LIGHTING SYSTEM

PRECAUTION

1. PRECAUTION FOR USING BATTERY DURING INSPECTION

(a) While using the battery during inspection, do not bring the positive and negative tester probes too close to each other as a short circuit may occur.

2. PRECAUTION FOR HEADLIGHT BULB REPLACEMENT

(a) If even a thin film of oil is left on the surface of the halogen light, the bulb may be damaged 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 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.

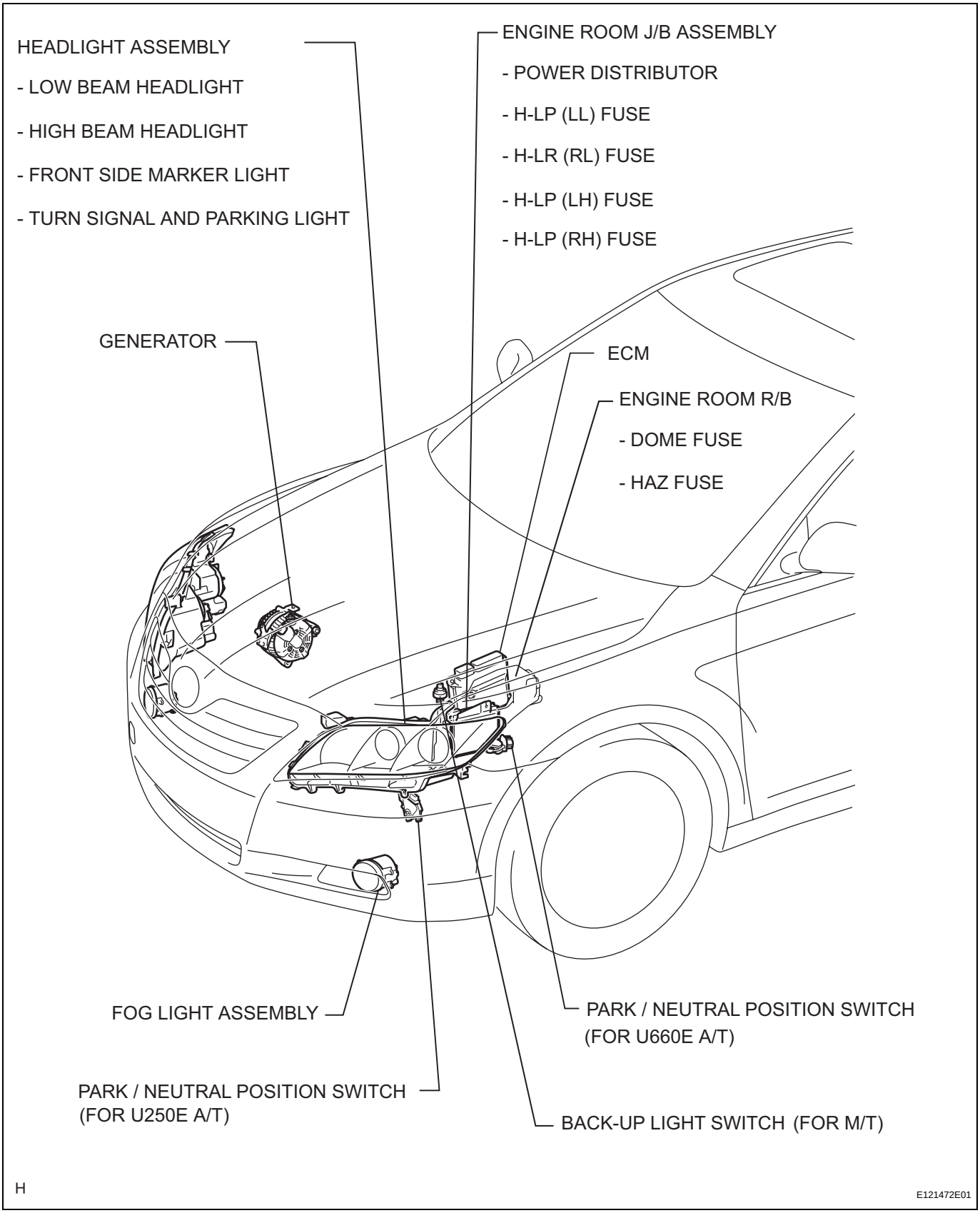
(e) Firmly reinstall the socket after bulb replacement. The lens may become cloudy or the light cavity may fill with water through the gaps around the socket.

3. EXPRESSIONS OF IGNITION SWITCH

(a) The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this section.

Switch Type		Ignition Switch (position)	Engine Switch (condition)
Expression	Ignition switch off	LOCK	Off
	Ignition switch on (IG)	ON	On (IG)
	Ignition switch on (ACC)	ACC	On (ACC)
	Engine start	START	Start

PARTS LOCATION



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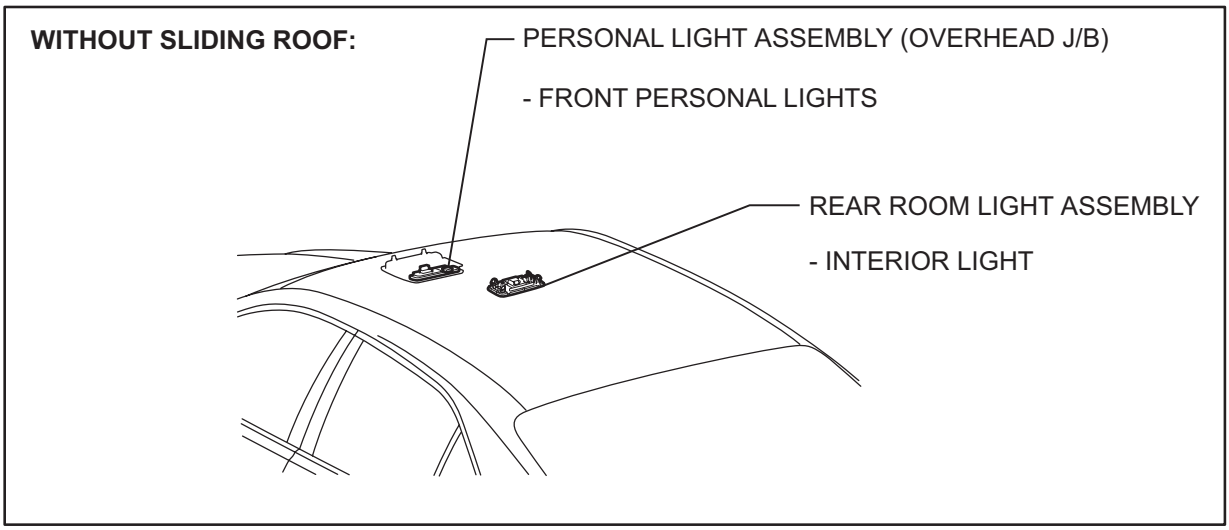
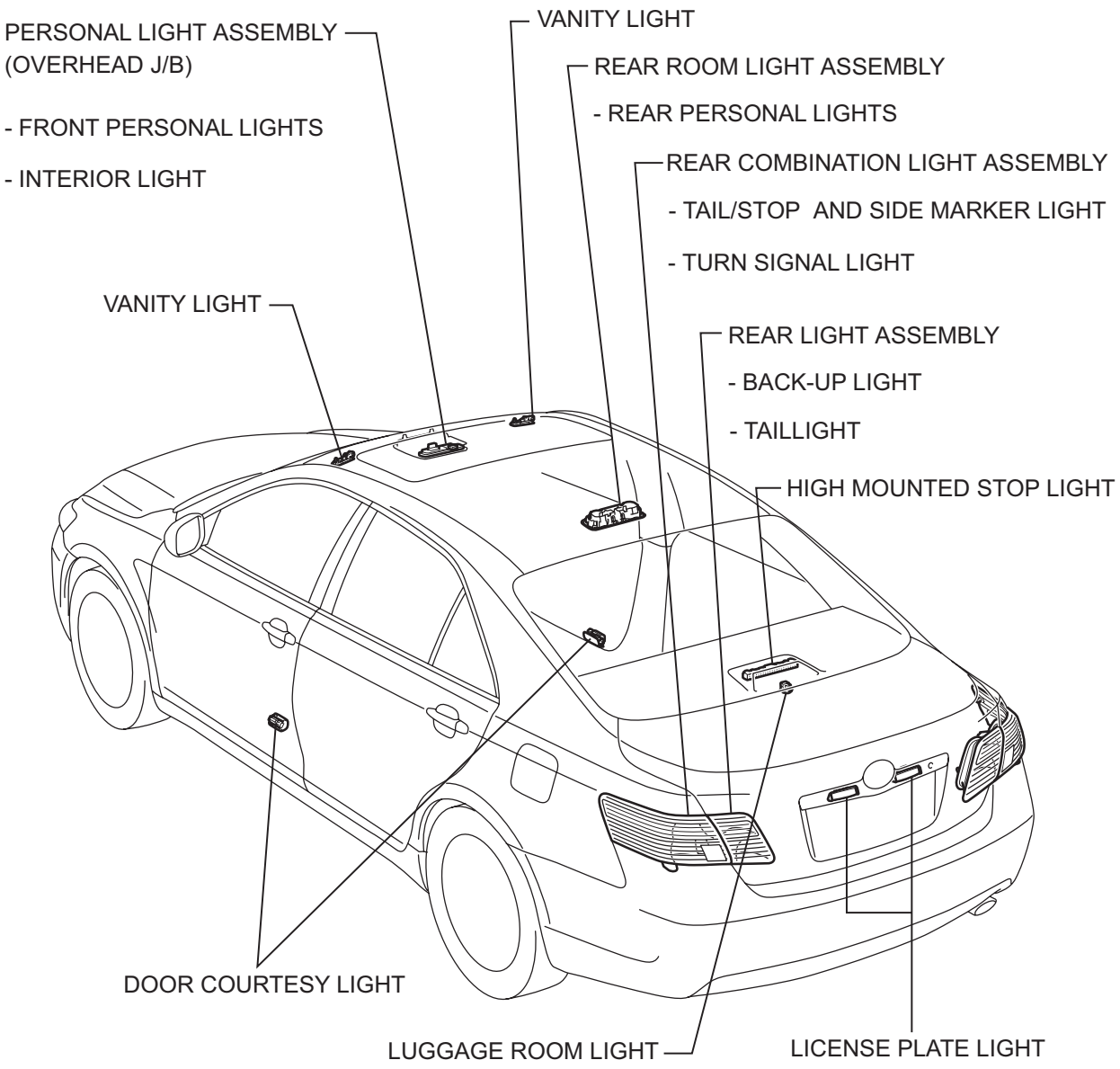
WITHOUT SLIDING ROOF:





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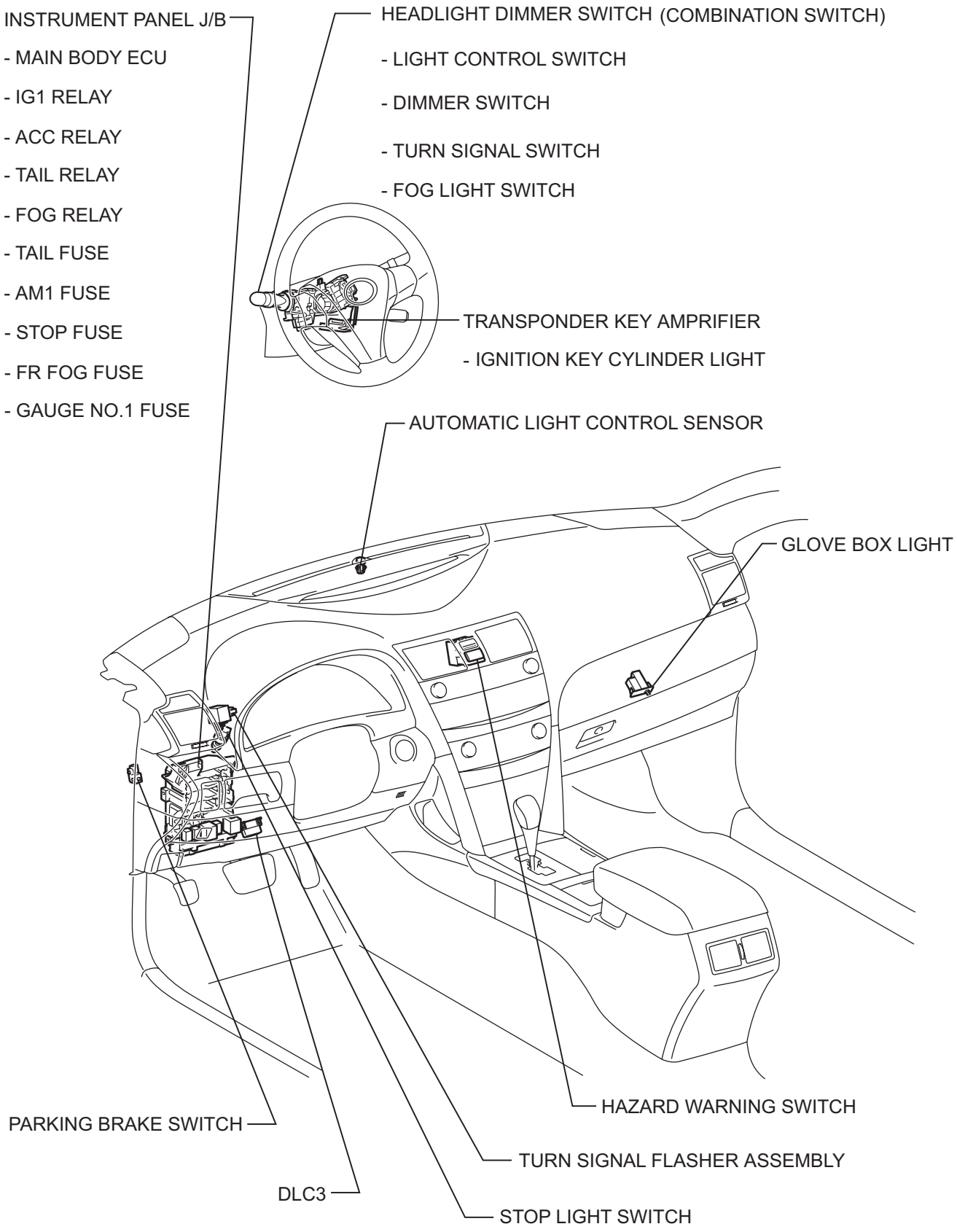

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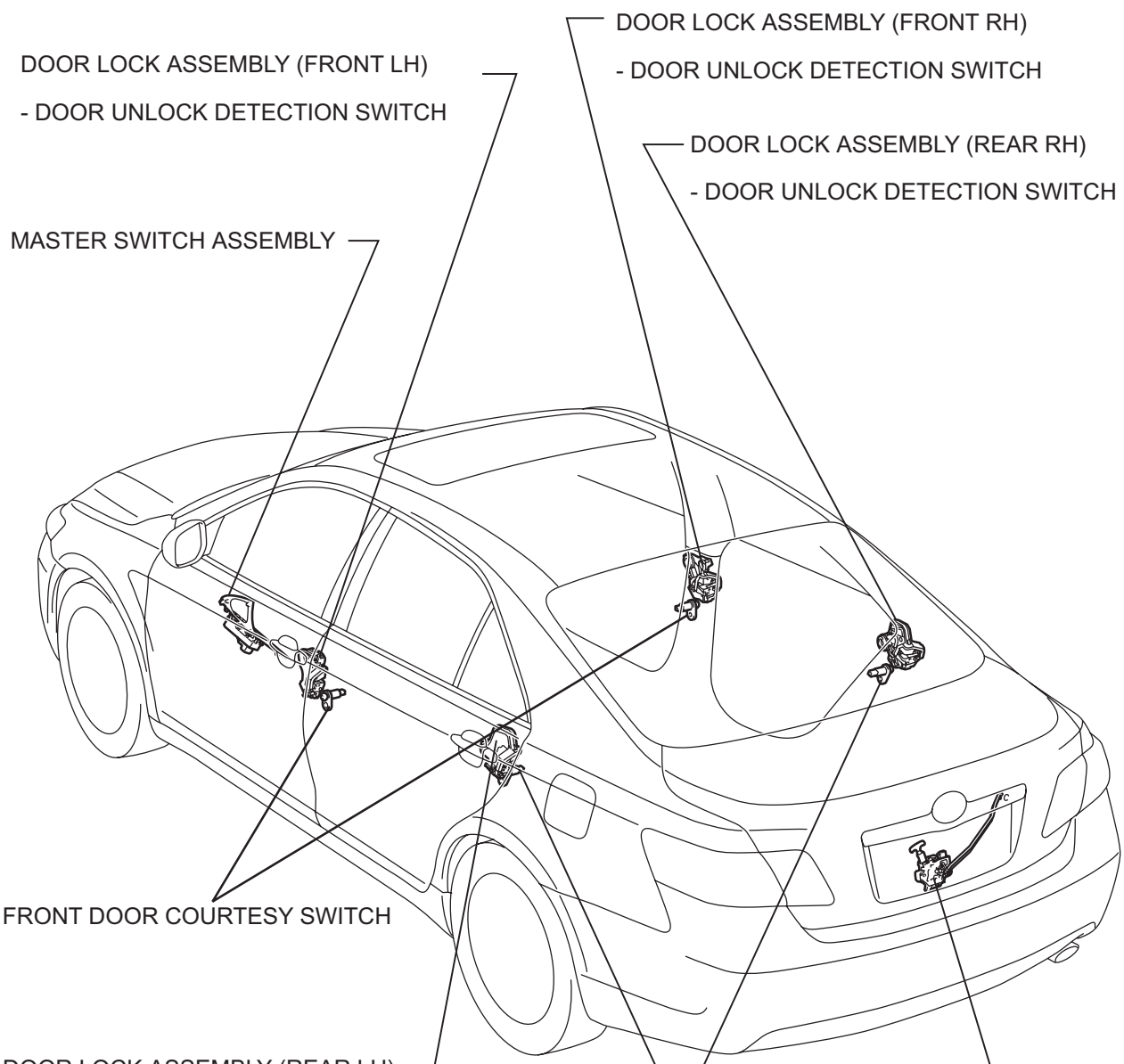

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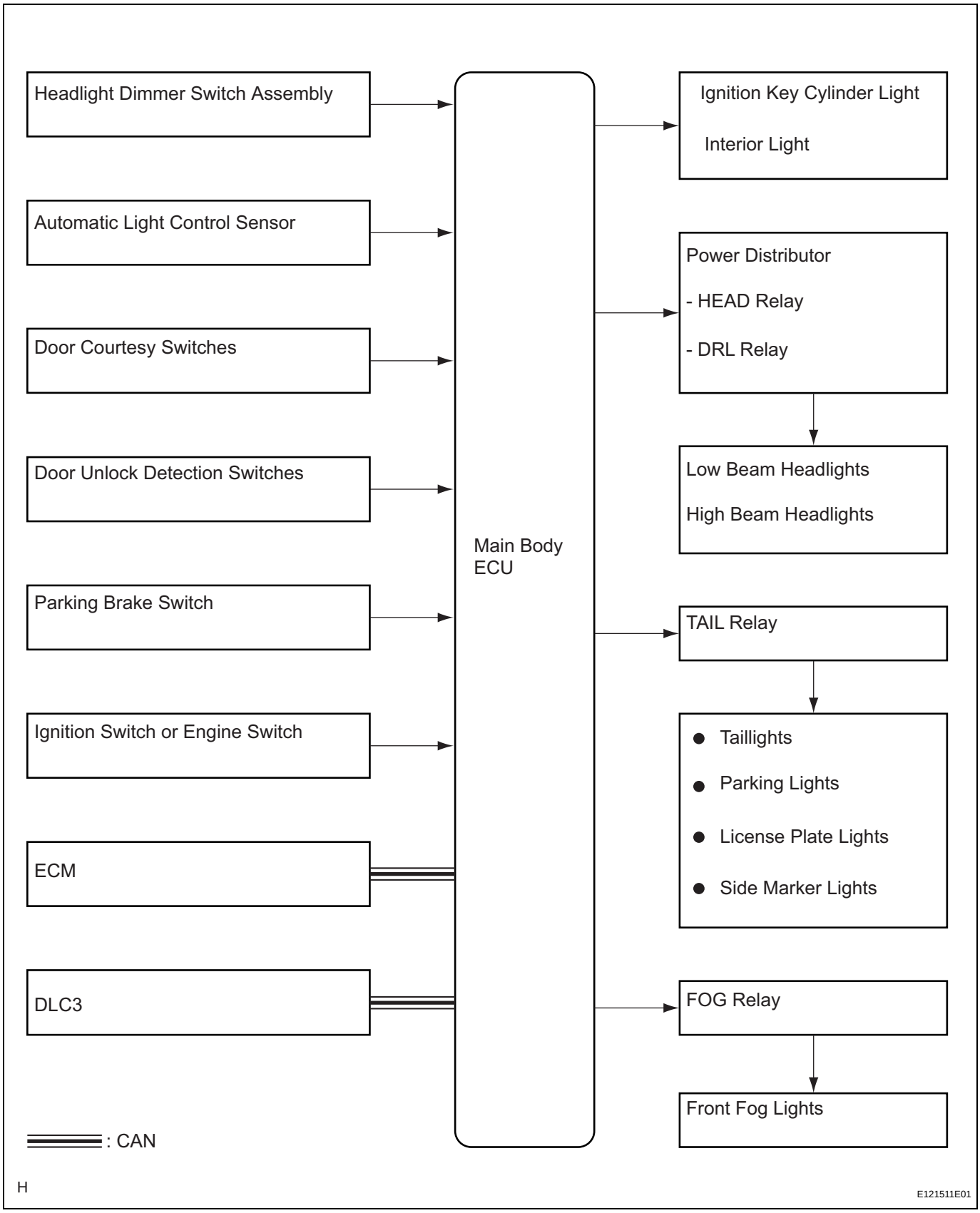
SYSTEM DIAGRAM



SYSTEM DESCRIPTION

1. MANUAL LIGHT CONTROL SYSTEM

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

(a) The main body ECU controls this system based on the signals listed below.

