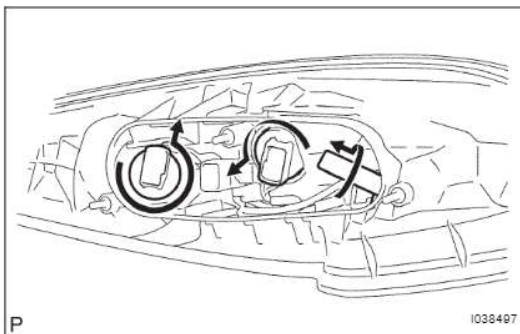
- (b) Disengage the pin, and remove the rear combination light assembly LH as shown in the illustration.

2. REMOVE REAR COMBINATION LIGHT BODY GASKET LH



3. REMOVE REAR COMBINATION LIGHT BULB

- (a) Remove the 3 rear combination light sockets as shown in the illustration.
- (b) Remove the 3 rear combination light bulbs from the 3 rear combination light sockets.



4. REMOVE REAR COMBINATION LIGHT SOCKET AND WIRE SUB-ASSEMBLY

LI

LI-94**LIGHTING – REAR COMBINATION LIGHT ASSEMBLY**

INSTALLATION**HINT:**

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **INSTALL REAR COMBINATION LIGHT SOCKET AND WIRE SUB-ASSEMBLY**
2. **INSTALL REAR COMBINATION LIGHT BULB**
3. **INSTALL REAR COMBINATION LIGHT BODY GASKET LH**
4. **INSTALL REAR COMBINATION LIGHT ASSEMBLY LH**

LI-94**LIGHTING – LICENSE PLATE LIGHT ASSEMBLY**

LICENSE PLATE LIGHT ASSEMBLY

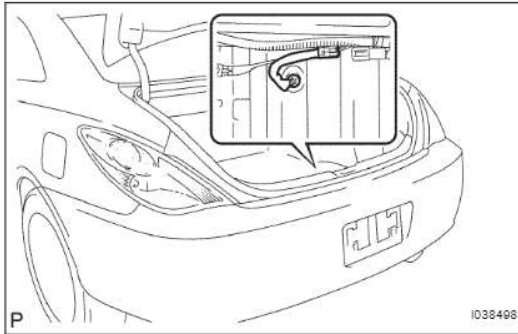
REMOVAL

HINT:

Installation is in the reverse order of removal.

- 1. REMOVE REAR FLOOR FINISH PLATE**
- 2. REMOVE LICENSE PLATE LIGHT ASSEMBLY**

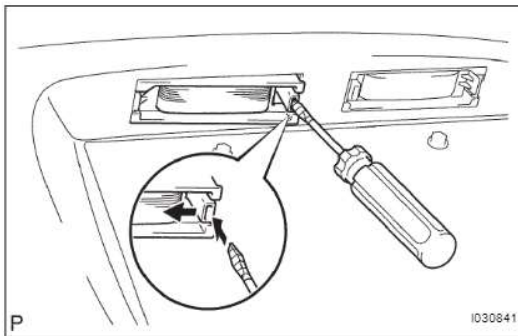
(a) Disconnect the connector and grommet.



(b) Using a screwdriver, disconnect the 2 license plate light assembly.

HINT:

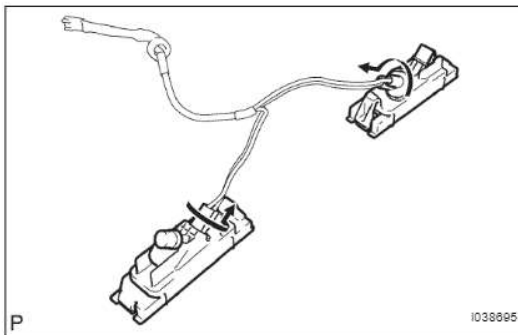
Tape the screwdriver tip before use.