Input	Output	Lights that illuminate
Light control switch TAIL signal	Taillight relay drive signal	• Taillights • License plate lights • Side marker lights • Parking lights
Light control switch HEAD signal	Headlight relay drive signal	Low beam headlights

2. AUTOMATIC LIGHT CONTROL SYSTEM

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

(a) The main body ECU controls this system based on the signals listed below.

Input	Output	Lights that illuminate
• Light control switch AUTO signal • Automatic light control sensor signal	• Headlight relay drive signal • Taillight relay drive signal	• Low beam headlights • Taillights • License plate lights • Side marker lights • Parking lights

3. LIGHT AUTO TURN OFF SYSTEM

When the headlights and taillights are on through the operation of the automatic light control system or through the 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 and taillights.

However, if the ignition switch is turned off and all doors are locked, this system turns off the headlights and taillights immediately.

(a) The main body ECU controls this system based on the signals listed below.

Input	Output	Lights that operate
• Door courtesy switch signal • Ignition switch or engine switch signal	• Headlight relay OFF demand • Taillight relay OFF demand • DRL relay OFF demand • FOG light relay OFF demand	• Low beam headlights • Taillights, license plate lights, parking lights, and side marker lights • High beam headlights • Front fog lights

4. DAYTIME RUNNING LIGHT SYSTEM

The daytime running light system is designed to automatically illuminate the headlights (dimmed HI beams), during the daytime to make the car more visible to other vehicle.

(a) The main body ECU controls this system.
The daytime running light system starts operating when all of the following conditions are met:

Items	Conditions
Ignition switch or engine switch	On (IG)
Engine	Running
Light control switch position	OFF, TAIL or AUTO position (if headlight-on control is not being performed by the automatic light control)
Parking brake switch	Released (OFF)

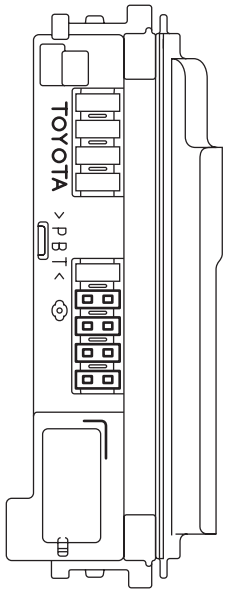
5. ILLUMINATED ENTRY SYSTEM

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

(a) The main body ECU controls this system. The operation and condition of the illuminated entry system are described below.

Operation	Condition
Fade in	When any of the following conditions is met, the interior light and ignition key cylinder light fade in. • Any door is opened. • Any door is unlocked when the ignition switch is off and all doors are closed. • Ignition switch is turned from on (ACC) to off when all doors are closed.
Fade out immediately	When either of the following conditions is met, the interior light and ignition key cylinder light fade out immediately. • Ignition switch is turned from off to on (ACC or IG) when all doors are closed. • All doors are locked when the ignition switch is off.
Illuminate for approximately 15 seconds, and then fade out	All doors are closed when the ignition switch is off.
Fade out (Battery saving)	When the following conditions are met, the interior light and ignition key cylinder light fade out. • A key is not in the actuation area (with smart key system). • A key is not inserted in the ignition key cylinder (without smart key system). • There are no changes in the condition of the doors for 20 minutes.

Power Distributor (Engine Room J/B)



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6. POWER DISTRIBUTOR

(a) The power distributor (engine room J/B assembly) is installed in the engine room R/B.

(b) The HEAD relay and DRL relay are installed in the power distributor (engine room J/B assembly).

(c) When a short circuit occurs between the power distributor (engine room J/B assembly) and high beam headlight bulbs, a fail-safe function operates.

(d) When the fail-safe function operates, the power distributor stops the operation of the DRL relay.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedures to troubleshoot the lighting system.
- *: Use the intelligent tester.

1	VEHICLE BROUGHT TO WORKSHOP

NEXT

2	CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

NEXT

3	INSPECT BATTERY VOLTAGE

Standard voltage:
11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

4	INSPECT CAN COMMUNICATION SYSTEM*

(a) Use the intelligent tester to check if the CAN communication system is functioning normally.

Result

Result	Proceed to
CAN communication system DTC is not output	A
CAN communication system DTC is output	B

B → **Go to step 8**

A

5	CHECK FOR DTC*

Result

Result	Proceed to
DTC is not output	A
DTC is output	B

B → **Go to step 8**

A

LI

6	PROBLEM SYMPTOMS TABLE

Result

Result	Proceed to
Fault is not listed in problem symptoms table	A
Fault is listed in problem symptoms table	B

B → **Go to step 8**

A

7	OVERALL ANALYSIS AND TROUBLESHOOTING*

(a) Data List / Active Test (See page LI-21)
(b) Terminals of ECU (See page LI-16)

NEXT

8	ADJUST, REPAIR OR REPLACE

NEXT

9	CONFIRMATION TEST

NEXT

END

CUSTOMIZE PARAMETERS

HINT:
The followings are the possible items to be customized.
NOTICE:

- **Before attempting to customize vehicle settings, confirm whether it is possible to make the change that the customer has requested.**
- **Be sure to record the current value before customizing.**
- **In case of performing the troubleshooting, pay attention because there is a possibility that the function has been disabled by customizing. (Example: In case of the symptom in which "The wireless operation does not function", check that the wireless operation has not been disabled by customizing, then perform the troubleshooting.)**

ILLUMINATED ENTRY:

Display	Default	Contents	Setting
LIGHTING TIME	15 s	Changes the lighting time of the interior light and ignition key cylinder light.	7.5 s / 15 s / 30 s
I/L ON / UNLOCK	ON	Lights up the interior light and ignition key cylinder light when a door is unlocked.	ON / OFF
I/L ON / ACC OFF	ON	Lights up the interior light and ignition key cylinder light when the ignition switch is turned from on (ACC) to off	ON / OFF

LIGHT CONTROL:

Display	Default	Contents	Setting
LIGHT OFF DELAY	30 s	Keeps the headlights on for a certain period of time after turning the ignition switch off and closing all the doors with the headlights on.	OFF / 30 s / 60 s / 90 s
SENSITIVITY	NORMAL	Adjusts the sensitivity of the automatic light control system. *1	LIGHT 2 / LIGHT 1 / NORMAL / DARK 1 / DARK 2
DISP EX ON SEN	NORMAL	Changes the ambient brightness level required to dim the clock display illumination, etc. *1	LIGHT 2 / LIGHT 1 / NORMAL / DARK 1 / DARK 2
DISP EX OFF SEN	NORMAL	Changes the ambient brightness level required to cancel the dimming of the clock display illumination, etc.	LIGHT 2 / LIGHT 1 / NORMAL / DARK 1 / DARK 2

HINT:
Sensitivity adjustment can hardly be confirmed. Check by driving the customer's vehicle.

Illustration *1

Ambient Brightness Level	Dark ← → Bright				
Setting	DARK2	DARK1	NORMAL	LIGHT1	LIGHT2

PROBLEM SYMPTOMS TABLE

1. Headlight system:

Symptom	Suspected area	See page
One side LO-beam headlight does not illuminate	1. H-LP RL fuse or H-LP LL fuse	-
	2. Bulb	-
	3. Harness or connector	-
	4. Power distributor (Engine room J/B)	-
Both left and right LO-beam headlights do not illuminate	1. H-LP RL fuse and H-LP LL fuse	-
	2. Bulb	-
	3. Light control switch circuit	LI-48
	4. Headlight relay circuit	LI-35
	5. Main body ECU (Instrument panel J/B)	-
One side HI-beam headlight does not illuminate	1. H-LP RH fuse or H-LP LH fuse	-
	2. Bulb	-
	3. Harness or connector	-
	4. Power distributor (Engine room J/B)	-
Both left and right HI-beam headlights do not illuminate	1. H-LP RH fuse and H-LP LH fuse	-
	2. Bulb	-
	3. Light control switch circuit	LI-48
	4. Headlight (HI-BEAM) circuit	LI-39
	5. Main body ECU (Instrument panel J/B)	-
"Flash" headlights do not illuminate	1. Light control switch circuit	LI-48
	2. Main body ECU (Instrument panel J/B)	-
LO-beam headlights or HI-beam headlights do not go off	1. Headlight dimmer switch assembly	LI-120
	2. Power distributor (Engine room J/B)	-
	3. Harness or connector	-
	4. Main body ECU (Instrument panel J/B)	-

2. Daytime running light system:

Symptom	Suspected area	See page
Day time running light system does not operate	1. Light control switch circuit	LI-48
	2. Parking brake switch circuit	LI-61
	3. Power distributor (Engine room J/B)	-
	4. Main body ECU (Instrument panel J/B)	-
	5. ECM	-

3. Taillight system:

Symptom	Suspected area	See page
Front parking light does not illuminate	1. Bulb	-
	2. Harness or connector	-
Rear taillight does not illuminate	1. Bulb	-
	2. Harness or connector	-
License plate light does not illuminate	1. Bulb	-
	2. Harness or connector	-
Front side marker light does not illuminate	1. Bulb	-
	2. Harness or connector	-
Taillight system does not operate (Taillights, front side marker lights, parking lights, and license plate lights do not illuminate)	1. TAIL fuse	-
	2. Taillight relay	LI-141
	3. Light control switch circuit	LI-48
	4. Taillight relay circuit	LI-65
	5. Main body ECU (Instrument panel J/B)	-

4. Stop light system:

Symptom	Suspected area	See page
Stop light system does not operate	1. Bulb	-
	2. Stop fuse	-
	3. Stop light switch	LI-125
	4. Harness or connector	-
One side stop light does not illuminate	1. Bulb	-
	2. Harness or connector	-
Hi-mounted stop light does not illuminate	1. Bulb	-
	2. Harness or connector	-

5. Front fog light system:

Symptom	Suspected area	See page
One side fog light does not illuminate	1. Bulb	-
	2. Harness or connector	-
Both left and right fog lights do not illuminate (Taillight system is normal)	1. FR FOG fuse	-
	2. FR FOG relay	LI-142
	3. Light control switch circuit	LI-48
	4. Front fog light circuit	LI-44
	5. Main body ECU (Instrument panel J/B)	-

6. Turn signal and hazard warning system:

Symptom	Suspected area	See page
Hazard warning lights do not operate (Turn signal lights are normal)	1. HAZ fuse	-
	2. Hazard warning signal switch	LI-123
	3. Clock assembly	OT-4
	4. Turn signal flasher assembly	LI-138
	5. Harness or connector	-
Turn signal lights do not operate (Hazard warning lights are normal)	1. GAUGE No. 1 fuse	-
	2. Headlight dimmer switch assembly (Turn signal switch)	LI-120
	3. Turn signal flasher assembly	LI-138
	4. Harness or connector	-
"Hazard" and "Turn" do not operate	1. HAZ fuse and GAUGE No. 1 fuse	-
	2. Bulb	-
	3. Turn signal flasher assembly	LI-138
	4. Hazard warning signal switch	LI-123
	5. Headlight dimmer switch assembly (Turn signal switch)	LI-120
	6. Clock assembly	OT-4
	7. Harness or connector	-
Turn signal lights do not operate in one direction	1. Headlight dimmer switch assembly (Turn signal switch)	LI-120
	2. Turn signal flasher assembly	LI-138
	3. Harness or connector	-
Only one bulb does not operate	1. Bulb	-
	2. Harness or connector	-

7. Buck-up light system:

Symptom	Suspected area	See page
One side back-up light does not illuminate	1. Bulb	-
	2. Harness or connector	-

Symptom	Suspected area	See page
Both left and right back-up lights do not illuminate	1. Bulb	-
	2. GAUGE No. 1 fuse	-
	3. Buck-up light switch (for M/T)	LI-127
	4. Park/Neutral position switch (for U250E A/T)	AX-129
	5. Park/Neutral position switch (for U660E A/T)	AX-175
	6. Harness or connector	-

8. Illuminated entry system:

Symptom	Suspected area	See page
Only interior light does not illuminate	1. Bulb	-
	2. Personal light assembly (with sliding roof)	LI-105
	3. Rear room light assembly (without sliding roof)	LI-108
	4. Harness or connector	-
Only ignition key cylinder light does not illuminate	1. Transponder key amplifier (Ignition key cylinder light)	LI-113
	2. Harness or connector	-
Interior light and ignition key cylinder light do not operate normally	1. DOME fuse	-
	2. Personal light assembly	LI-105
	3. Rear room light assembly	LI-108
	4. Transponder key amplifier	LI-113
	5. Door courtesy switch circuit	LI-52
	6. Door lock position switch circuit	LI-55
	7. Ignition switch circuit	LI-28
	8. Interior light circuit	LI-57
	9. Main body ECU (Instrument panel J/B)	-

9. Vanity light system:

Symptom	Suspected area	See page
Vanity light does not illuminate	1. Bulb	-
	2. Vanity light assembly	LI-116
	3. Visor assembly (Vanity light switch)	-
	4. Harness or connector	-

10. Luggage compartment light system:

Symptom	Suspected area	See page
Luggage compartment light does not illuminate	1. Luggage compartment light	LI-111
	2. Luggage compartment door lock assembly (Door courtesy switch)	LI-132
	3. Harness or connector	-

11. Glove box light system:

Symptom	Suspected area	See page
Glove box light does not illuminate	1. Bulb	-
	2. Glove box light assembly	LI-115
	3. Harness or connector	-

12. Door courtesy light system:

Symptom	Suspected area	See page
Door courtesy light does not illuminate	1. Door courtesy light	LI-109
	2. Front door courtesy switch	LI-129
	3. Harness or connector	-

13. Personal light system:

Symptom	Suspected area	See page
Front personal lights do not illuminate	1. Bulb	-
	2. Personal light assembly	LI-105
	3. Harness or connector	-
Rear personal lights do not illuminate	1. Bulb	-
	2. Rear room light assembly	LI-108
	3. Harness or connector	-

14. Automatic light control system:

Symptom	Suspected area	See page
Automatic light control system does not operate normally	1. Light control switch circuit	LI-48
	2. Automatic light control sensor circuit	LI-23
	3. Main body ECU (Instrument panel J/B)	-

15. Light auto turn off system:

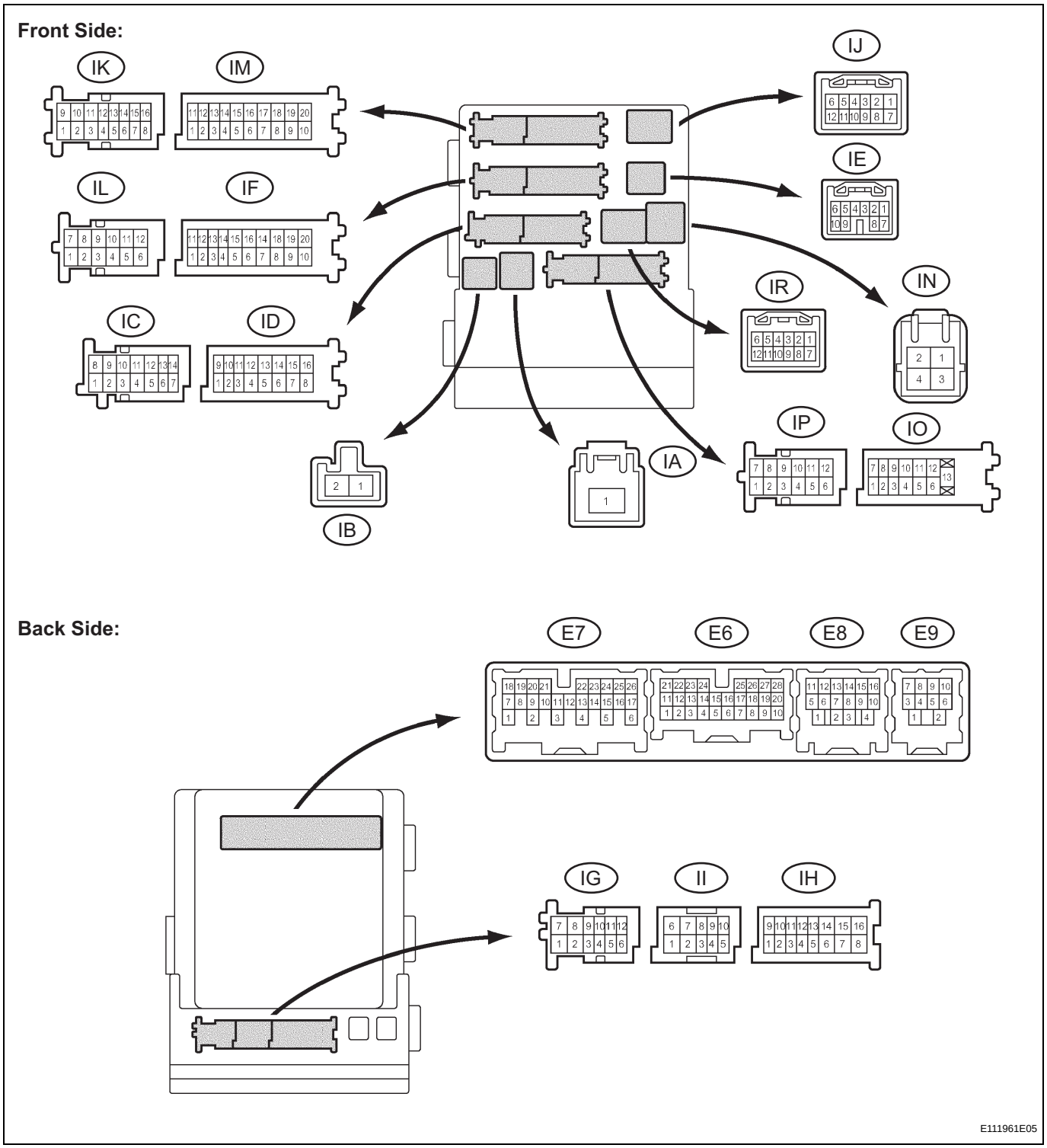
Symptom	Suspected area	See page
Light auto turn off system does not operate normally	1. Light control switch circuit	LI-48
	2. Door courtesy switch circuit	LI-52
	3. Main body ECU (Instrument panel J/B)	-

16. Battery saving system:

Symptom	Suspected area	See page
Battery saving function does not operate	1. Door courtesy switch circuit	LI-52
	2. Main body ECU (Instrument panel J/B)	-

TERMINALS OF ECU

1. CHECK MAIN BODY ECU (INSTRUMENT PANEL J/B)



(a) Disconnect the IA, ID, IF and IM J/B connectors.
(b) Measure the voltage and resistance between the specified terminals of the wire harness side connectors and body ground.