- 3. REMOVE LICENSE PLATE LIGHT LENS**

(a) Remove the 2 license plate light lenses as shown in the illustration.
- 4. REMOVE LICENSE PLATE LIGHT BULB**

(a) Remove the 2 license plate light bulbs.
- 5. REMOVE LICENSE PLATE LIGHT SOCKET AND WIRE**



INSTALLATION

- 1. INSTALL LICENSE PLATE LIGHT SOCKET AND WIRE**
- 2. INSTALL LICENSE PLATE LIGHT BULB**
- 3. INSTALL LICENSE PLATE LIGHT LENS**
- 4. INSTALL LICENSE PLATE LIGHT ASSEMBLY**
- 5. INSTALL REAR FLOOR FINISH PLATE**

INSTALLATION

1. **INSTALL CENTER STOP LIGHT BULB**
2. **INSTALL CENTER STOP LAMP ASSEMBLY**
3. **INSTALL PACKAGE TRAY TRIM PANEL ASSEMBLY**
4. **INSTALL ROOF SIDE GARNISH ASSEMBLY INNER LH**
5. **INSTALL ROOF SIDE GARNISH ASSEMBLY INNER RH**
6. **INSTALL CENTER PILLAR GARNISH LH**
7. **INSTALL CENTER PILLAR GARNISH RH**
8. **INSTALL FRONT DOOR WEATHERSTRIP LH**
9. **INSTALL FRONT DOOR WEATHERSTRIP RH**
10. **INSTALL REAR SEAT ASSEMBLY**
11. **INSTALL FRONT DOOR SCUFF PLATE LH**
12. **INSTALL FRONT DOOR SCUFF PLATE RH**

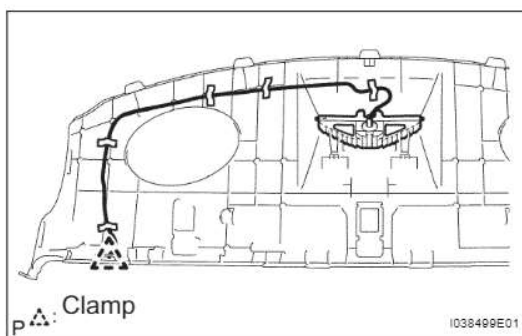
HIGH MOUNTED STOP LIGHT ASSEMBLY (for Coupe)

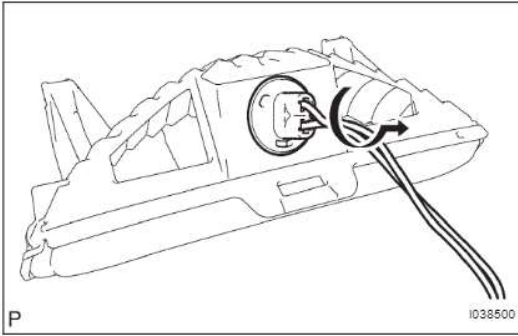
REMOVAL

HINT:

Installation is in the reverse order of removal.

1. **REMOVE FRONT DOOR SCUFF PLATE LH**
HINT:
See page [IR-1](#)
2. **REMOVE FRONT DOOR SCUFF PLATE RH**
HINT:
See page [IR-1](#)
3. **REMOVE REAR SEAT ASSEMBLY**
HINT:
See page [SE-38](#)
4. **REMOVE FRONT DOOR WEATHERSTRIP LH**
HINT:
See page [IR-1](#)
5. **REMOVE FRONT DOOR WEATHERSTRIP RH**
HINT:
See page [IR-1](#)
6. **REMOVE CENTER PILLAR GARNISH LH**
HINT:
See page [IR-1](#)
7. **REMOVE CENTER PILLAR GARNISH RH**
HINT:
See page [IR-1](#)
8. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER LH**
HINT:
See page [IR-1](#)
9. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER RH**
HINT:
See page [IR-1](#)
10. **REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY**
11. **REMOVE CENTER STOP LIGHT ASSEMBLY**
 - (a) Remove the 5 tape ties.
 - (b) Disengage the clamp, and remove the center stop light assembly.



LI-96**LIGHTING – HIGH MOUNTED STOP LIGHT ASSEMBLY (for Coupe)****12. REMOVE CENTER STOP LIGHT BULB**

- (a) Remove the combination light socket as shown in the illustration.
- (b) Remove the combination light bulb from the combination light socket.

HIGH MOUNTED STOP LIGHT ASSEMBLY (for Convertible)

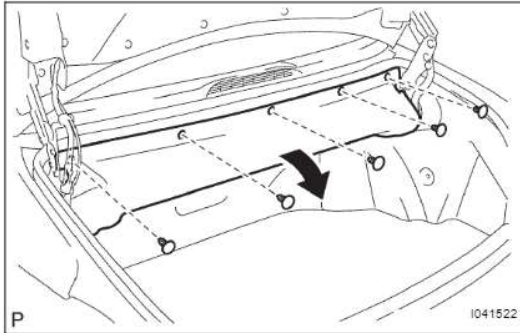
REMOVAL

HINT:

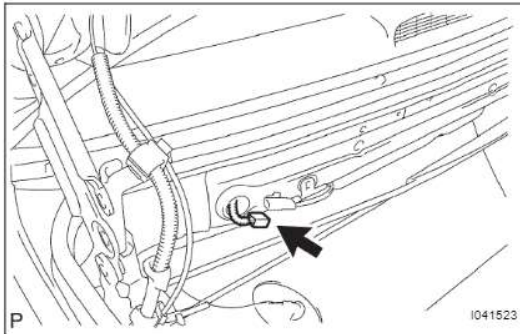
Installation is in the reverse order of removal.

1. REMOVE BACK BELT MOULDING

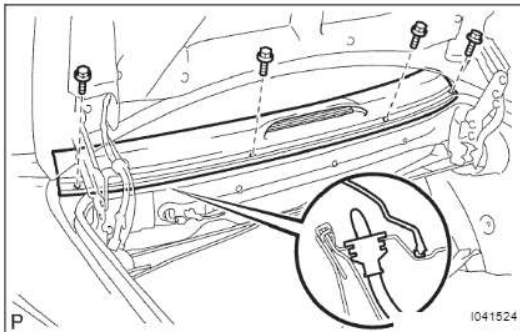
- (a) Remove the 5 clips and turn up the luggage compartment trim cover front.



- (b) Disconnect the connector.

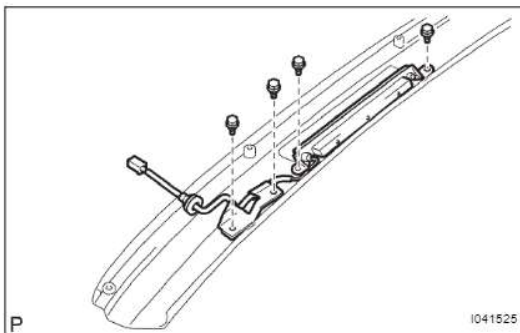


- (c) Remove the 4 bolts and the grommet, and then remove the back belt moulding.



2. REMOVE CENTER STOP LIGHT ASSEMBLY

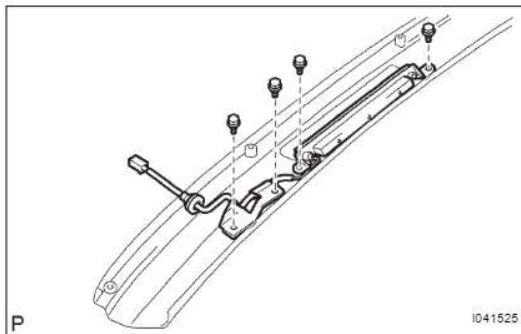
- (a) Remove the 4 bolts, and then remove the center stop light assembly.