Standard voltage

Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
IA-1 - Body ground	B - Body ground	Battery power supply	Always	10 to 14 V

LI

Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
ALTB (ID-16) - Body ground	W - Body ground	Generator power supply	Always	10 to 14 V

Standard resistance

Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
GND1 (IF-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (IM-9) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the IA, ID, IF, and IM J/B connectors.

(d) Measure the resistance and voltage between the specified terminals of the J/B connectors and body ground.

Standard resistance

Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
CLTE (E6-18) - Body ground	BR - Body ground	Automatic light control ground	Always	Below 1 Ω

Standard voltage

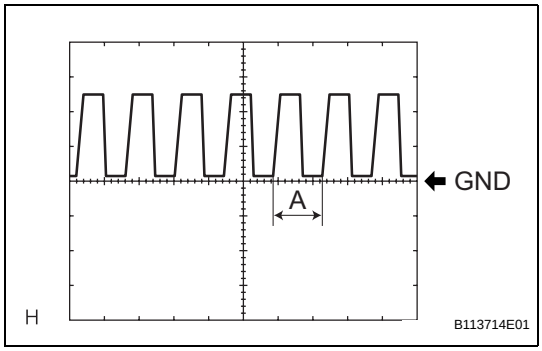
Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
PKB (IC-14) - Body ground (*3)	L - Body ground	Parking brake switch input	Parking brake switch ON	Below 1 V
			Parking brake switch OFF	10 to 14 V
HRLY (ID-3) - Body ground	P - Body ground	Headlight relay drive output	Light control switch in HEAD	Below 1 V
			Light control switch not in HEAD	10 to 14 V
DRL (ID-9) - Body ground	V - Body ground	High beam headlights drive output	Dimmer switch in HIGH or HIGH FLASH	Below 1 V
			Dimmer switch in LOW	10 to 14 V
HU (IG-5) - Body ground	LG - Body ground	Dimmer switch HIGH input	Dimmer switch in HIGH or HIGH FLASH	10 to 14 V
			Dimmer switch in LOW	Below 1 V
ILE (II-10) - Body ground (*2)	BR - Body ground	Interior light and ignition key cylinder light drive output	Interior light and ignition key cylinder light ON	Below 1 V
			Interior light and ignition key cylinder light OFF	10 to 14 V
PKB (IM-2) - Body ground (*4)	Y - Body ground	Parking brake switch input	Parking brake switch ON	Below 1 V
			Parking brake switch OFF (Released)	10 to 14 V
LCTY (IO-7) - Body ground	LG - Body ground	Rear left door courtesy switch input	Rear left door open	Below 1 V
			Rear left door closed	10 to 14 V
LSR (IP-5) - Body ground (*2)	GR - Body ground	Rear left door lock position switch input	Rear left door locked	10 to 14 V
			Rear left door unlocked	Below 1 V
LSWL (IP-5) - Body ground (*2)	GR - Body ground	Rear left door lock position switch input	Rear left door locked	10 to 14 V
			Rear left door unlocked	Below 1 V
HEAD (E6-17) - Body ground	P - Body ground	Light control switch HEAD input	Light control switch in HEAD	Below 1 V
			Light control switch not in HEAD	10 to 14 V

Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
CLTS (E6-19) - Body ground	G - Body ground	Automatic light control sensor signal input	Ignition switch off	Below 1 V
			Automatic light control system operates	Pulse generation (See waveform 1)
CLTB (E6-20) - Body ground	B - Body ground	Automatic light control sensor power supply output	Ignition switch off	Below 1 V
			Ignition switch on (IG) and light control switch in AUTO	10 to 14 V
PCTY (E6-21) - Body ground	Y - Body ground	Passenger side door courtesy switch input	Passenger side door open	Below 1 V
			Passenger side door closed	10 to 14 V
LGCY (E6-25) - Body ground	W - Body ground	Luggage courtesy switch input	Luggage compartment door open	Below 1 V
			Luggage compartment door closed	10 to 14 V
LSWP (E6-27) - Body ground	LG - Body ground	Passenger side door lock position switch input	Passenger side door locked	10 to 14 V
			Passenger side door unlocked	Below 1 V
FFOG (E6-28) - Body ground	V - Body ground	Front fog light switch input	Front fog light switch ON	Below 1 V
			Front fog light switch OFF	10 to 14 V
LSWR (E6-5) - Body ground (*1)	V - Body ground	Rear right door lock position switch input	Rear right door locked	10 to 14 V
			Rear right door unlocked	Below 1 V
RCTY (E6-5) - Body ground (*2)	GR - Body ground	Rear right door courtesy switch input	Rear right door open	Below 1 V
			Rear right door closed	10 to 14 V
RCTY (E6-7) - Body ground (*1)	GR - Body ground	Rear right door courtesy switch input	Rear right door open	Below 1 V
			Rear right door closed	10 to 14 V
HF (E7-13) - Body ground	R - Body ground	Dimmer switch HIGH FLASH signal input	Dimmer switch in HIGH FLASH position	Below 1 V
			Dimmer switch not in HIGH FLASH position	10 to 14 V
SSW2 (E7-16) - Body ground (*1)	V - Body ground	Engine switch input	Engine switch not pushed	10 to 14 V
			Engine switch pushed	Below 1 V
SSW1 (E7-17) - Body ground (*1)	L - Body ground	Engine switch input	Engine switch not pushed	10 to 14 V
			Engine switch pushed	Below 1 V
A (E7-21) - Body ground	G - Body ground	Light control switch AUTO signal input	Light control switch in AUTO	Below 1 V
			Light control switch not in AUTO	10 to 14 V
ACCD (E7-22) - Body ground (*1)	W - Body ground	Accessory relay drive output	Ignition switch on (ACC)	Below 1 V
			Ignition switch off	10 to 14 V
TAIL (E7-23) - Body ground	B - Body ground	Light control switch TAIL signal input	Light control switch in TAIL or HEAD	Below 1 V
			Light control switch in neither TAIL nor HEAD	10 to 14 V
DCTY (E7-24) - Body ground	L - Body ground	Driver side door courtesy switch input	Driver side door open	Below 1 V
			Driver side door closed	10 to 14 V
IG1D (E7-3) - Body ground (*1)	P - Body ground	Ignition 1 relay drive output	Ignition switch on (IG)	Below 1 V
			Ignition switch off	10 to 14 V

Symbols	Wiring Color	Terminal Description	Condition	Specified Condition
FFGO (E7-4) - Body ground	R - Body ground	Front fog light relay drive output	Light control switch in HEAD and front fog light switch ON	Below 1 V
			Front fog light switch OFF	10 to 14 V
LSWD (E7-9) - Body ground	L - Body ground	Driver side door lock position switch input	Driver side door locked	10 to 14 V
			Driver side door unlocked	Below 1 V
CANH (E8-5) - Body ground	R - Body ground	Control system CAN communication	Ignition switch on (IG)	Pulse generation
			Ignition switch off	Below 1 V
CANL (E8-6) - Body ground	W - Body ground	Control system CAN communication	Ignition switch on (IG)	Pulse generation
			Ignition switch off	Below 1 V

If the result is not as specified, the main body ECU (Instrument panel J/B) may have a malfunction.
HINT:
*1: with smart key system
*2: without smart key system
*3: Pedal type parking brake
*4: Lever type parking brake

(1) Waveform 1



Item	Contents
Tool setting	5 V/DIV., 5 ms./DIV.

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

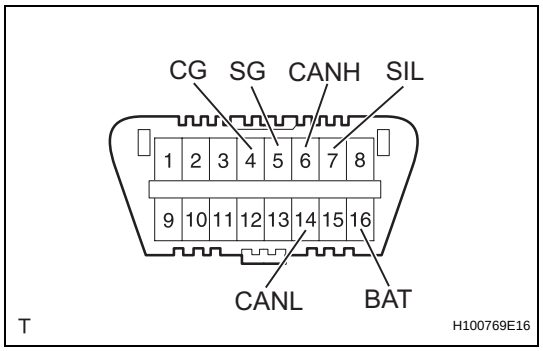
DIAGNOSIS SYSTEM

1. DESCRIPTION

(a) Lighting system data and the Diagnostic Trouble Codes (DTCs) can be read from the Data Link Connector 3 (DLC3) of the vehicle. When the system seems to be malfunctioning, use the intelligent tester to check for malfunctions and perform repairs.

2. CHECK DLC3

(a) The ECU uses ISO 15765-4 for communication. The terminal arrangement of the DLC3 complies with SAE J1962 and matches the ISO 15765-4 format.

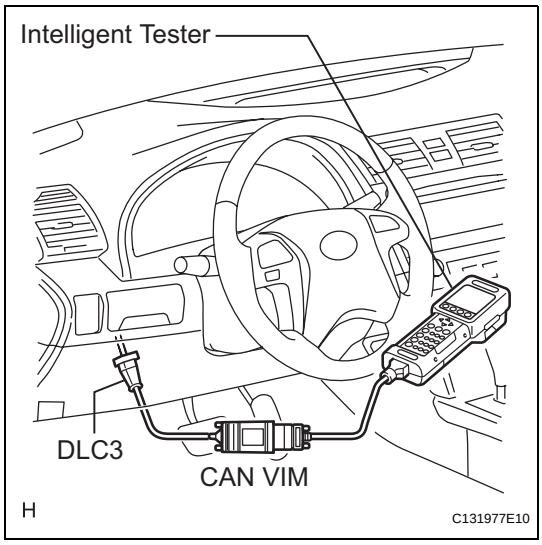


Symbols (Terminal No.)	Terminal Description	Condition	Specified Condition
SIL (7) - SG (5)	Bus "+" line	During transmission	Pulse generation
CG (4) - Body ground	Chassis ground	Always	Below 1 Ω
SG (5) - Body ground	Signal ground	Always	Below 1 Ω
BAT (16) - Body ground	Battery positive	Always	11 to 14 V
CANH (6) - CANL (14)	CAN bus line	Ignition switch off*	54 to 69 Ω
CANH (6) - CG (4)	HIGH-level CAN bus line	Ignition switch off*	200 Ω or higher
CANL (14) - CG (4)	LOW-level CAN bus line	Ignition switch off*	200 Ω or higher
CANH (6) - BAT (16)	HIGH-level CAN bus line	Ignition switch off*	6 kΩ or higher
CANL (14) - BAT (16)	LOW-level CAN bus line	Ignition switch off*	6 kΩ or higher

NOTICE:

***Before measuring the resistance, leave the vehicle as is for at least 1minute and do not operate the ignition switch, any other switches, or the doors.**

If the result is not as specified, the DLC3 may have a malfunction. Repair or replace the harness and connector.



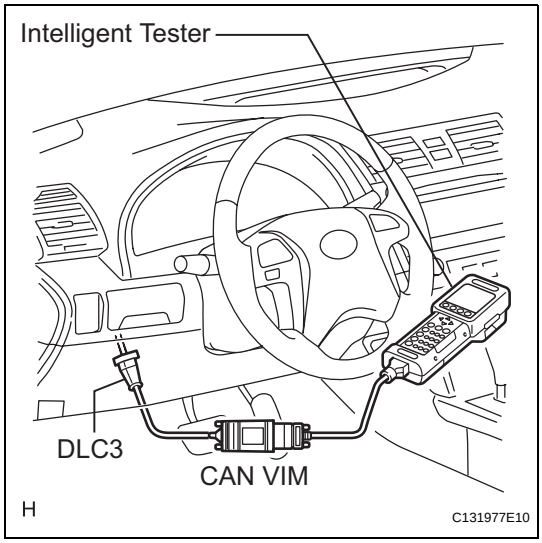
(b) Connect the cable of the intelligent tester to the DLC3, turn the ignition switch on (IG) and attempt to use the tester. If the display indicates that a communication error has occurred, there is a problem either with the vehicle or with the tester.
HINT:
- If communication is normal when the tester is connected to another vehicle, inspect the DLC3 of the original vehicle.
- If communication is still not possible when the tester is connected to another vehicle, the problem may be in the tester itself. Consult the Service Department listed in the tester's instruction manual.

3. INSPECT BATTERY VOLTAGE

Standard voltage:

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.



DTC CHECK / CLEAR

1. CHECK DTC

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG).
(c) Read the DTCs by following the directions on the tester screen.
HINT:
Please refer to the intelligent tester operator's manual for further details.

2. CLEAR DTC

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG).
(c) Erase the DTCs by following the directions on the tester screen.
HINT:
Please refer to the intelligent tester operator's manual for further details.

DATA LIST / ACTIVE TEST

1. READ DATA LIST

HINT:

Using the intelligent tester DATA LIST allows switch, actuator and other item values to be read without removing any parts. Reading the DATA LIST early in troubleshooting is one way to save time.

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG).
(c) Read the DATA LIST according to the display on the tester.

MAIN BODY (MAIN BODY ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
ACC SW	Ignition switch or engine switch ACC signal / ON or OFF	ON: Ignition switch on (ACC or IG) OFF: Ignition switch off	-
IG SW	Ignition switch or engine switch IG signal / ON or OFF	ON: Ignition switch on (IG) OFF: Ignition switch off	-
D DOR CTY SW	Driver side door courtesy switch signal / ON or OFF	ON: Driver side door is open OFF: Driver side door is closed	-
P DOR CTY SW	Passenger side door courtesy switch signal / ON or OFF	ON: Front passenger side door is open OFF: Front passenger side door is closed	-
RR DOR CTY SW	Rear right door courtesy switch signal / ON or OFF	ON: Rear right door is open OFF: Rear right door is closed	-
RL DOR CTY SW	Rear left door courtesy switch signal / ON or OFF	ON: Rear left door is open OFF: Rear left door is closed	-
D LOCK POS SW	Driver side door lock position switch signal / ON or OFF	ON: Driver side door is unlocked OFF: Driver side door is locked	-
P LOCK POS SW	Passenger side door lock position switch signal / ON or OFF	ON: Front passenger side door is unlocked OFF: Front passenger side door is locked	-
RR LOCK POS SW (with Smart Key System)	Rear right door lock position switch signal / ON or OFF	ON: Rear right door is unlocked OFF: Rear right door is locked	-
RL. LOCK POS SW (with Smart Key System)	Rear left door lock position switch signal / ON or OFF	ON: Rear left door is unlocked OFF: Rear left door is locked	-
DIMMER SW	Dimmer switch HIGH signal / ON or OFF	ON: Dimmer switch in HIGH or HIGH FLASH OFF: Dimmer switch in LOW	-
HIGH FLASHER SW	Dimmer switch HIGH FLASH signal / ON or OFF	ON: Dimmer switch in HIGH FLASH OFF: Dimmer switch not in HIGH FLASH	-
F FOG LIGHT SW	Fog light switch signal / ON or OFF	ON: Fog light switch ON OFF: Fog light switch OFF	-
AUTO LIGHT SW	Light control switch AUTO signal / ON or OFF	ON: Light control switch in AUTO OFF: Light control switch not in AUTO	-
HEAD LIGHT SW	Light control switch HEAD signal / ON or OFF	ON: Light control switch in HEAD OFF: Light control switch not in HEAD	-
TAIL LIGHT SW	Light control switch TAIL signal / ON or OFF	ON: Light control switch in TAIL or HEAD OFF: Light control switch not in TAIL or HEAD	-

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
ILLUMINATE RATE	Illumination rate information / 0 ms. to 99.99 ms.	0.8 ms. to 22.0 ms. (Value is output according to ambient illuminance)	-
PARKING BRAKE SW	Parking brake switch signal / ON or OFF	ON: Parking brake switch is ON OFF: Parking brake switch is OFF	-

2. PERFORM ACTIVE TEST

HINT:

Performing the intelligent tester ACTIVE TEST allows a relay, VSV, actuator, and other items to be operated without removing any parts. Performing the ACTIVE TEST early in troubleshooting is one way to save time. The DATA LIST can be displayed during the ACTIVE TEST.

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG).
(c) Perform the ACTIVE TEST according to the display on the tester.

MAIN BODY (MAIN BODY ECU):

Item	Test Details	Diagnostic Note
F FOG LIGHT RLY	Front fog light relay ON / OFF	-
HEAD LIGHT	Headlight relay ON / OFF	-
HEAD LIGHT (HI)	High beam headlights ON / OFF	-
TAIL LIGHT	Taillight ON / OFF	-
DIMMER SIG	Dimmer signal ON / OFF	-
ILLUMI OUTPUT	Interior light and ignition key cylinder light ON / OFF (Interior light switch in DOOR position and all doors are closed)	-

DIAGNOSTIC TROUBLE CODE CHART

LIGHTING SYSTEM:

DTC No.	Detection Item	Suspected Area	See page
B1244	Light Sensor Circuit Malfunction	1. Automatic light control sensor 2. Harness or connector 3. Main body ECU (Instrument panel J/B)	LI-23

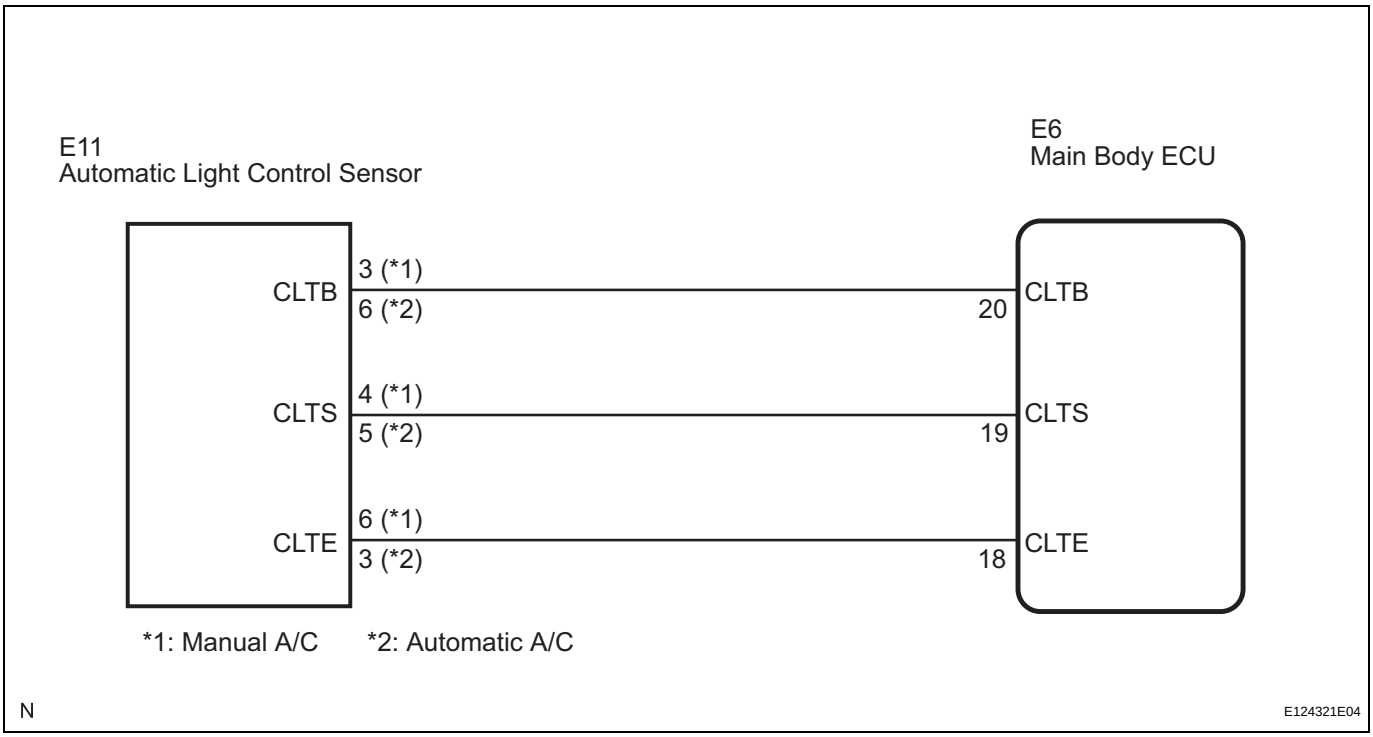
DTC	B1244	Light Sensor Circuit Malfunction

DESCRIPTION

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

DTC No.	DTC Detecting Condition	Trouble Area
B1244	• Malfunction in automatic light control sensor • Open or short in automatic light control sensor circuit	• Automatic light control sensor • Harness or connector • Main body ECU (Instrument panel J/B)

WIRING DIAGRAM



INSPECTION PROCEDURE

LI

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the item below in the DATA LIST, and read the display on the intelligent tester.