LI

LI-98**LIGHTING – HIGH MOUNTED STOP LIGHT ASSEMBLY (for Convertible)****INSTALLATION****1. INSTALL CENTER STOP LIGHT ASSEMBLY**

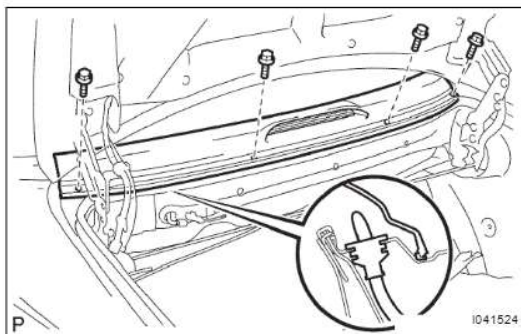
- (a) Install the center stop light assembly with the 4 bolts.

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

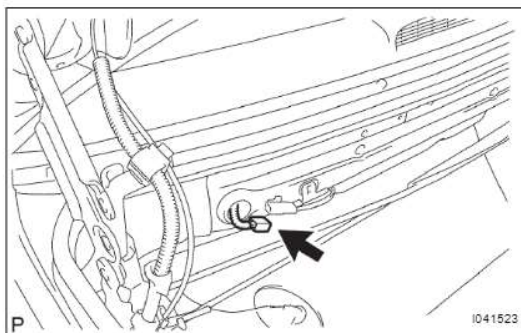
**2. INSTALL BACK BELT MOULDING**

- (a) Install the back belt moulding with the 4 bolts and the grommet.

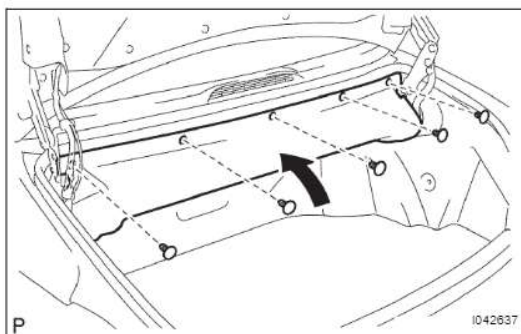
Torque: 14 N*m (143 kgf*cm, 10 ft.*lbf)

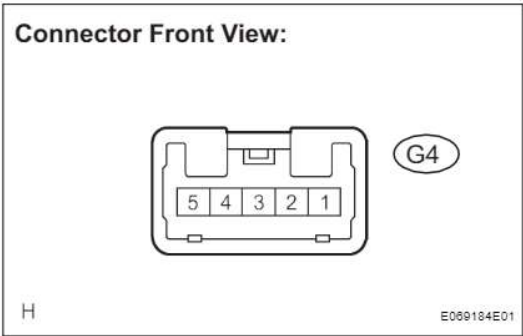


- (b) Connect the connector.



- (c) Install the luggage compartment trim cover front with the 5 clips.





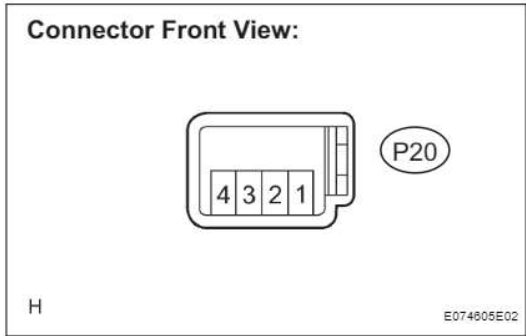
PERSONAL LIGHT ASSEMBLY (for Coupe)

INSPECTION

1. MAP LIGHT ASSEMBLY
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Switch operation	Specified resistance
1 - 5	OFF	10 kΩ or higher

- (b) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 5, then check that the light comes on when the switch is in the ON position.
- OK:**
- Light comes on.**



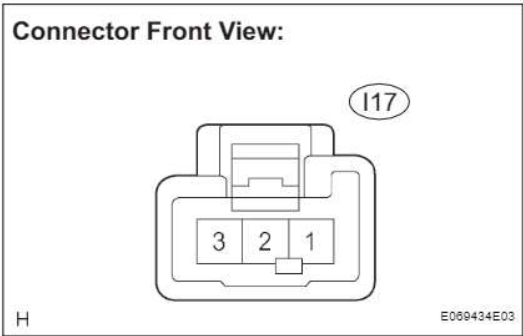
PERSONAL LIGHT ASSEMBLY (for Convertible)