MAIN BODY (MAIN BODY ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
ILLUMINATE RATE	Illumination rate information / 0 ms to 99.99 ms	0.8 ms to 22.0 ms (Value is output according to ambient illuminance)	-

OK:

Normal condition listed above is displayed.

OK → **REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

NG

2 CHECK VEHICLE CONDITION

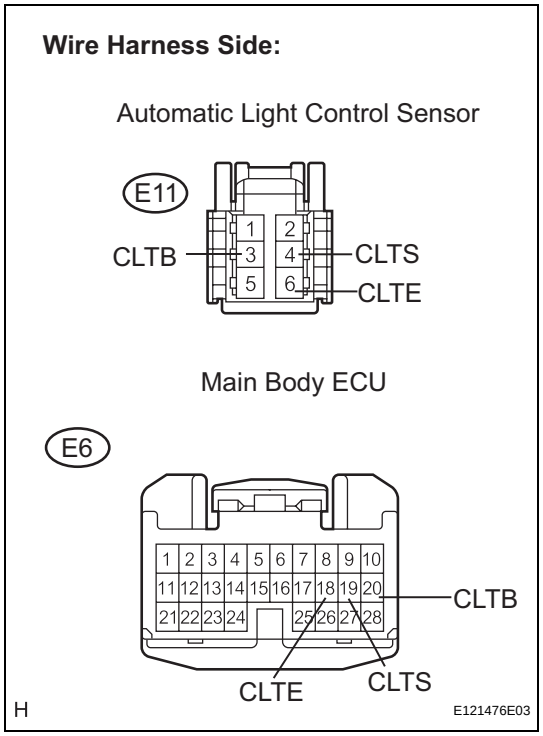
Result

Vehicle Condition	Proceed to
Manual Air Conditioning System	A
Automatic Air Conditioning System	B

B → **Go to step 6**

A

3 CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - AUTOMATIC LIGHT CONTROL SENSOR)



(a) Disconnect the E11 automatic light control sensor connector.
(b) Disconnect the E6 main body ECU connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

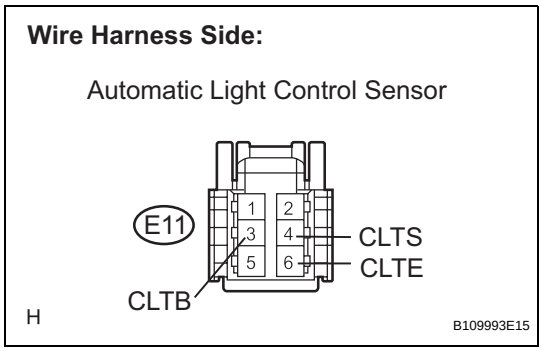
Tester Connection	Condition	Specified Condition
E6-18 (CLTE) - E11-6 (CLTE)	Always	Below 1 Ω
E6-19 (CLTS) - E11-4 (CLTS)	Always	Below 1 Ω
E6-20 (CLTB) - E11-3 (CLTB)	Always	Below 1 Ω
E6-18 (CLTE) - Body ground	Always	10 kΩ or higher
E6-19 (CLTS) - Body ground	Always	10 kΩ or higher
E6-20 (CLTB) - Body ground	Always	10 kΩ or higher

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

OK

4 INSPECT MAIN BODY ECU (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY)

(a) Reconnect the main body ECU connector.



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

Standard voltage

Tester Connection	Condition	Specified Condition
E11-3 (CLTB) - E11-6 (CLTE)	Ignition switch off	Below 1 V
	Ignition switch on (IG)	10 to 14 V

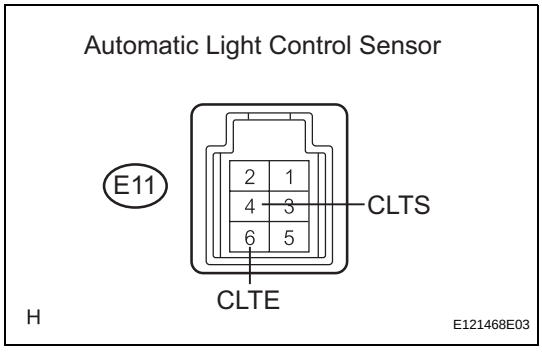
Standard resistance

Tester Connection	Condition	Specified Condition
E11-6 (CLTE) - Body ground	Always	Below 1 Ω

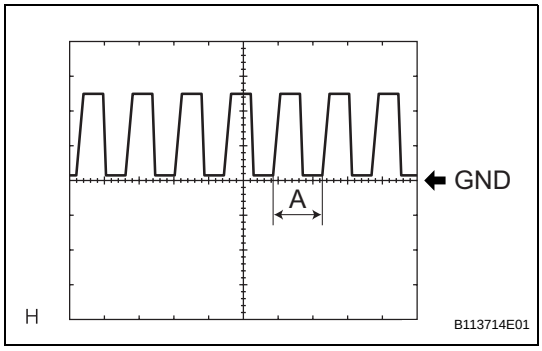
NG → **REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

OK

5 INSPECT AUTOMATIC LIGHT CONTROL SENSOR



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



(c) Check the waveform.

OK

Tester Connection	Tool Setting	Condition	Specified Condition
E11-6 (CLTE) - E11-4 (CLTS)	5 V/DIV., 5 ms./ DIV.	Ignition switch on (IG), light control switch in AUTO	Correct waveform is as shown

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

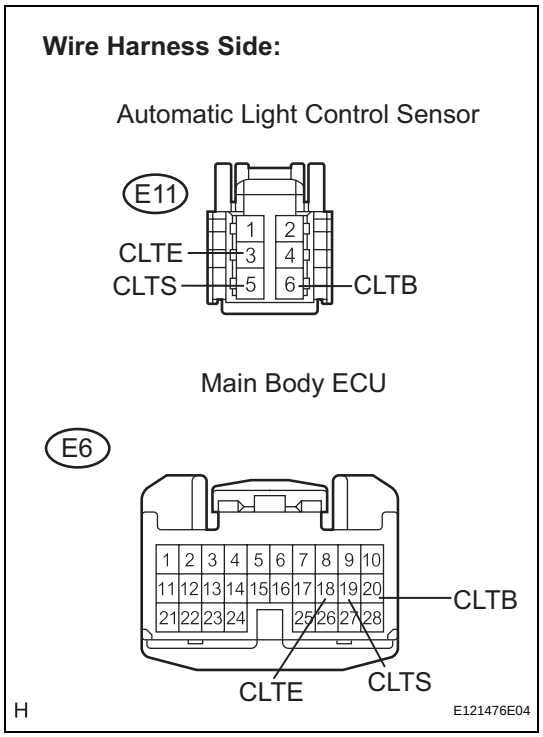
NG → **REPLACE AUTOMATIC LIGHT CONTROL SENSOR**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

LI

6 CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - AUTOMATIC LIGHT CONTROL SENSOR)



(a) Disconnect the E11 automatic light control sensor connector.
(b) Disconnect the E6 main body ECU connector.

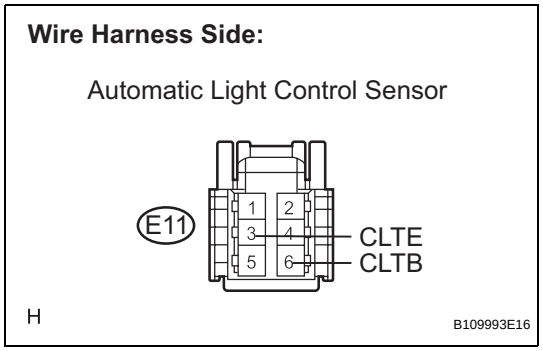
Standard resistance

Tester Connection	Condition	Specified Condition
E6-18 (CLTE) - E11-3 (CLTE)	Always	Below 1 Ω
E6-19 (CLTS) - E11-5 (CLTS)	Always	Below 1 Ω
E6-20 (CLTB) - E11-6 (CLTB)	Always	Below 1 Ω
E6-18 (CLTE) - Body ground	Always	10 kΩ or higher
E6-19 (CLTS) - Body ground	Always	10 kΩ or higher
E6-20 (CLTB) - Body ground	Always	10 kΩ or higher

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

OK

7 INSPECT MAIN BODY ECU (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY)



(a) Reconnect the main body ECU connector.
(b) Measure the voltage and resistance according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E11-6 (CLTB) - E11-3 (CLTE)	Ignition switch off	Below 1 V
E11-6 (CLTB) - E11-3 (CLTE)	Ignition switch on (IG)	10 to 14 V

Standard resistance

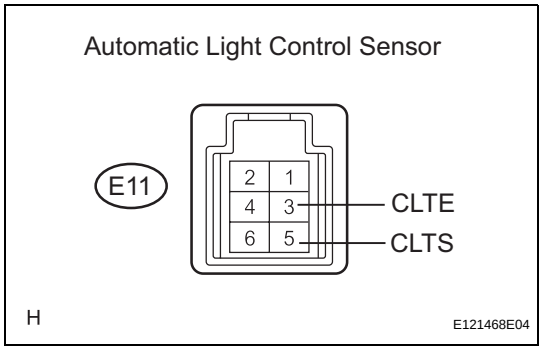
Tester Connection	Condition	Specified Condition
E11-3 (CLTE) - Body ground	Always	Below 1 Ω

NG → **REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

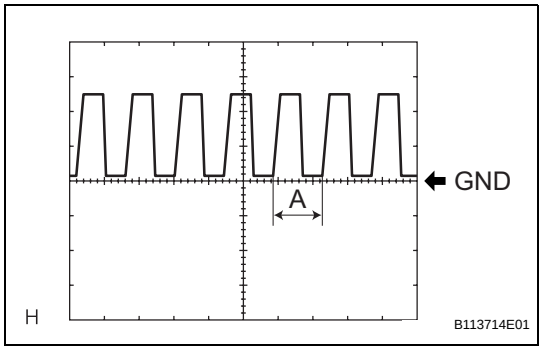
OK

LI

8	**INSPECT AUTOMATIC LIGHT CONTROL SENSOR**



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



(c) Check the waveform.
OK

Tester Connection	Tool Setting	Condition	Specified Condition
E11-3 (CLTE) - E11-5 (CLTS)	5 V/DIV., 5 ms./ DIV.	Ignition switch on (IG), light control switch in AUTO	Correct waveform is as shown

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

NG → **REPLACE AUTOMATIC LIGHT CONTROL SENSOR**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

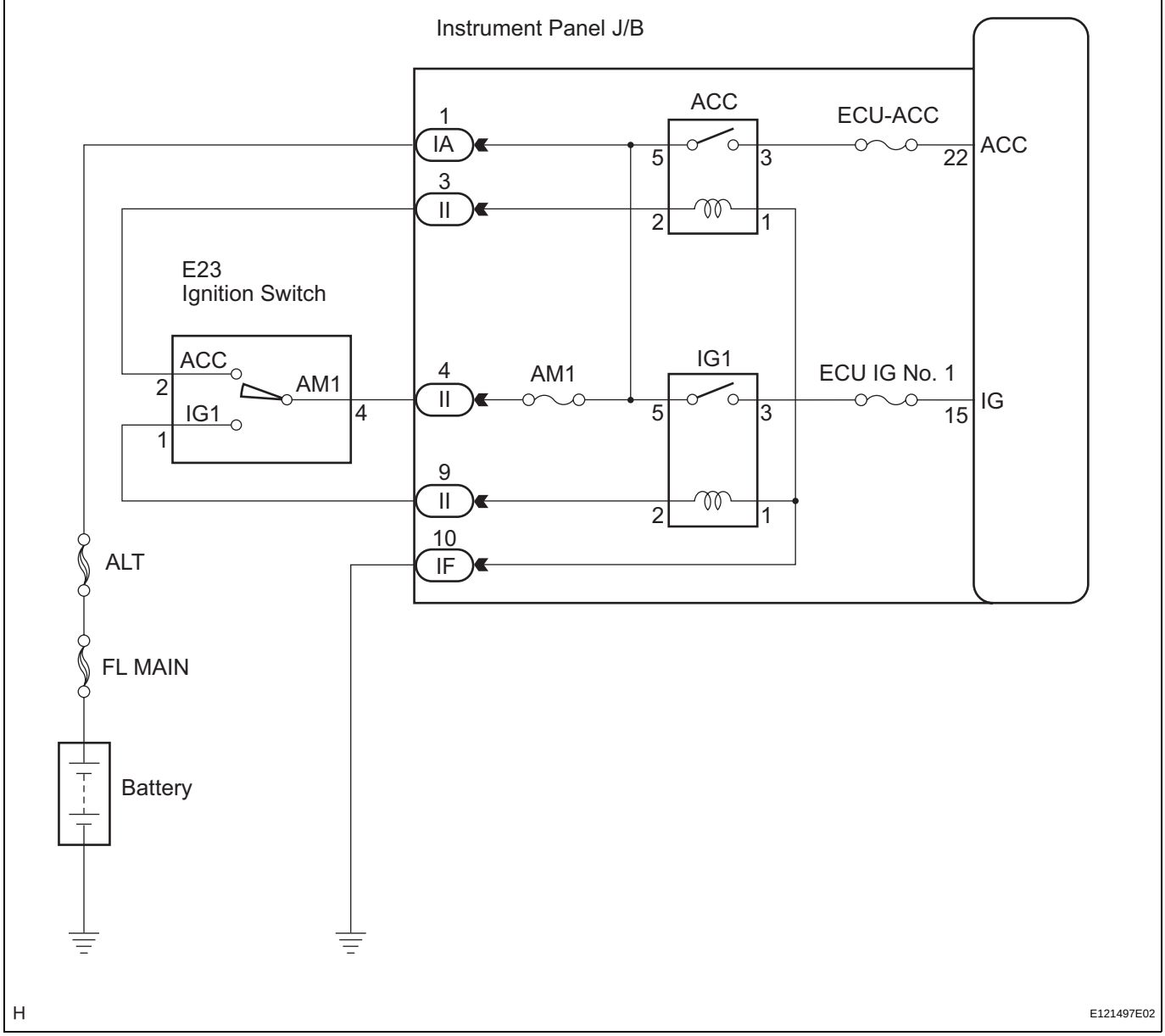
Ignition Switch Circuit

DESCRIPTION

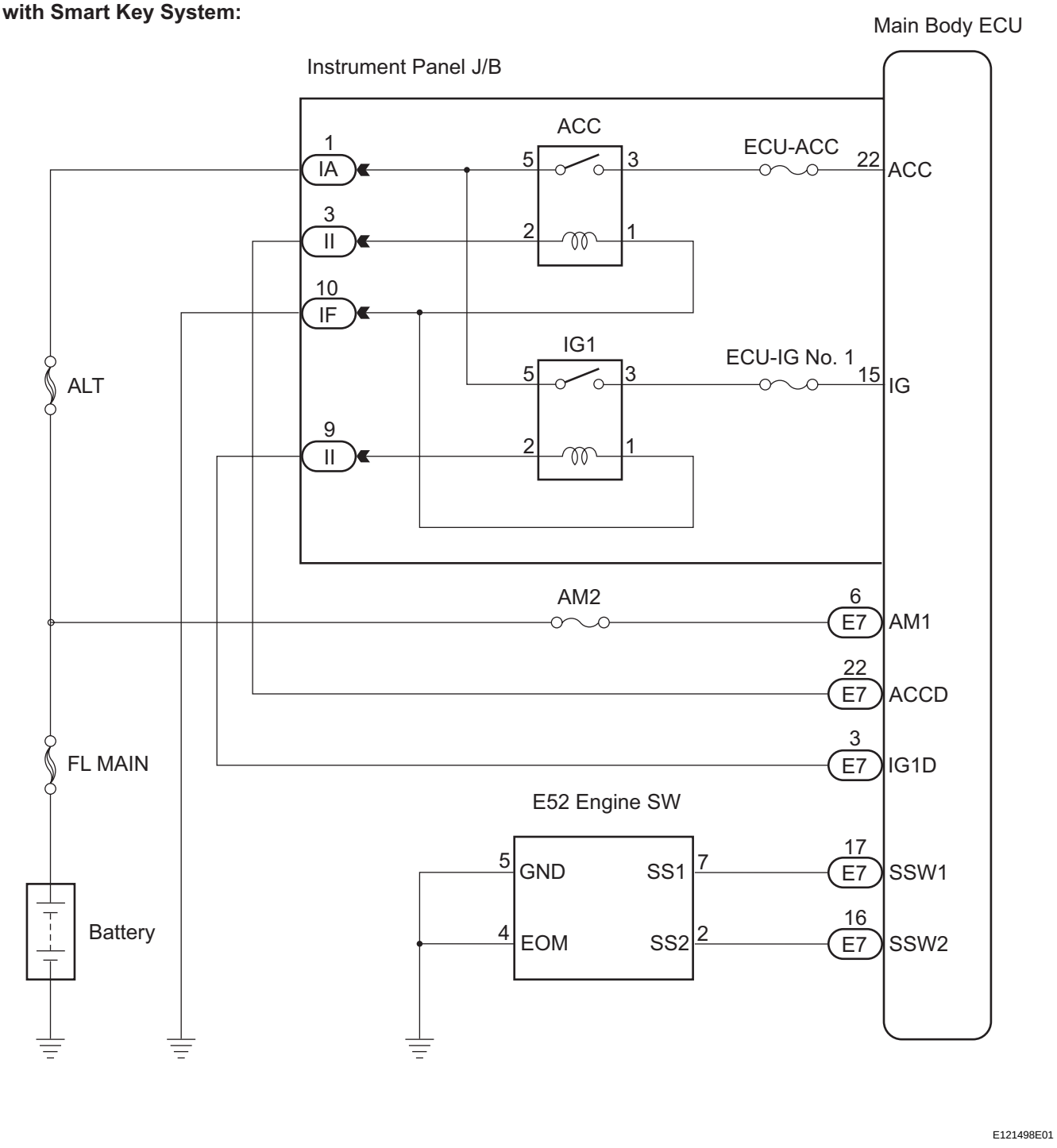
This circuit detects the state of the ignition switch or engine switch, and sends it to the main body ECU.

WIRING DIAGRAM

without Smart Key System:



with Smart Key System:



INSPECTION PROCEDURE

1	**READ VALUE OF INTELLIGENT TESTER**

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.

LI

(c) Select the items below in the DATA LIST, and read the display on the intelligent tester.

MAIN BODY (MAIN BODY ECU):

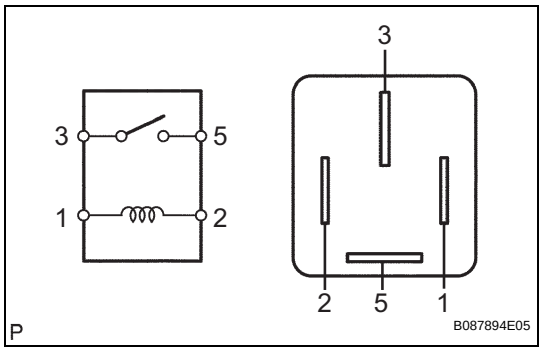
Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
ACC SW	Ignition switch or engine switch ACC signal / ON or OFF	ON: Ignition switch on (IG or ACC) OFF: Ignition switch off	-
IG SW	Ignition switch or engine switch IG signal / ON or OFF	ON: Ignition switch on (IG) OFF: Ignition switch off	-

OK:
Normal conditions listed above are displayed.