INSPECTION

1. MAP LIGHT ASSEMBLY
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Switch operation	Specified condition
1 - 2 1 - 3	OFF	10 kΩ or higher

- (b) Connect the positive (+) lead from the battery to terminal 1 and negative (-) lead to terminal 2, then check that the light comes on when the switch is in the ON position.
- OK:**
- Light comes on.**
- (c) Connect the positive (+) lead from the battery to terminal 1 and negative (-) lead to terminal 3, then check that the light comes on when the switch is in the DOOR position.
- OK:**
- Light comes on.**



ROOM LIGHT ASSEMBLY (for Coupe)

INSPECTION

1. ROOM LIGHT ASSEMBLY NO.1
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

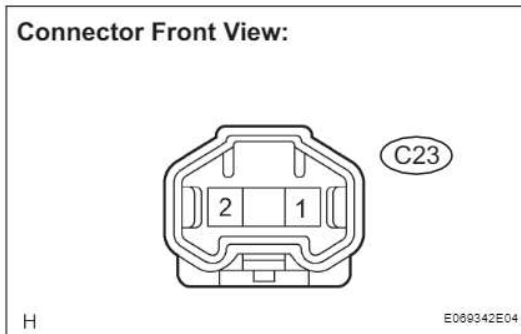
Tester connection	Switch operation	Specified resistance
1 - 2 1 - 3	OFF	10 kΩ or higher

- (b) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, then check that the light comes on when the switch is in the DOOR position.
- OK:**
- Light comes on.**
- (c) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 3, then check that the light comes on when the switch is in the ON position.
- OK:**
- Light comes on.**

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LIGHTING – ROOM LIGHT ASSEMBLY (for Convertible)

Connector Front View:



ROOM LIGHT ASSEMBLY (for Convertible)

INSPECTION

1. ROOM LIGHT ASSEMBLY

- (a) Connect the positive (+) lead from the battery to one of the terminal and the negative (-) lead to other terminal, then check that the light comes on.

OK:

Lights comes on.

LUGGAGE COMPARTMENT ROOM LIGHT

INSPECTION

1. **LUGGAGE COMPARTMENT LIGHT ASSEMBLY NO.1**
 - (a) Connect the positive (+) lead from the battery to one of the terminal and the negative (-) lead to other terminal, then check that the light comes on when the switch is in the ON position.

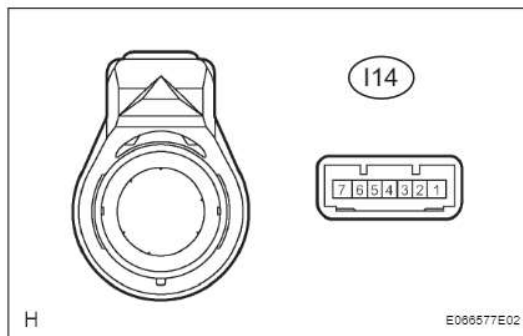
OK:

Light comes on.

LI

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LIGHTING – IGNITION KEY CYLINDER LIGHT



IGNITION KEY CYLINDER LIGHT INSPECTION

1. TRANSPONDER KEY AMPLIFIER

- (a) Inspect ignition key cylinder light operation.
 - (1) Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 6, then check that the illumination comes on.

OK:

Illumination comes on.

GLOVE BOX LIGHT

INSPECTION

1. GLOVE BOX LIGHT ASSEMBLY

- (a) Connect the positive (+) lead from the battery to one of the terminal and the negative (-) lead to other terminal, then check that the light comes on when the switch is in the ON position.

OK:

Light comes on.

VANITY LIGHT

INSPECTION

1. LH VISOR ASSEMBLY

- (a) Connect the positive (+) lead from the battery to one of the terminal and the negative (-) lead to other terminal, then check that the illumination comes on when the switch is in the ON position.

OK:

Light comes on.

2. RH VISOR ASSEMBLY

- (a) Connect the positive (+) lead from the battery to one of the terminal and the negative (-) lead to other terminal, then check that the light comes on when the switch is in the ON position.

OK:

Light comes on.

CONSOLE BOX LIGHT

INSPECTION

1. ROOF CONSOLE BOX ASSEMBLY

- (a) Connect the positive (+) lead from the battery to one of the terminal and the negative (-) lead to other terminal, then check that the light comes on when the switch is in the ON position.

OK:

Light comes on.

LI-110**LIGHTING – HEADLIGHT DIMMER SWITCH**

INSTALLATION**1. INSTALL HEADLIGHT DIMMER SWITCH ASSEMBLY****2. INSTALL STEERING COLUMN COVER**

HINT:

See page [SR-4](#)**3. INSTALL STEERING COLUMN COVER LWR**

HINT:

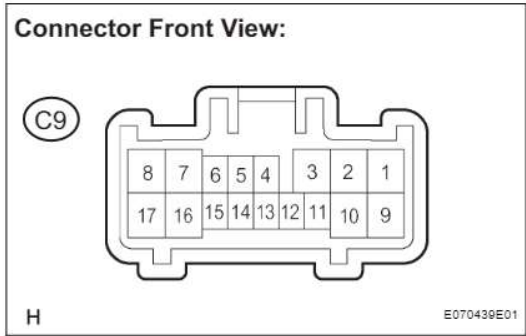
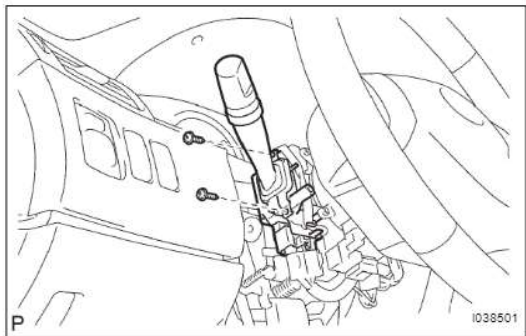
See page [SR-4](#)

HEADLIGHT DIMMER SWITCH

REMOVAL

HINT:
Installation is in the reverse order of removal.

- 1. REMOVE STEERING COLUMN COVER LWR
HINT:
See pageSR-4
- 2. REMOVE STEERING COLUMN COVER
HINT:
See pageSR-4
- 3. REMOVE HEADLIGHT DIMMER SWITCH ASSEMBLY
 - (a) Disconnect the connector.
 - (b) Remove the 2 screws and the headlight dimmer switch assembly.



INSPECTION

- 1. INSPECT HEADLIGHT DIMMER SWITCH ASSEMBLY
 - (a) Inspect light control switch.
 - (1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Switch operation	Specified resistance
12 - 16 13 - 16 14 - 16	OFF	10 Ω or higher
14 - 16	TAIL	Below 1 Ω
13 - 16 14 - 16	HEAD	Below 1 Ω
12 - 16	AUTO	Below 1 Ω

- (b) Inspect headlight dimmer switch.
 - (1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Switch operation	Specified resistance
7 - 16 8 - 16	FLASH	Below 1 Ω
16 - 17	LOW BEAM	Below 1 Ω
7 - 16	HI BEAM	Below 1 Ω

LIGHTING – HEADLIGHT DIMMER SWITCH**LI-109**

(c) Inspect turn signal switch.

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

Standard resistance

Tester connection	Switch operation	Specified resistance
2 - 3	Right turn	Below 1 Ω
1 - 2 2 - 3	Neutral	10 Ω or higher
1 - 2	Left turn	Below 1 Ω

(d) Inspect front fog light switch.