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

NG

2 INSPECT ACC RELAY



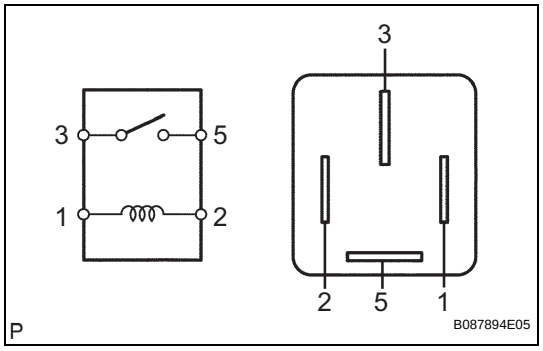
(a) Remove the ACC relay from the instrument panel J/B assembly.
(b) Measure the resistance according to the value(s) in the table below.
Standard resistance

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

NG → **REPLACE ACC RELAY**

OK

3 INSPECT NO. 1 IGNITION RELAY



(a) Remove the No. 1 ignition relay from the instrument panel J/B assembly.
(b) Measure the resistance according to the value(s) in the table below.
Standard resistance

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

NG → **REPLACE NO. 1 IGNITION RELAY**

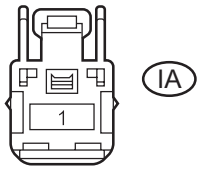
OK

LI

4	CHECK HARNESS AND CONNECTOR (INSTRUMENT PANEL J/B ASSEMBLY - BATTERY AND GROUND)

Wire Harness Side:

Instrument Panel J/B Assembly



H E121505E01

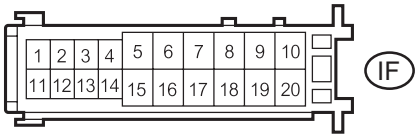
(a) Disconnect the IA instrument panel J/B assembly connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
IA-1 - Body ground	Always	10 to 14 V

Wire Harness Side:

Instrument Panel J/B Assembly



H E121504E01

(c) Disconnect the IF instrument panel J/B assembly connector.
(d) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
IF-10 - Body ground	Always	Below 1 Ω

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

OK

5	CHECK VEHICLE CONDITION

(a) Check the vehicle condition.

Result

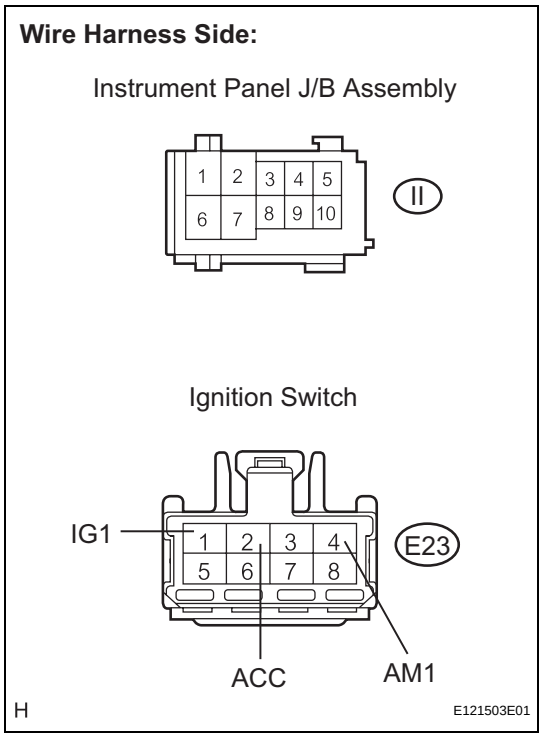
Condition	Proceed to
without Smart Key System	A
with Smart Key System	B

B → **Go to step 8**

A

LI

6	CHECK HARNESS AND CONNECTOR (INSTRUMENT PANEL J/B ASSEMBLY - IGNITION SWITCH)



(a) Disconnect the E23 ignition switch connector.
(b) Disconnect the II instrument panel J/B assembly connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
II-3 - E23-2 (ACC)	Always	Below 1 Ω
II-4 - E23-4 (AM1)	Always	Below 1 Ω
II-9 - E23-1 (IG1)	Always	Below 1 Ω
II-3 - Body ground	Always	10 kΩ or higher
II-4 - Body ground	Always	10 kΩ or higher
II-9 - Body ground	Always	10 kΩ or higher

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

OK

7	INSPECT IGNITION SWITCH

(a) Inspect the ignition switch (See page ST-155)

OK:

Ignition switch is normal.

NG → **REPLACE IGNITION SWITCH**

OK

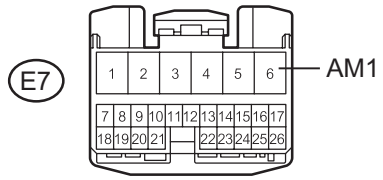
REPLACE INSTRUMENT PANEL J/B ASSEMBLY

LI

8 CHECK HARNESS AND CONNECTOR (BATTERY - MAIN BODY ECU)

Wire Harness Side:

Main Body ECU



H E121506E01

(a) Disconnect the E7 main body ECU connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E7-6 (AM1) - Body ground	Always	10 to 14 V

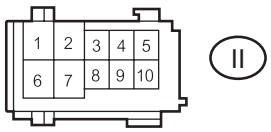
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

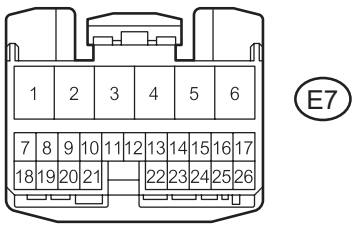
9 CHECK HARNESS AND CONNECTOR (INSTRUMENT PANEL J/B ASSEMBLY - MAIN BODY ECU)

Wire Harness Side:

Instrument Panel J/B Assembly



Main Body ECU



H E121484E02

(a) Disconnect the E7 main body ECU connector.
(b) Disconnect the II instrument panel J/B assembly connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

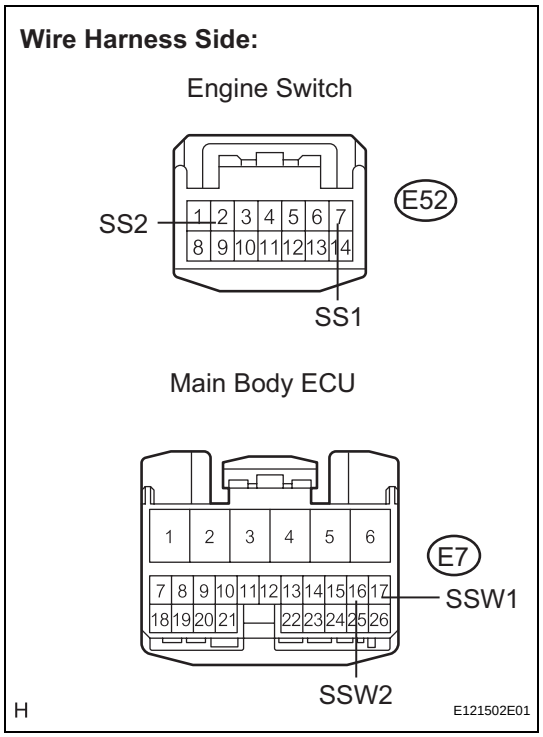
Tester Connection	Condition	Specified Condition
II-3 - E7-22 (ACCD)	Always	Below 1 Ω
II-9 - E7-3 (IG1D)	Always	Below 1 Ω
II-3 - Body ground	Always	10 kΩ or higher
II-9 - Body ground	Always	10 kΩ or higher

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

OK

LI

10	CHECK HARNESS AND CONNECTOR (ENGINE SWITCH - MAIN BODY ECU AND BODY GROUND)



(a) Disconnect the E52 engine switch connector.
(b) Disconnect the E7 main body ECU connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
E52-7 (SS1) - E7-17 (SSW1)	Always	Below 1 Ω
E52-2 (SS2) - E7-16 (SSW2)	Always	Below 1 Ω
E52-5 (GND) - Body ground	Always	10 kΩ or higher
E52-4 (EOM) - Body ground	Always	10 kΩ or higher

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

OK

11	INSPECT ENGINE SWITCH

(a) Inspect the engine switch (See page ST-153).

OK:

Engine switch is normal.

NG → **REPLACE ENGINE SWITCH**

OK

REPLACE INSTRUMENT PANEL J/B ASSEMBLY

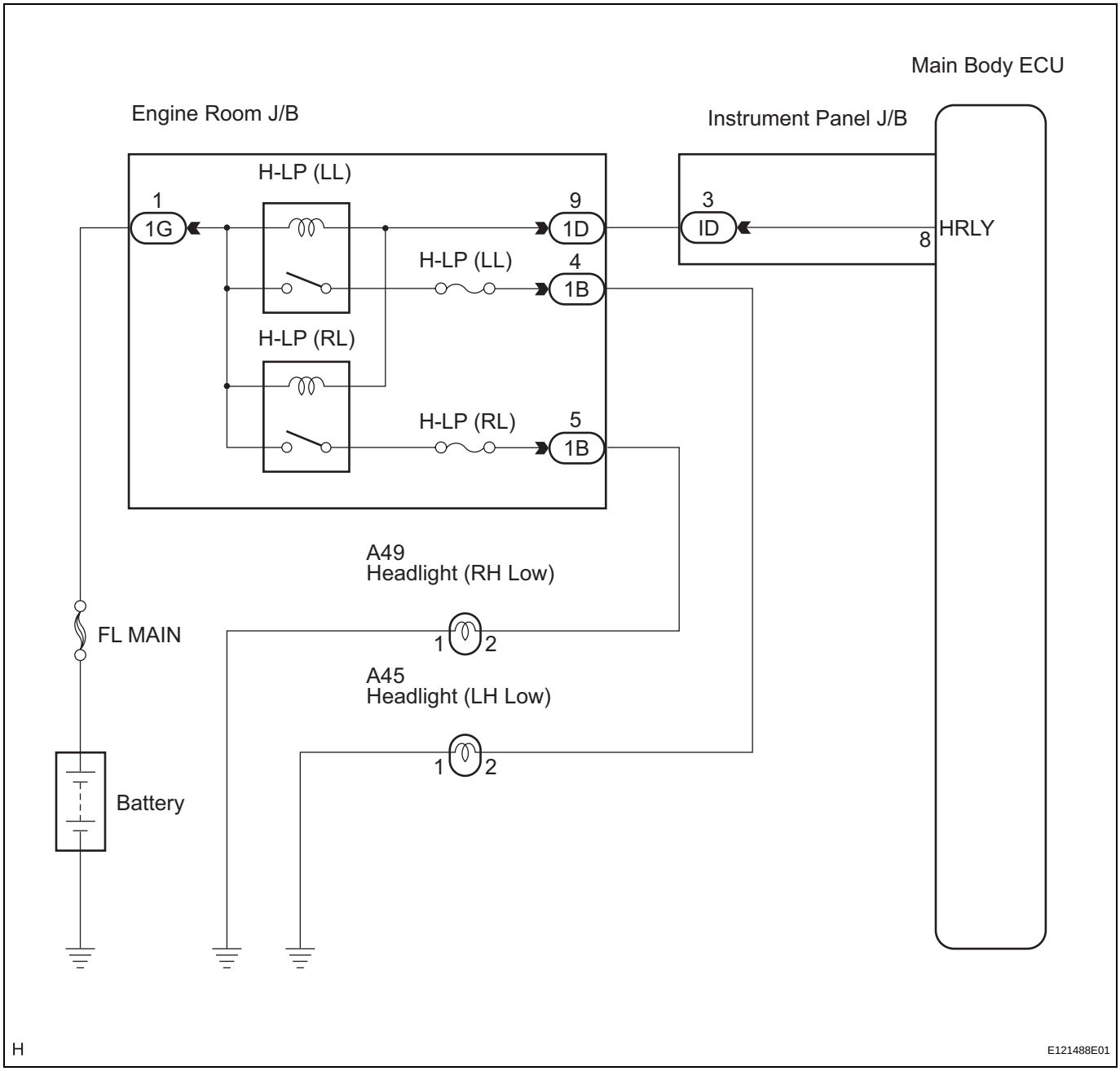
LI

Headlight Relay Circuit

DESCRIPTION

The main body ECU receives a light control switch HEAD signal from the headlight dimmer switch assembly, and turns the low beam headlights on. The headlight relay is installed in the power distributor (engine room J/B assembly).

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.

(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the item below in the ACTIVE TEST and then check that the relay operates.

MAIN BODY (MAIN BODY ECU):

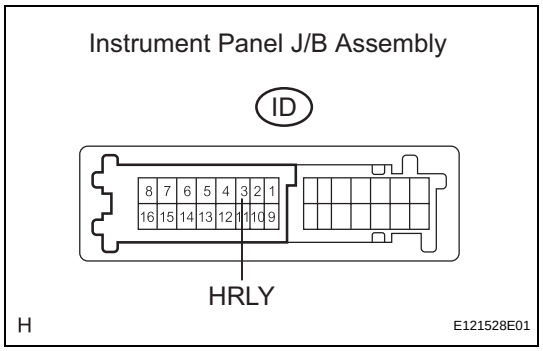
Item	Test Details	Diagnostic Note
HEAD RELAY	Headlight Relay ON / OFF	-

OK:
Headlight relay operates. (Low beam headlights illuminate.)

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

NG

2 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



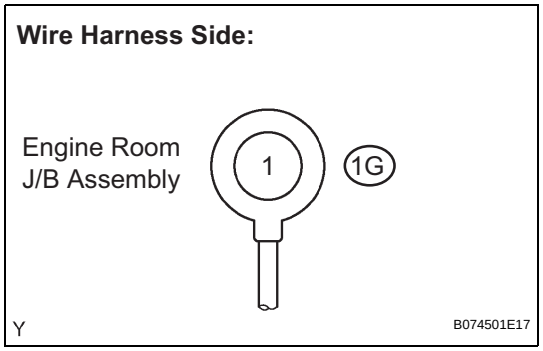
(a) Measure the voltage according to the value(s) in the table below.
Standard voltage

Tester Connection	Condition	Specified Condition
ID-3 (HRLY) - Body ground	Light control switch OFF → HEAD	10 to 14 V → Below 1 V

OK → **Go to step 6**

NG

3 CHECK HARNESS AND CONNECTOR (BATTERY - ENGINE ROOM J/B ASSEMBLY)



(a) Disconnect the 1G engine room J/B assembly connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connector	Condition	Specified Condition
1G - Body ground	Always	10 to 14 V

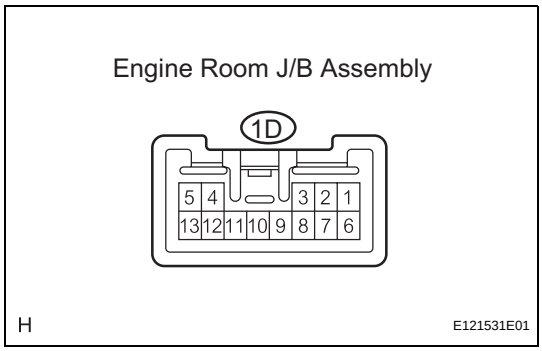
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

4 INSPECT ENGINE ROOM J/B BLOCK ASSEMBLY

(a) Reconnect the 1G engine room J/B assembly connector.

LI



(b) Disconnect the 1D engine room J/B assembly connector.
(c) Measure the voltage according to the value(s) in the table below.

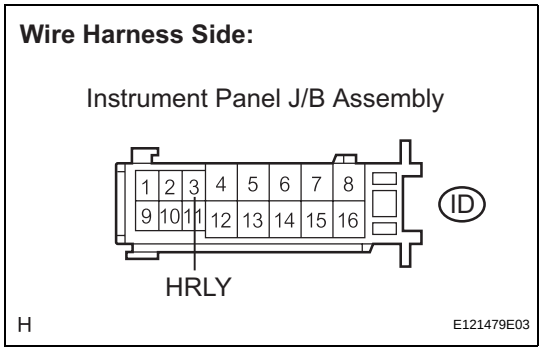
Standard voltage

Tester Connection	Condition	Specified Condition
1D-9 - Body ground	Always	10 to 14 V

NG → **REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY (POWER DISTRIBUTOR)**

OK

5	CHECK HARNESS AND CONNECTOR (ENGINE ROOM J/B ASSEMBLY - INSTRUMENT PANEL J/B ASSEMBLY)



(a) Reconnect the 1D engine room J/B assembly connector.
(b) Disconnect the ID instrument panel J/B assembly connector.
(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
ID-3 (HRLY) - Body ground	Always	10 to 14 V

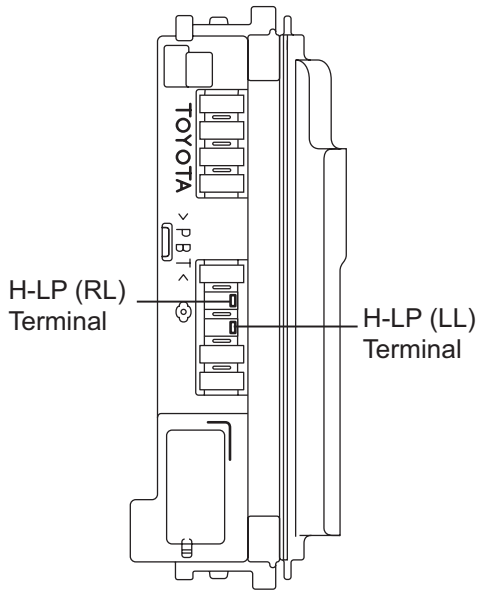
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

6	INSPECT ENGINE ROOM JUNCTION BLOCK ASSEMBLY

Power Distributer (Engine Room J/B)



(a) Remove the H-LP (RL) fuse and H-LP (LL) fuse from the engine room J/B assembly.
(b) Measure the voltage between the loading slot of each fuse and body ground.

Standard voltage

Tester Connection	Condition	Specified Condition
H-LP (RL) Terminal - Body ground	Light control switch in HEAD	10 to 14 V
H-LP (LL) Terminal - Body ground	Light control switch in HEAD	10 to 14 V

NG → **REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY (POWER DISTRIBUTOR)**

OK

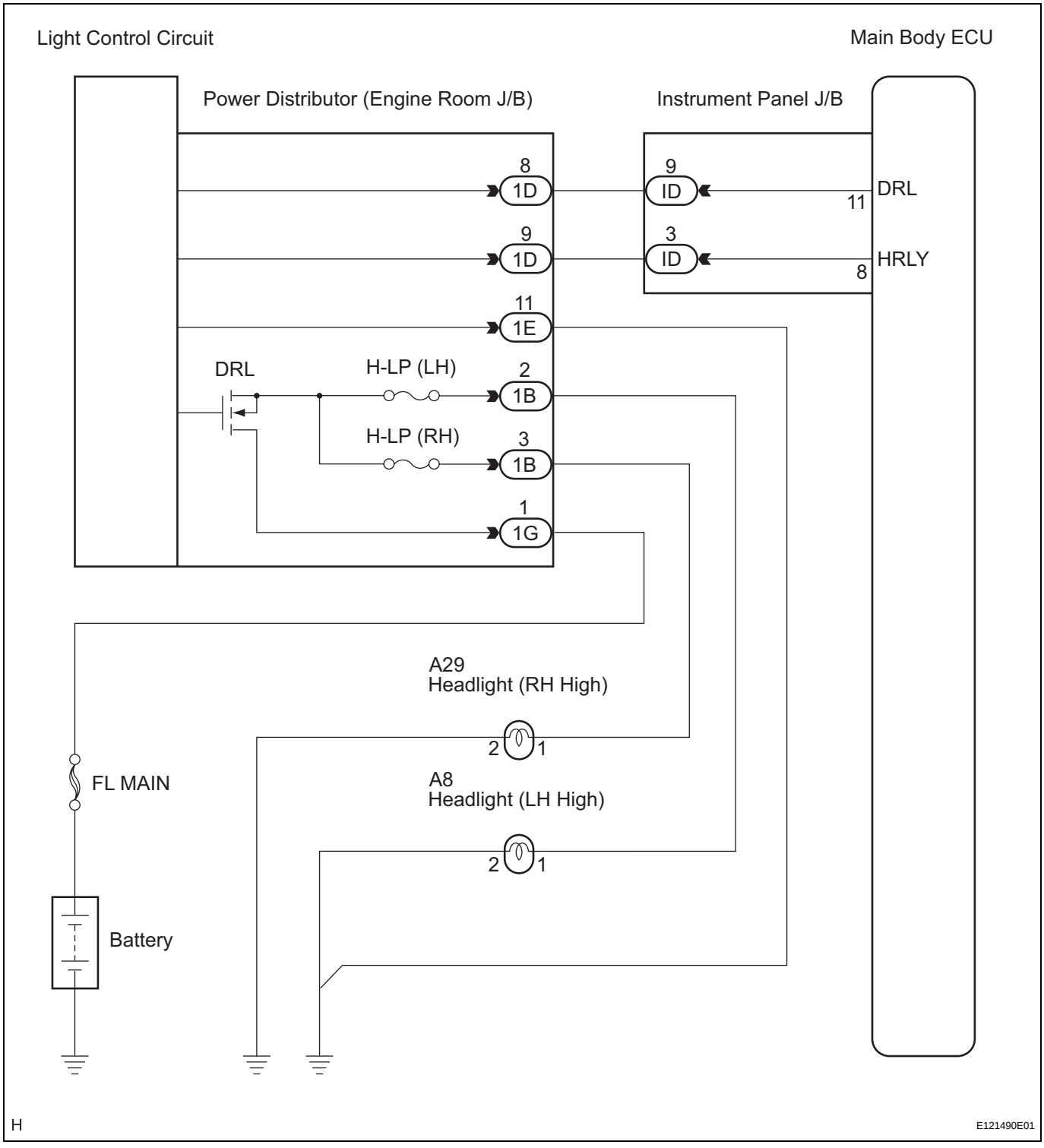
REPAIR OR REPLACE HARNESS OR CONNECTOR (FUSE - BODY GROUND)

Headlight (HI-BEAM) Circuit

DESCRIPTION

The main body ECU receives dimmer switch HIGH signal and light control switch HEAD signal from the headlight dimmer switch assembly, and turns the high beam headlights on.
HINT:
When a short circuit occurs between the power distributor (engine room J/B assembly) and high beam headlight, the power distributor stops the DRL relay operation (Fail-safe function).