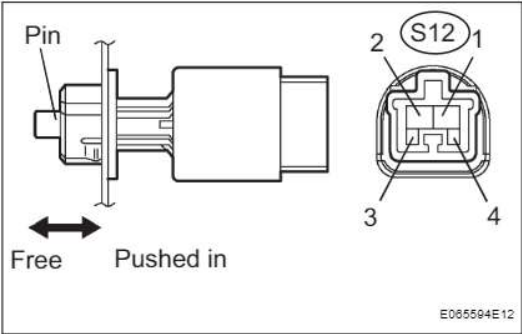
- (1) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Switch operation	Specified resistance
10 - 11	OFF	10 Ω or higher
10 - 11	ON	Below 1 Ω

LI-110

LIGHTING – STOP LIGHT SWITCH



STOP LIGHT SWITCH
INSPECTION

1. STOP LIGHT SWITCH ASSEMBLY
- (a) Measure the resistance according to the value(s) in the table below.
- Standard resistance**

Tester connection	Switch position	Specified resistance
1 - 2	Switch pin free	Below 1 Ω
3 - 4	Switch pin free	10 kΩ or higher
1 - 2	Switch pin pushed in	10 kΩ or higher
3 - 4	Switch pin pushed in	Below 1 Ω



BACK-UP LIGHT SWITCH

INSPECTION

1. BACK UP LIGHT SWITCH ASSEMBLY
- (a) Measure the resistance according to the value(s) in the table below.
- Standard resistance

Tester connection	Switch operation	Specified resistance
1 - 2	Ball is not pressed	10 kΩ or higher
1 - 2	Ball is pressed	Below 1 Ω



FRONT DOOR COURTESY SWITCH

INSPECTION

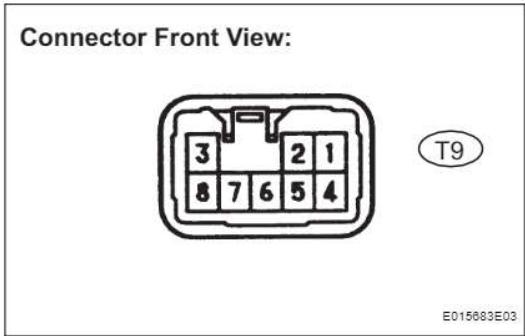
1. FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY

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

Standard resistance

Tester connection	Switch operation	Specified resistance
1 - Body ground	ON (When shaft is pressed)	10 kΩ or higher
1 - Body ground	OFF (When shaft is not pressed)	Below 1 Ω





TURN SIGNAL FLASHER
ASSEMBLY

INSPECTION

1. INSPECT TURN SIGNAL FLASHER RELAY
- (a) Disconnect the connector from the turn signal flasher relay.
 - (b) Measure the voltage according the value(s) in the table below.

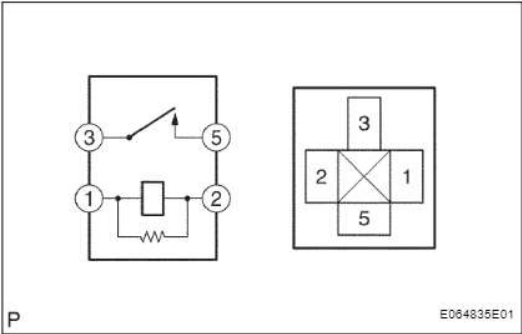
Voltage

Tester connection	Condition	Specified condition
1 - body ground	Turn ignition switch ON	10 to 14 V
1 - body ground	Turn ignition switch OFF	Below 1 V
4 - body ground	Always	10 to 14 V
4 - body ground	Always	Below 1 V

- (c) Reconnect the connector to the turn signal flasher.
- (d) Measure the voltage according to the valve(s) in the table below.

Voltage

Tester connection	Condition	Specified condition
2 - body ground	Hazard switch OFF → ON	0V 10 to 14 V (60 to 120 times per minute)
2 - body ground	Turn signal switch (right turn) OFF → ON	0V 10 to 14 V (60 to 120 times per minute)
3 - body ground	Hazard switch OFF → ON	0V 10 to 14 V (60 to 120 times per minute)
3 - body ground	Turn signal switch (left turn) OFF → ON	0V 10 to 14 V (60 to 120 times per minute)
5 - body ground	Turn signal switch (left turn) OFF → ON	10 to 14 V → 0 V
6 - body ground	Turn signal switch (right turn) OFF → ON	10 to 14 V → 0 V
8 - body ground	Hazard switch OFF → ON	10 to 14 V → 0 V