WIRING DIAGRAM



LI

INSPECTION PROCEDURE

1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the item below in the ACTIVE TEST and then check that the relay operates.

MAIN BODY (MAIN BODY ECU):

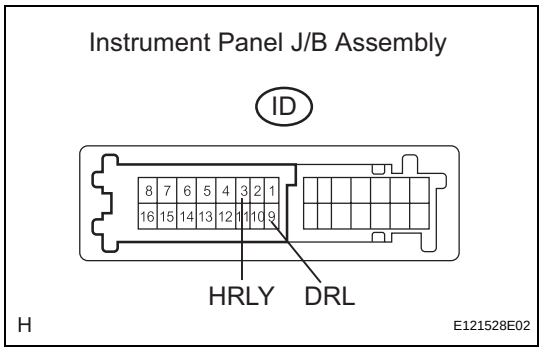
Item	Test Details	Diagnostic Note
HEAD LIGHT (HI)	High beam headlights ON / OFF	-

OK:
Relay operates. (High beam headlights illuminate.)

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

NG

2 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



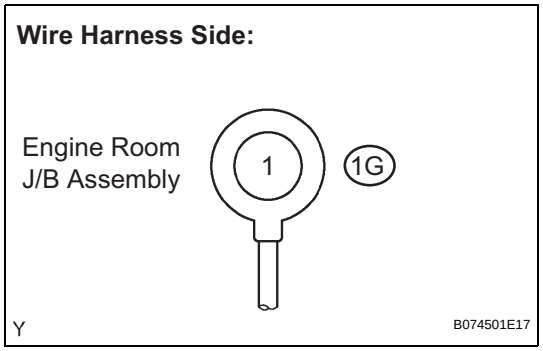
(a) Measure the voltage according to the value(s) in the table below.
Standard voltage

Tester Connection	Condition	Specified Condition
ID-3 (HRLY) - Body ground	Light control switch OFF → HEAD	10 to 14 V → Below 1 V
ID-9 (DRL) - Body ground	Light control switch in HEAD, dimmer switch LOW → HIGH	10 to 14 V → Below 1 V

OK → **Go to step 6**

NG

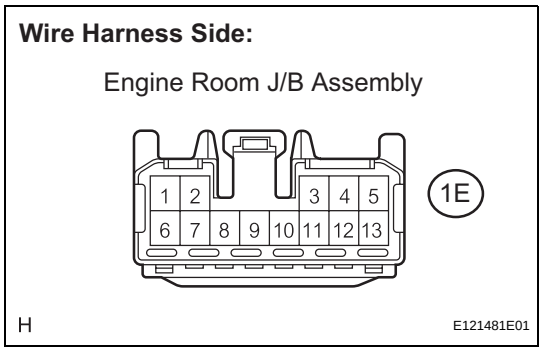
3 CHECK HARNESS AND CONNECTOR (ENGINE ROOM J/B ASSEMBLY - BATTERY AND BODY GROUND)



(a) Disconnect the 1G engine room J/B assembly connector.
(b) Measure the voltage according to the value(s) in the table below.
Standard voltage

Tester Connection	Condition	Specified Condition
1G-1 - Body ground	Always	10 to 14 V

LI



(c) Disconnect the 1E engine room J/B assembly connector.
(d) Measure the resistance according to the value(s) in the table below.

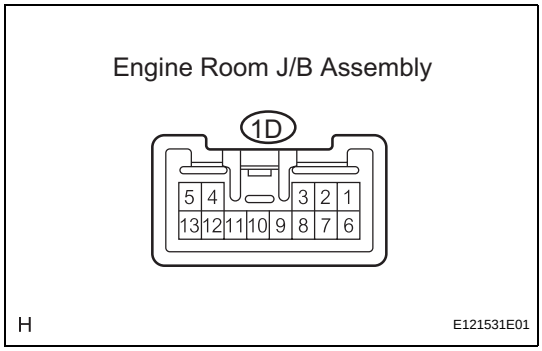
Standard resistance

Tester Connection	Condition	Specified Condition
1E-11 - Body ground	Always	Below 1 Ω

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

OK

4 INSPECT ENGINE ROOM JUNCTION BLOCK ASSEMBLY



(a) Reconnect the 1G and 1E engine room J/B assembly connectors.
(b) Disconnect the 1D engine room J/B assembly connector.
(c) Measure the voltage according to the value(s) in the table below.

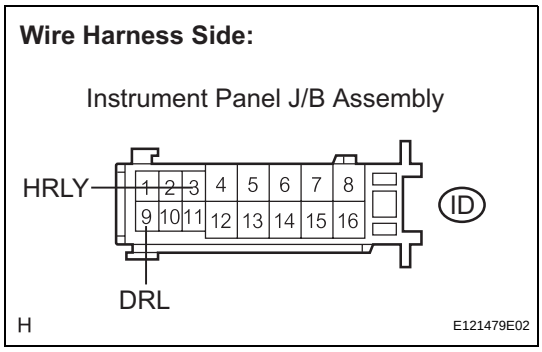
Standard voltage

Tester Connection	Condition	Specified Condition
1D-8 - Body ground	Always	10 to 14 V
1D-9 - Body ground	Always	10 to 14 V

NG → **REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY (POWER DISTRIBUTOR)**

OK

5 CHECK HARNESS AND CONNECTOR (ENGINE ROOM J/B ASSEMBLY - INSTRUMENT PANEL J/B ASSEMBLY)



(a) Reconnect the 1D engine room J/B assembly connector.
(b) Disconnect the ID instrument panel J/B connector.
(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
ID-3 (DRL) - Body ground	Always	10 to 14 V
ID-9 (HRLY) - Body ground	Always	10 to 14 V

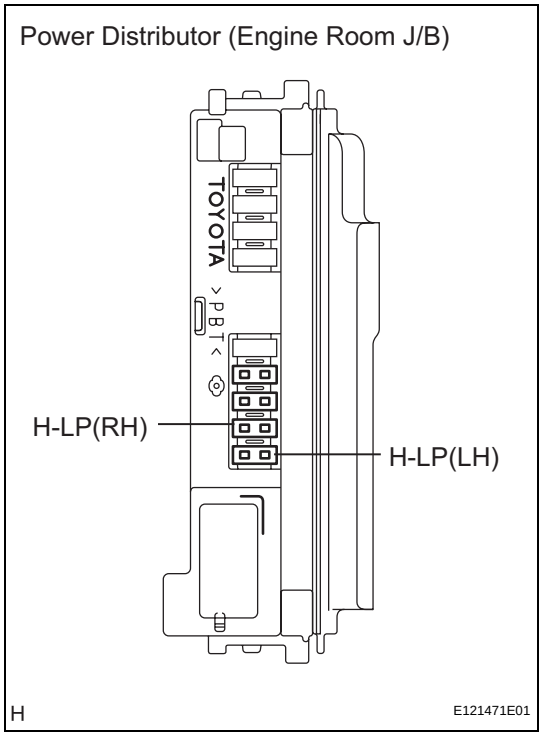
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

LI

6 CHECK HARNESS AND CONNECTOR (SHORT IN RELAY-DRIVEN CIRCUIT)



(a) Remove the H-LP (RH) fuse from the engine room J/B assembly.
(b) Turn the light control switch to the HEAD position and turn the dimmer switch to the HIGH position.
(c) Check if the high beam headlight LH illuminates.
(d) Turn the dimmer switch to the LOW position.
(e) Install the H-LP (RH) fuse and remove the H-LP (LH) fuse.
(f) Turn the dimmer switch to the HIGH position.
(g) Check if the high beam headlight RH illuminates.

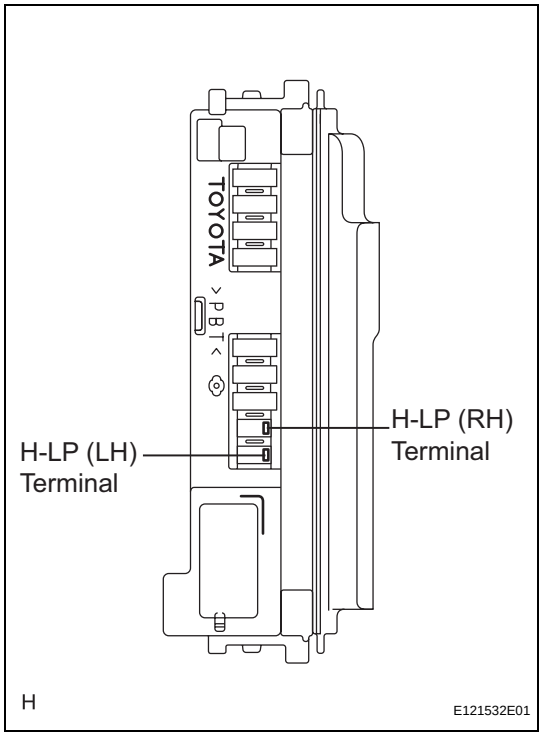
OK:

Either high beam headlight LH or RH illuminates.

OK → **REPAIR OR REPLACE HARNESS OR CONNECTOR (SHORT CIRCUIT BETWEEN FUSE AND BULB)**

NG

7 INSPECT ENGINE ROOM JUNCTION BLOCK ASSEMBLY



(a) Remove the H-LP (RH) fuse and H-LP (LH) fuse from the engine room J/B assembly.
(b) Measure the voltage between the loading slot of each fuse and body ground.

Standard voltage

Tester Connection	Condition	Specified Condition
H-LP (RH) Terminal - Body ground	Light control switch in HEAD and dimmer switch in HIGH	10 to 14 V
H-LP (LH) Terminal - Body ground	Light control switch in HEAD and dimmer switch in HIGH	10 to 14 V

NG → **REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY (POWER DISTRIBUTOR)**

LI

OK

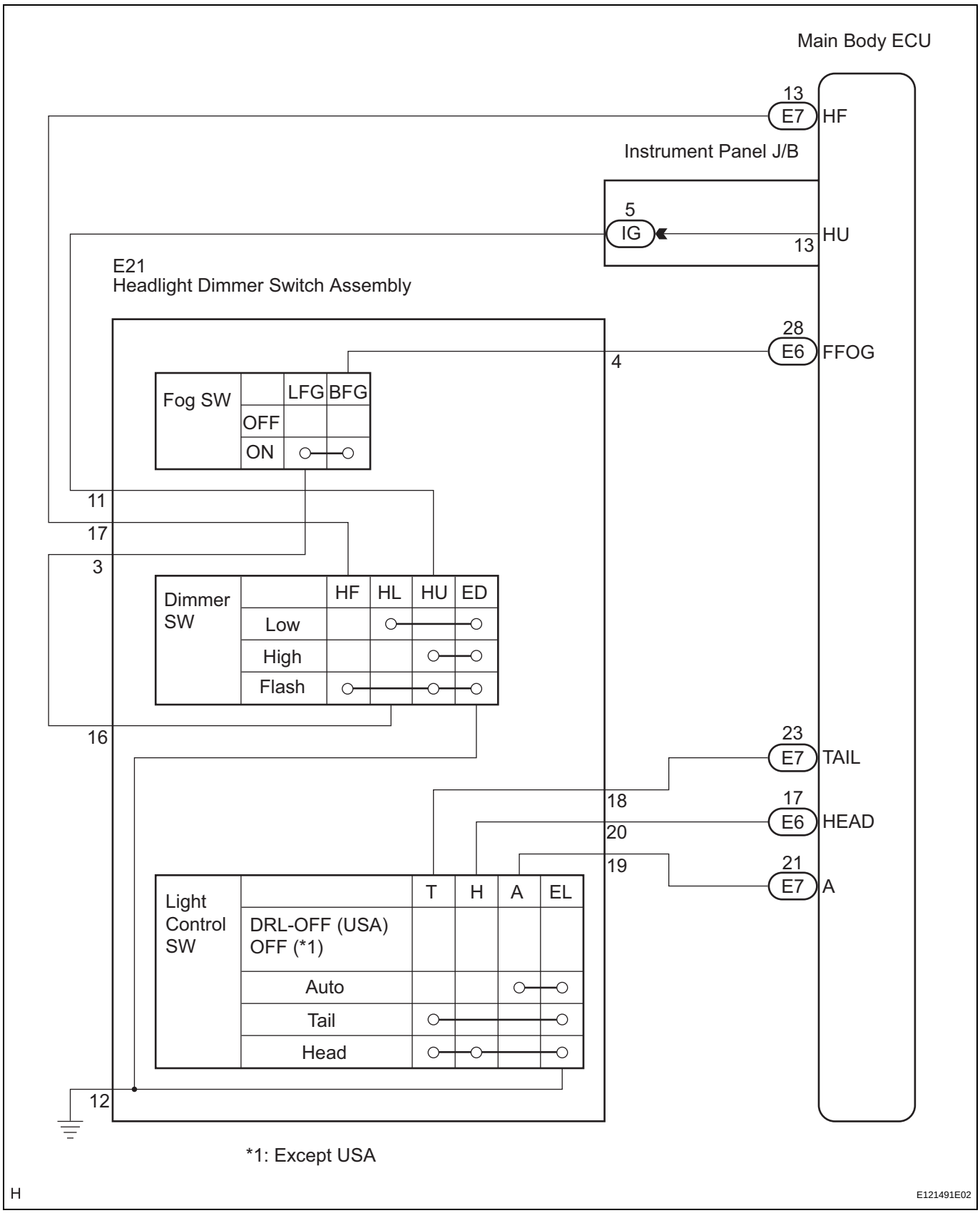
REPAIR OR REPLACE HARNESS OR CONNECTOR (OPEN CIRCUIT BETWEEN FUSE AND BODY GROUND)

Light Control Switch Circuit

DESCRIPTION

This circuit detects the condition of the headlight dimmer switch assembly.

WIRING DIAGRAM



LI

INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the items below in the DATA LIST, and read the display on the intelligent tester.

MAIN BODY (MAIN BODY ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
DIMMER SW	Dimmer switch HIGH signal / ON or OFF	ON: Dimmer switch in HIGH or FLASH OFF: Dimmer switch in neither HIGH nor FLASH	-
HIGH FLASHER SW	Dimmer switch FLASH signal / ON or OFF	ON: Dimmer switch in FLASH OFF: Dimmer switch not in FLASH	-
F FOG LIGHT SW	Front fog light switch signal / ON or OFF	ON: Fog light switch ON OFF: Fog light switch OFF	-
AUTO LIGHT SW	Light control switch AUTO signal / ON or OFF	ON: Light control switch in AUTO OFF: Light control switch not in AUTO	-
HEAD LIGHT SW	Light control switch HEAD signal / ON or OFF	ON: Light control switch in HEAD OFF: Light control switch not in HEAD	-
TAIL LIGHT SW	Light control switch TAIL signal / ON or OFF	ON: Light control switch in TAIL or HEAD OFF: Light control switch in neither TAIL nor HEAD	-

OK:
Normal conditions listed above are displayed.

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

NG

2	INSPECT HEADLIGHT DIMMER SWITCH ASSEMBLY

(a) Inspect the headlight dimmer switch assembly (See page LI-120).

OK:
Headlight dimmer switch assembly is normal.

NG → **REPLACE HEADLIGHT DIMMER SWITCH ASSEMBLY**

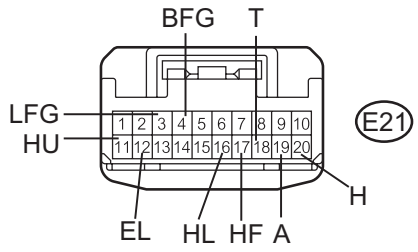
OK

LI

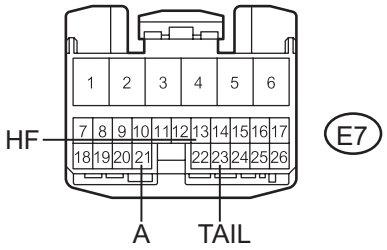
3	CHECK HARNESS AND CONNECTOR (INSTRUMENT PANEL J/B ASSEMBLY - SWITCH ASSEMBLY)

Wire Harness Side:

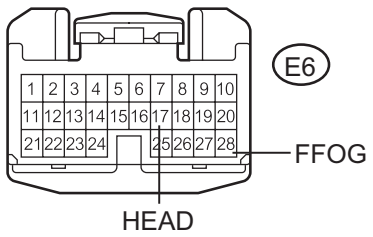
Headlight Dimmer Switch Assembly



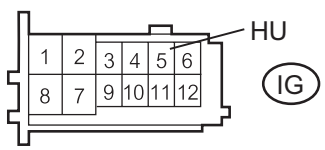
Main Body ECU



Main Body ECU



Instrument Panel J/B Assembly



H

E121507E02

(a) Disconnect the E21 headlight dimmer switch assembly connector.
(b) Disconnect the E6 and E7 main body ECU connectors.
(c) Disconnect the IG instrument panel J/B connector.
(d) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
E21-3 (LFG) - E21-16 (HL)	Always	Below 1 Ω
E21-4 (BFG) - E6-28 (FFOG)	Always	Below 1 Ω
E21-11 (HU) - IG-5 (HU)	Always	Below 1 Ω
E21-17 (HF) - E7-13 (HF)	Always	Below 1 Ω
E21-18 (T) - E7-23 (TAIL)	Always	Below 1 Ω
E21-19 (A) - E7-21 (A)	Always	Below 1 Ω
E21-20 (H) - E6-17 (HEAD)	Always	Below 1 Ω
E21-3 (LFG) - Body ground	Always	10 kΩ or higher
E21-4 (BFG) - Body ground	Always	10 kΩ or higher
E21-11 (HU) - Body ground	Always	10 kΩ or higher
E21-17 (HF) - Body ground	Always	10 kΩ or higher
E21-18 (T) - Body ground	Always	10 kΩ or higher
E21-19 (A) - Body ground	Always	10 kΩ or higher
E21-20 (H) - Body ground	Always	10 kΩ or higher
E21-12 (EL) - Body ground	Always	Below 1 Ω

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

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

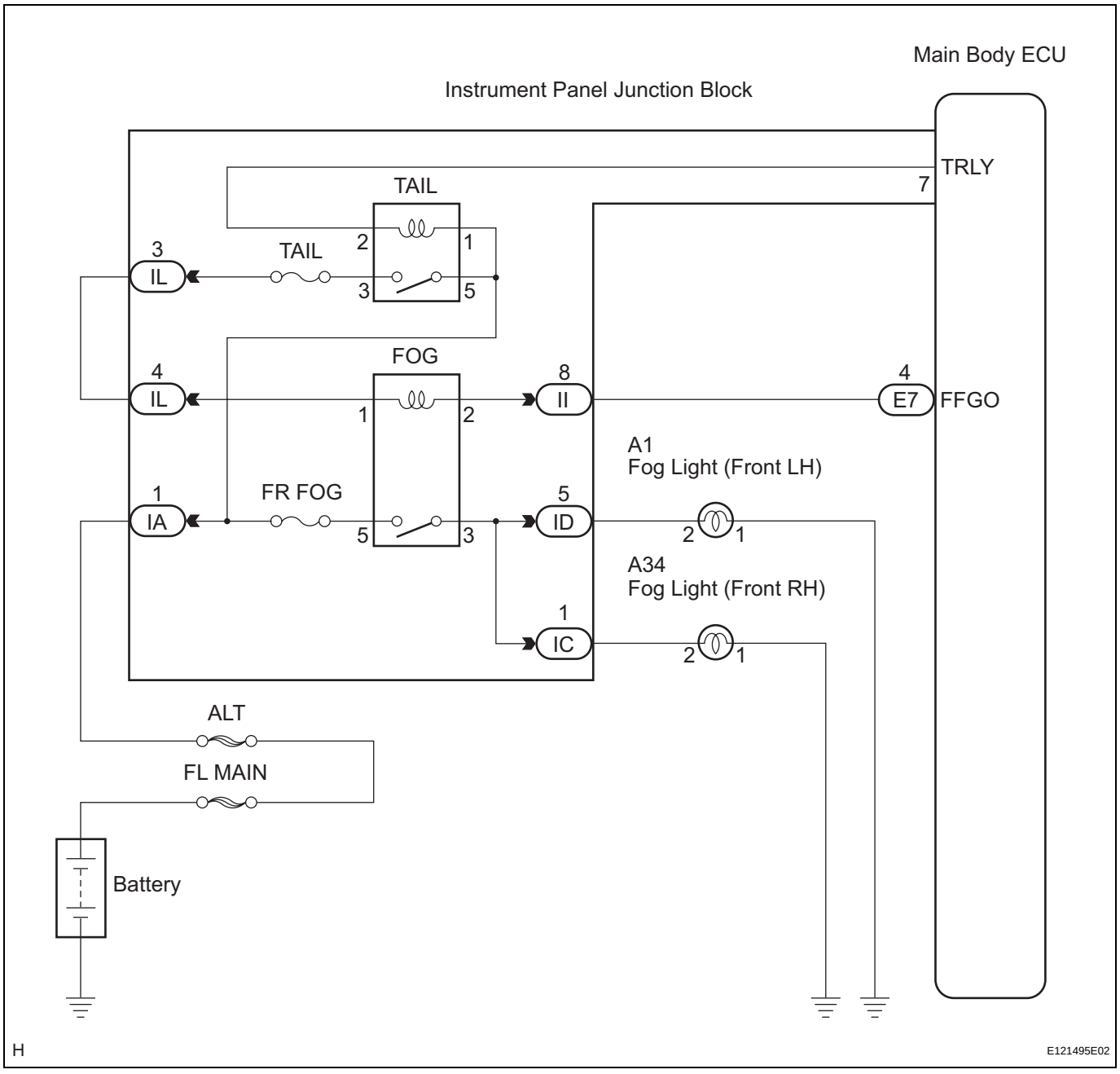
LI

Front Fog Light Circuit

DESCRIPTION

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

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.

LI

(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the item below in the ACTIVE TEST and then check that the relay operates.

MAIN BODY (MAIN BODY ECU):

Item	Test Details	Diagnostic Note
F FOG LIGHT RLY	Front fog light relay ON / OFF	-

OK:
Front fog light relay operates. (Front fog lights come on.)

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

NG

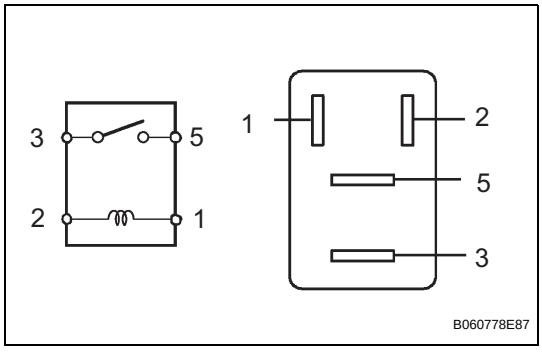
2 INSPECT FUSE (FR FOG)

(a) Remove the FR FOG fuse from the instrument panel J/B assembly.
(b) Measure the resistance of the fuse.
Standard resistance:
Below 1 Ω

NG → **REPLACE FUSE**

OK

3 INSPECT FOG LIGHT RELAY



(a) Remove the front fog light relay from the instrument panel J/B assembly.
(b) Measure the resistance according to the value(s) in the table below.
Standard resistance

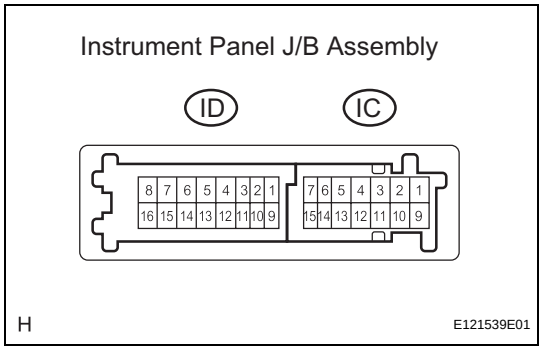
Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
	Below 1 Ω (When battery voltage is applied to terminals 1 and 2)

NG → **REPLACE FOG LIGHT RELAY**

OK

LI

4 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



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

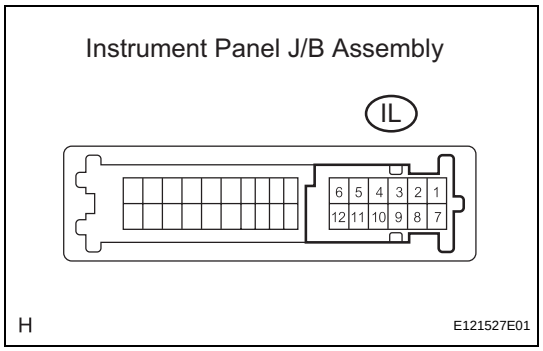
Standard voltage

Tester Connection	Condition	Specified Condition
IC-1 - Body ground	Light control switch in HEAD, front fog light switch OFF → ON	Below 1 V → 10 to 14 V
ID-5 - Body ground	Light control switch in HEAD, front fog light switch OFF → ON	Below 1 V → 10 to 14 V

OK → **REPAIR OR REPLACE HARNESS OR CONNECTOR (INSTRUMENT PANEL J/B ASSEMBLY - BODY GROUND)**

NG

5 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



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

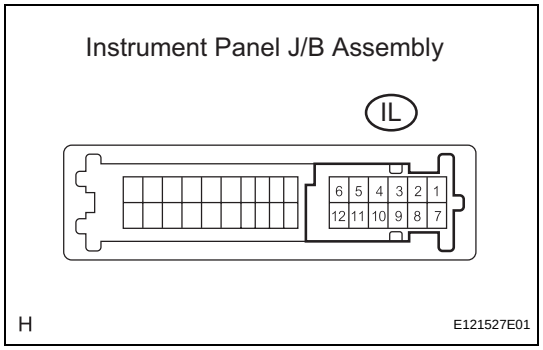
Standard voltage

Tester Connection	Condition	Specified Condition
IL-3 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

NG → **REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

OK

6 CHECK HARNESS AND CONNECTOR (BETWEEN CONNECTOR IL-3 AND CONNECTOR IL-4)



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

Standard voltage

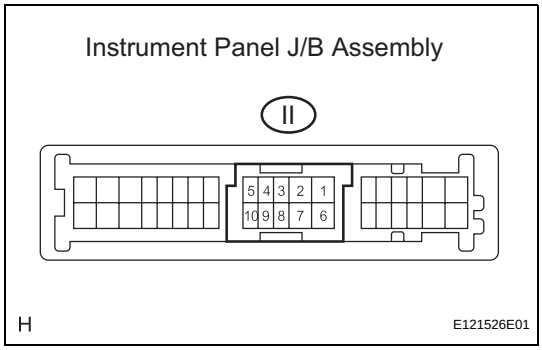
Tester Connection	Condition	Specified Condition
IL-4 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

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

OK

LI

7 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



(a) Disconnect the II instrument panel J/B assembly connector.
(b) Measure the voltage according to the value(s) in the table below.

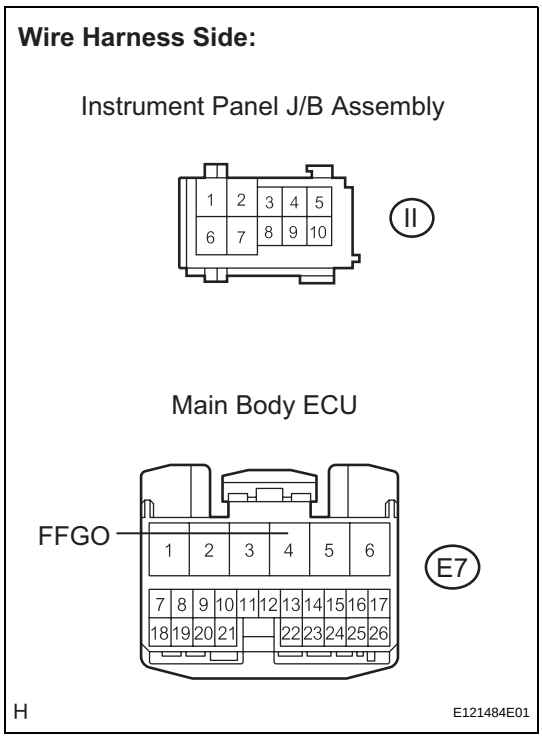
Standard voltage

Tester Connection	Condition	Specified Condition
II-8 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

NG → **REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

OK

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



(a) Disconnect the E7 main body ECU connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
E7-4 - II-8	Always	Below 1 Ω

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

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

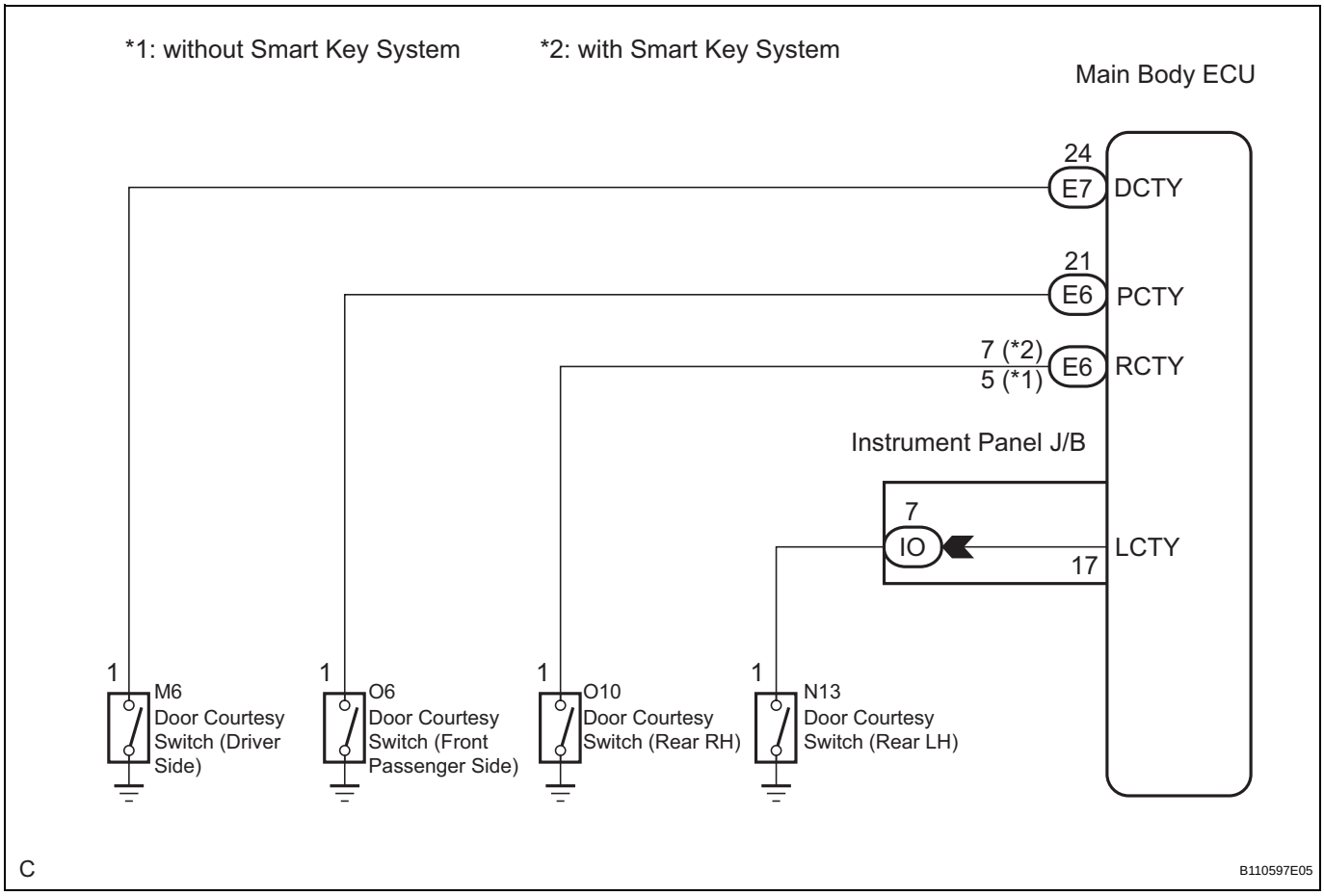
LI

Door Courtesy Switch Circuit

DESCRIPTION

The main body ECU detects the condition of the door courtesy switches.

WIRING DIAGRAM



INSPECTION PROCEDURE

LI

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the items below in the DATA LIST, and read the display on the intelligent tester.

MAIN BODY (MAIN BODY ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
D DOR CTY SW	Driver side door courtesy switch signal / ON or OFF	ON: Driver side door is open OFF: Driver side door is closed	-
P DOR CTY SW	Passenger side door courtesy switch signal / ON or OFF	ON: Passenger side door is open OFF: Passenger side door is closed	-
RR DOR CTY SW	Rear right door courtesy switch signal / ON or OFF	ON: Rear right door is open OFF: Rear right door is closed	-

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
RL DOR CTY SW	Rear left door courtesy switch signal / ON or OFF	ON: Rear left door is open OFF: Rear left door is closed	-

OK:
Normal conditions listed above are displayed.

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

NG

2 INSPECT DOOR COURTESY SWITCH

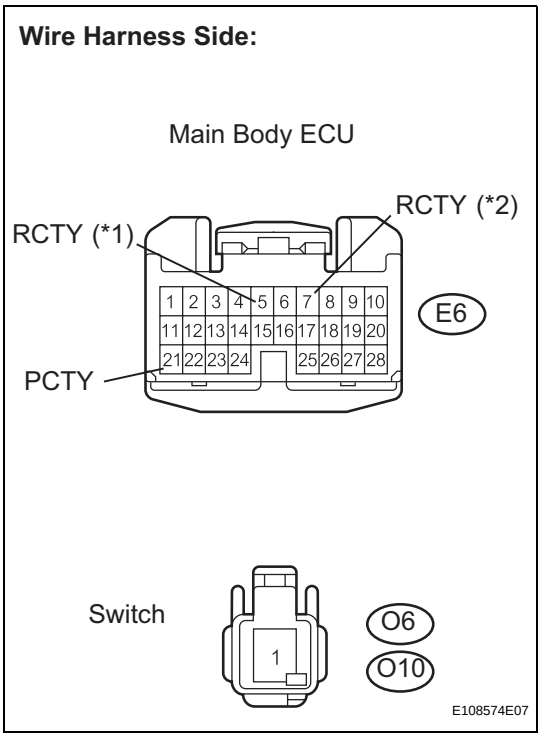
(a) Inspect the front door courtesy switch (See page LI-129).
(b) Inspect the rear door courtesy switch (See page LI-131).

OK:
Door courtesy switches are normal.

NG → **REPLACE DOOR COURTESY SWITCH**

OK

3 CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - DOOR COURTESY SWITCH)



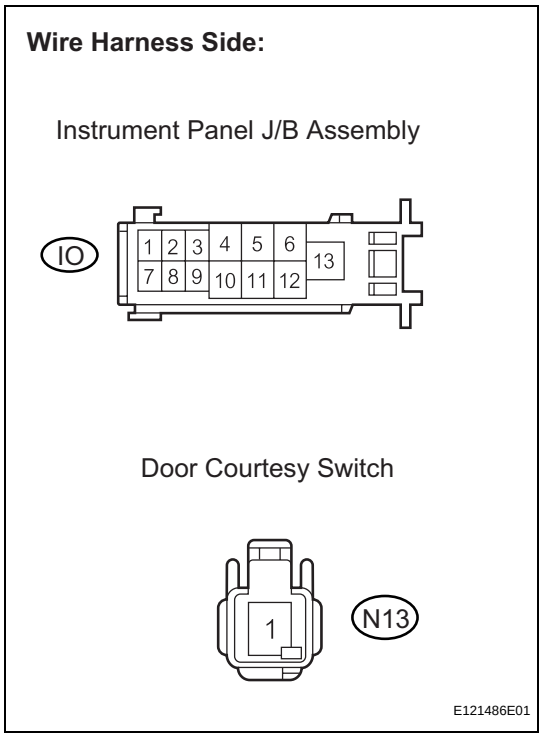
(a) Check the harness and connector between the main body ECU and door courtesy switches (passenger side and rear RH).
(1) Disconnect the E6 main body ECU connector.
(2) Disconnect the O6 and O10 switch connectors.
(3) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
E6-5 (*1) - O10-1 (Rear RH)	Always	Below 1 Ω
E6-7 (*2) - O10-1 (Rear RH)	Always	Below 1 Ω
E6-21 (PCTY) - O6-1 (Front passenger side)	Always	Below 1 Ω
O10-1 (Rear RH) - Body ground	Always	10 kΩ or higher
O6-1 (Front passenger side) - Body ground	Always	10 kΩ or higher

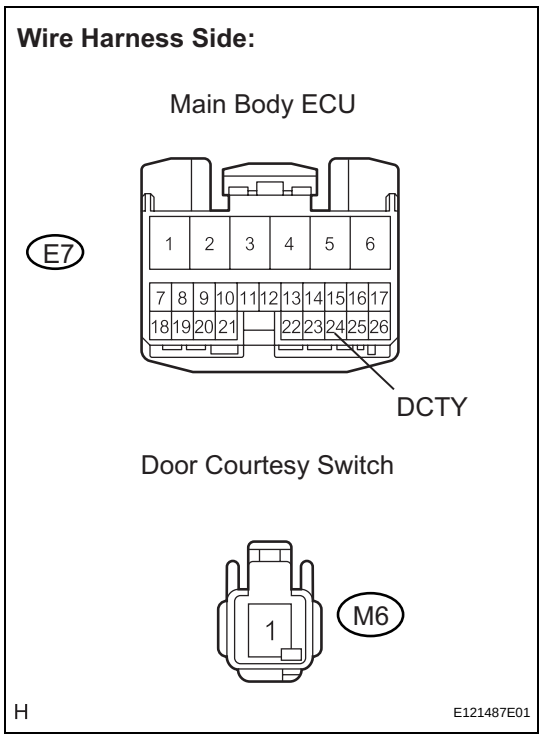
HINT:
*1: without Smart Key System
*2: with Smart Key System

LI



(b) Check the harness and connector between the instrument panel J/B assembly and rear LH door courtesy switch.
(1) Disconnect the IO instrument panel J/B assembly connector.
(2) Disconnect the N13 switch connector.
(3) Measure the resistance according to the value(s) in the table below.
Standard resistance

Tester Connection	Condition	Specified Condition
IO-7 (LCTY) - N13-1 (Rear LH)	Always	Below 1 Ω
IO-7 (LCTY) - Body ground	Always	10 kΩ or higher