HEADLIGHT RELAY

INSPECTION

1. HEADLIGHT RELAY
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω; (When battery voltage is applied to terminals 1 - 2)

HEADLIGHT DIMMER RELAY

INSPECTION

1. DRL NO.2 RELAY

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

Resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)

2. DRL NO.3 RELAY

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

Resistance

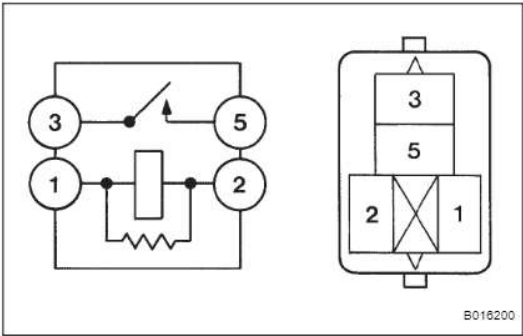
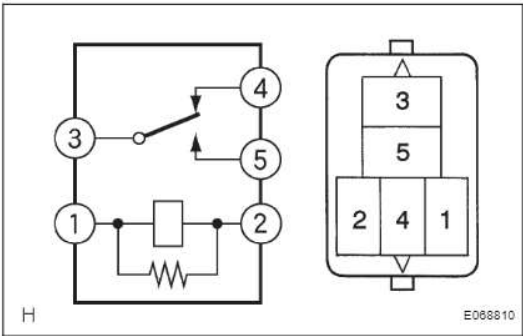
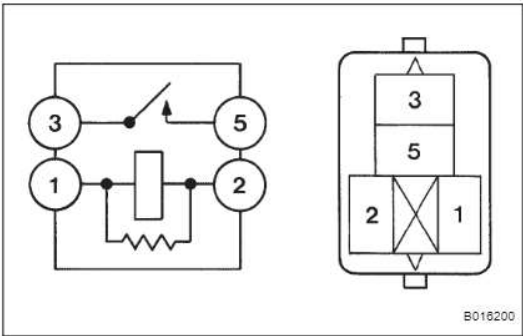
Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)
3 - 4	10 kΩ or higher (When battery voltage is applied to terminals 1 - 2)

3. DRL NO.4 RELAY

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

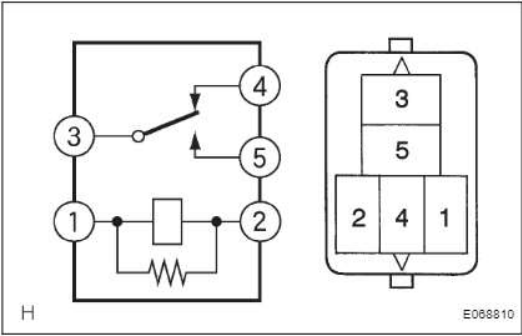
Resistance

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)



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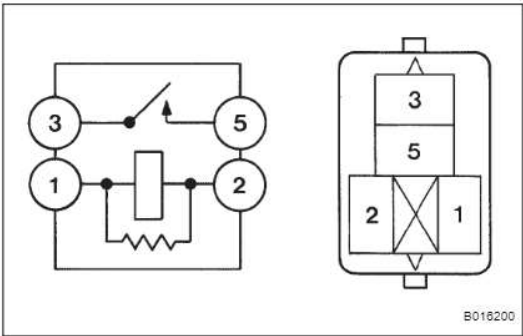
LIGHTING – TAILLIGHT RELAY



TAILLIGHT RELAY
INSPECTION

1. TAIL LIGHT RELAY
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)
3 - 4	10 kΩ or higher (When battery voltage is applied to terminals 1 - 2)



FOG LIGHT RELAY

INSPECTION

1. **FOG LIGHT RELAY**
- (a) Measure the resistance according to the value(s) in the table below.
- Resistance**

Tester connection	Specified condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 - 2)