(c) Check the harness and connector between the main body ECU and driver side door courtesy switch.
(1) Disconnect the E7 main body ECU connector.
(2) Disconnect the M6 switch connector.
(3) Measure the resistance according to the value(s) in the table below.
Standard resistance

Tester Connection	Condition	Specified Condition
E7-24 (DCTY) - M6-1 (Driver side)	Always	Below 1 Ω
E7-24 (DCTY) - Body ground	Always	10 kΩ or higher

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

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

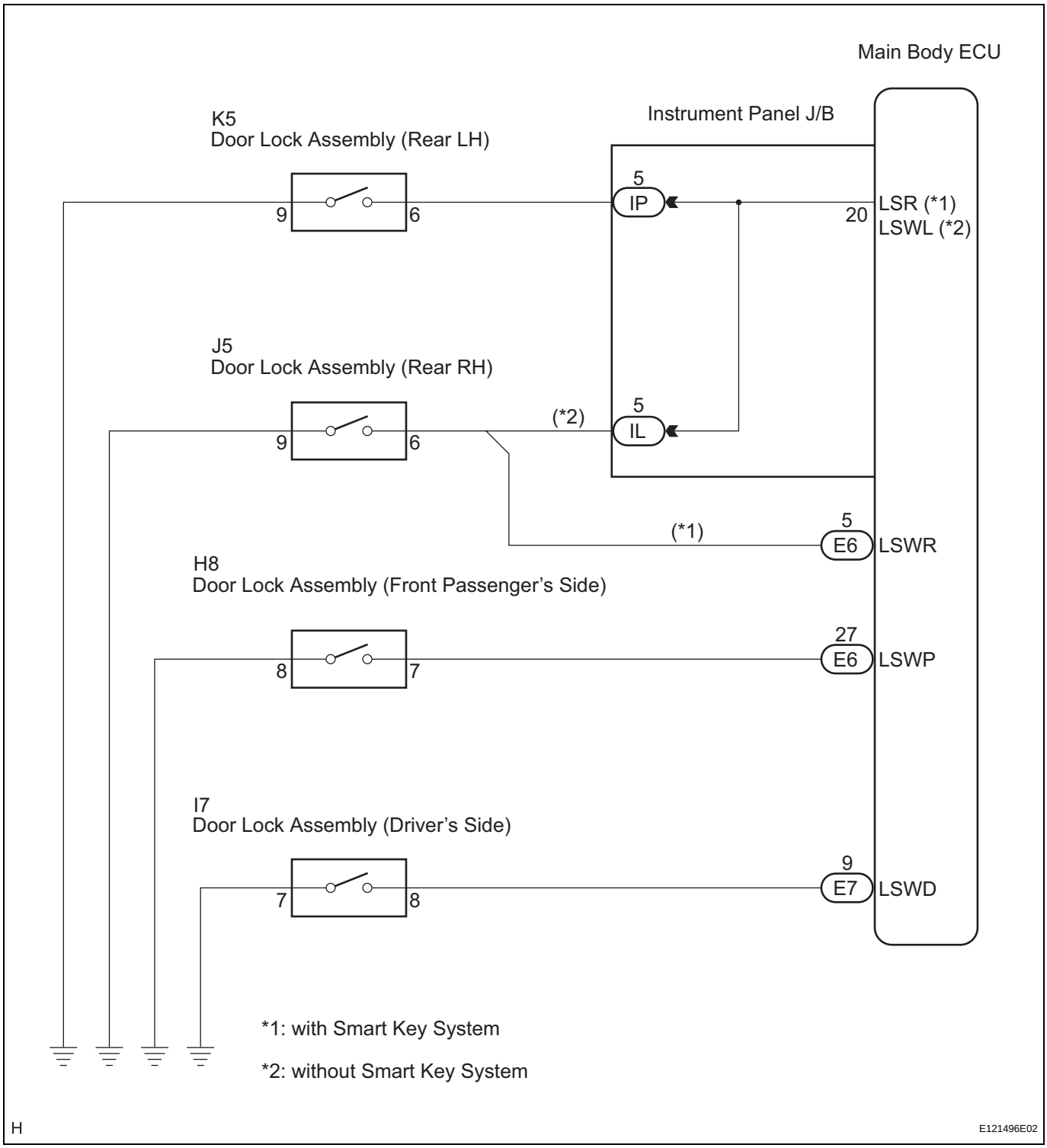
LI

Door LOCK Position Circuit

DESCRIPTION

The main body ECU receives each door lock position switch signal to control the illuminated entry system.

WIRING DIAGRAM



LI

INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the items below in the DATA LIST, and read the display on the intelligent tester.

MAIN BODY (MAIN BODY ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
D LOCK POS SW	Driver side door lock position switch signal / ON or OFF	ON: Driver side door is unlocked OFF: Driver side door is locked	-
P LOCK POS SW	Passenger side door lock position switch signal / ON or OFF	ON: Passenger side door is unlocked OFF: Passenger side door is locked	-
RR LOCK POS SW (with Smart Key System)	Rear right door lock position switch signal / ON or OFF	ON: Rear right door is unlocked OFF: Rear right door is locked	-
RL LOCK POS SW (with Smart Key System)	Rear left door lock position switch signal / ON or OFF	ON: Rear left door is unlocked OFF: Rear left door is locked	-

OK:
Normal conditions listed above are displayed.

NG → **GO TO POWER DOOR LOCK CONTROL SYSTEM**

OK

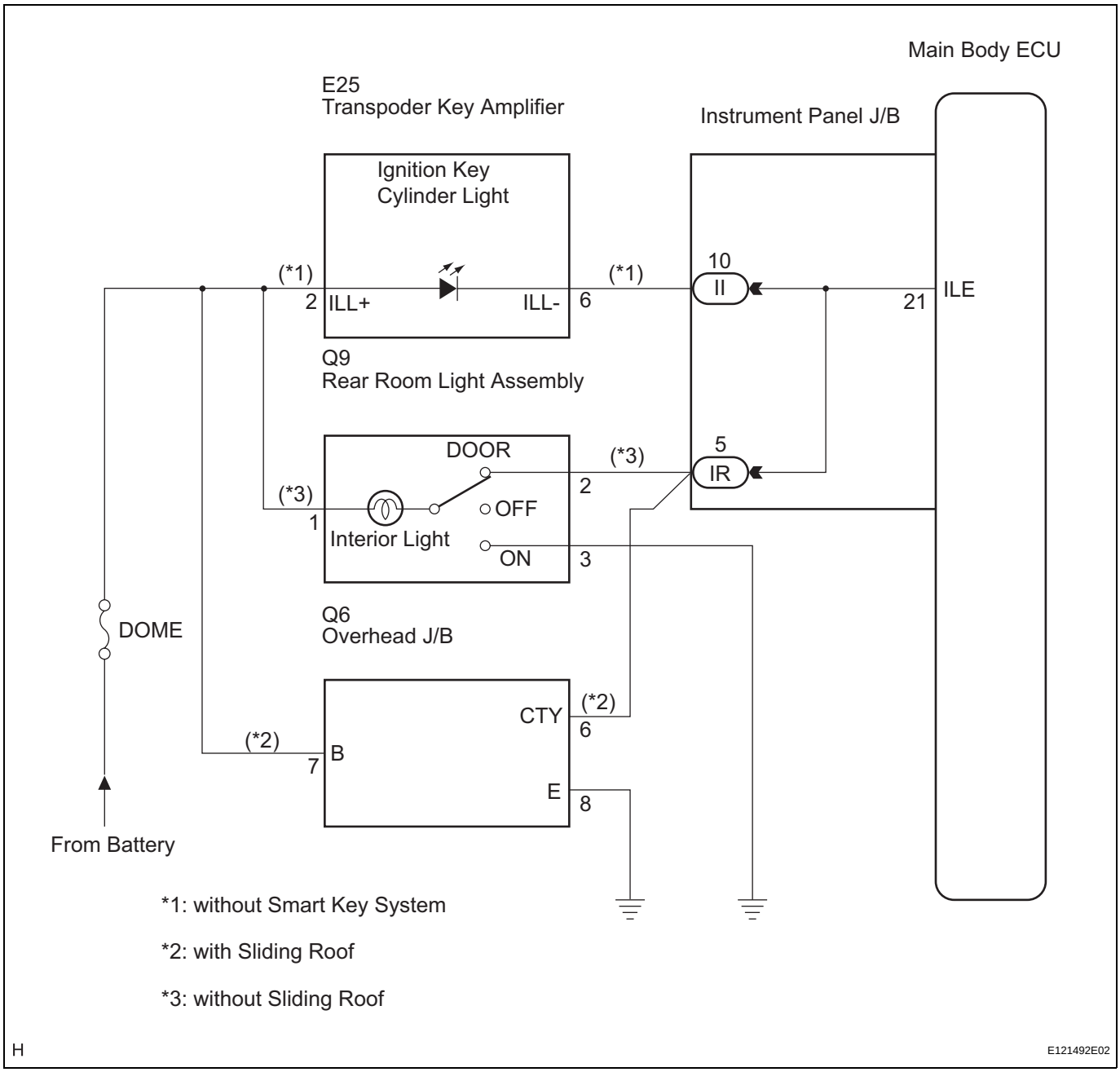
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Interior Light Circuit

DESCRIPTION

The main body ECU controls the illuminated entry system (interior light and ignition key cylinder light).

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn intelligent tester main switch on.

(c) Select the item(s) below in the ACTIVE TEST, and check the operation.

MAIN BODY (MAIN BODY ECU):

Item	Test Details	Diagnostic Note
INTERIOR LAMP	Interior light and ignition key cylinder light ON / OFF (Interior light switch in DOOR position and all doors are closed).	-

OK:

Each light illuminates.

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

NG

2 CHECK VEHICLE CONDITION

(a) Check the vehicle condition.

Result

Condition	Proceed to
without Sliding Roof	**A**
with Sliding Roof	**B**

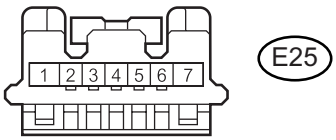
B → **Go to step 4**

A

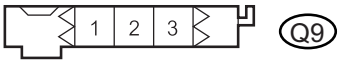
3	**CHECK HARNESS AND CONNECTOR (LIGHT - BATTERY AND INSTRUMENT PANEL J/B ASSEMBLY)**

Wire Harness Side:

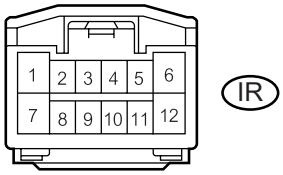
Transponder Key Amplifier (*1)



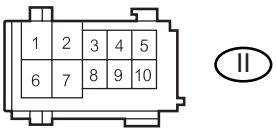
Rear Room Light Assembly



Instrument Panel J/B Assembly



Instrument Panel J/B Assembly



H

E121508E01

(a) Disconnect the E25 transponder key amplifier connector (*1).
(b) Disconnect the Q9 rear room light assembly connector.
(c) Disconnect the IR and II instrument panel J/B assembly connectors.
(d) Measure the voltage and resistance according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E25-2 - Body ground (*1)	Always	10 to 14 V
Q9-1 - Body ground	Always	10 to 14 V

Standard resistance

Tester Connection	Condition	Specified Condition
II-10 - E25-6 (*1)	Always	Below 1 Ω
IR-5 - Q9-2	Always	Below 1 Ω
II-10 - Body ground	Always	10 kΩ or higher
IR-5 - Body ground	Always	10 kΩ or higher

HINT:
*1: without Smart Key System

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

LI

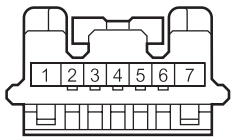
OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

4	**CHECK HARNESS AND CONNECTOR (LIGHT - BATTERY AND INSTRUMENT PANEL J/B ASSEMBLY)**

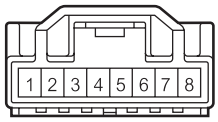
Wire Harness Side:

Transponder Key Amplifier (*1)



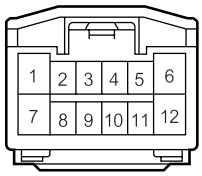
E25

Overhead J/B



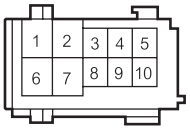
Q6

Instrument Panel J/B Assembly



IR

Instrument Panel J/B Assembly



II

H

E121509E01

(a) Disconnect the E25 transponder key amplifier connector (*1).
(b) Disconnect the Q6 overhead J/B connector.
(c) Disconnect the IR and II instrument panel J/B assembly connectors.
(d) Measure the voltage and resistance according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E25-2 - Body ground (*1)	Always	10 to 14 V
Q6-7 - Body ground	Always	10 to 14 V

Standard resistance

Tester Connection	Condition	Specified Condition
II-10 - E25-6 (*1)	Always	Below 1 Ω
IR-5 - Q6-6	Always	Below 1 Ω
II-10 - Body ground	Always	10 kΩ or higher
IR-5 - Body ground	Always	10 kΩ or higher

HINT:
*1: without Smart Key System

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

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

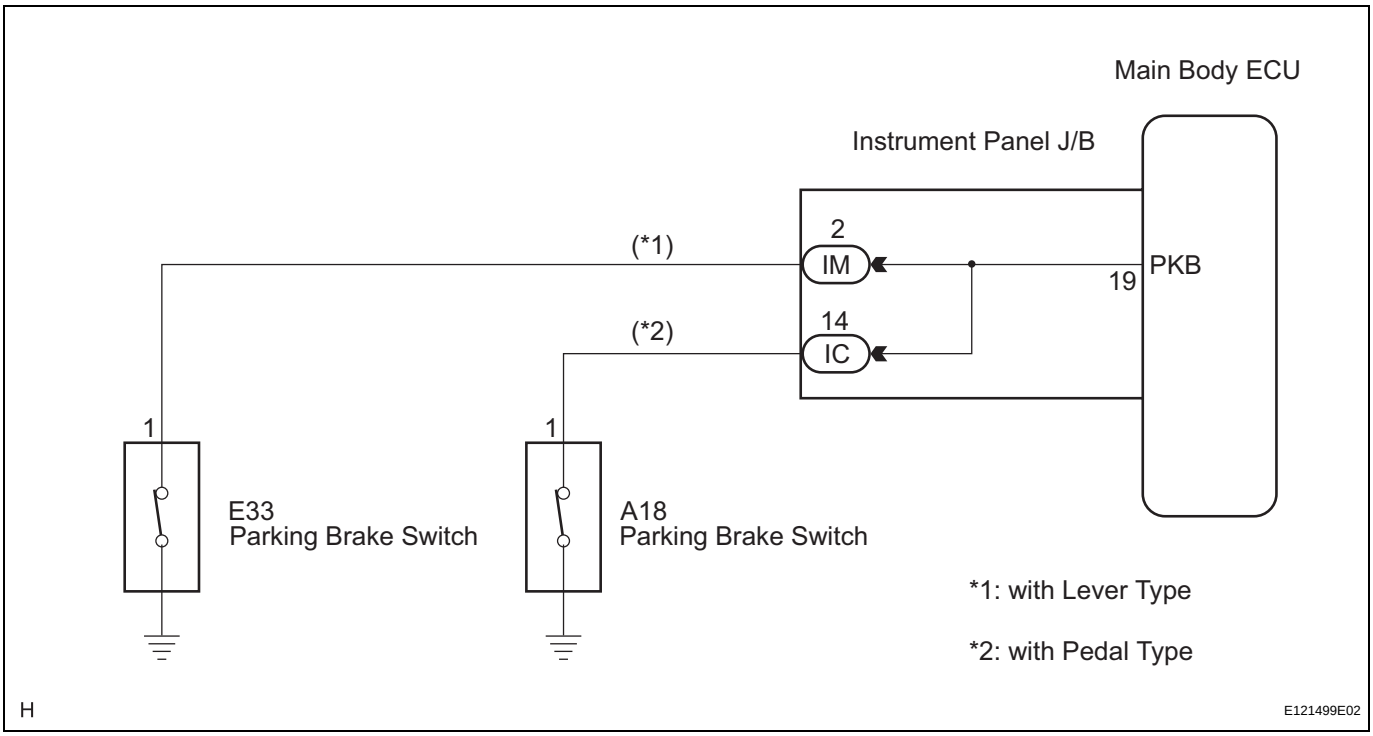
LI

Parking Brake Switch Circuit

DESCRIPTION

The main body ECU receives a parking brake switch signal to control the daytime running light system.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch and turn the intelligent tester main switch on.
(c) Select the item below in the DATA LIST, and read the display on the intelligent tester.

MAIN BODY (MAIN BODY ECU):

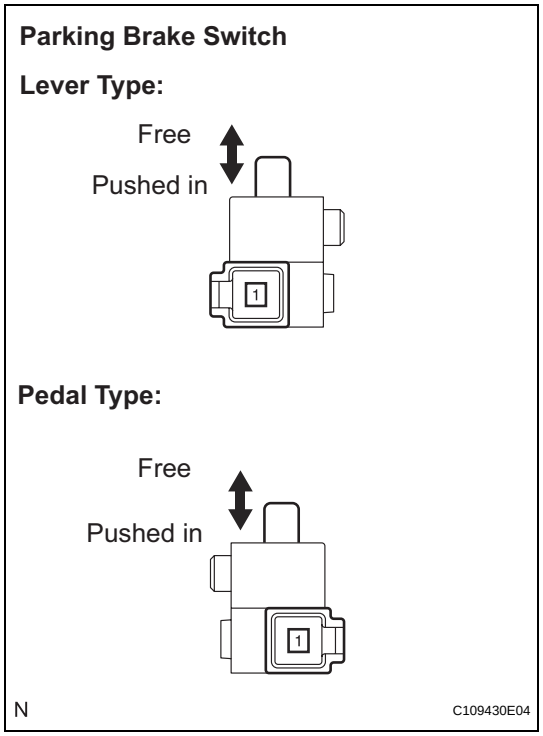
Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
PARKING BRAKE SW	Parking brake SW signal / ON or OFF	ON: Parking brake switch is ON OFF: Parking brake switch is OFF	-

OK:
Normal conditions listed above are displayed.

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

NG

2 INSPECT PARKING BRAKE SWITCH ASSEMBLY



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

Standard resistance

Tester Connection	Condition	Specified Condition
1 - Switch body	Shaft is pushed in	10 kΩ or higher
1 - Switch body	Shaft is not pushed in	Below 1 Ω

NG → **REPLACE PARKING BRAKE SWITCH ASSEMBLY**

OK

3 CHECK VEHICLE CONDITION

(a) Check the vehicle condition.

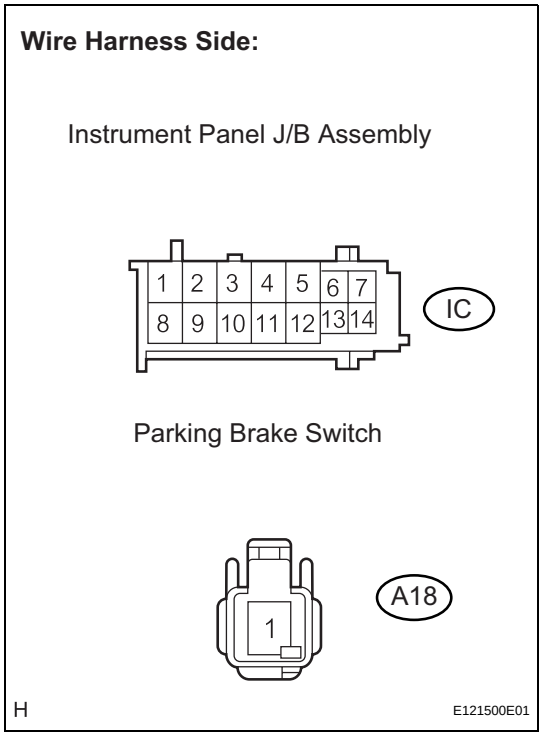
Result

Condition	Proceed to
with Pedal Type Parking Brake	A
with Lever Type Parking Brake	B

B → **Go to step 5**

A

4	CHECK HARNESS AND CONNECTOR (SWITCH - INSTRUMENT PANEL J/B ASSEMBLY)



(a) Disconnect the IC instrument panel J/B assembly connector.
(b) Disconnect the A18 switch connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

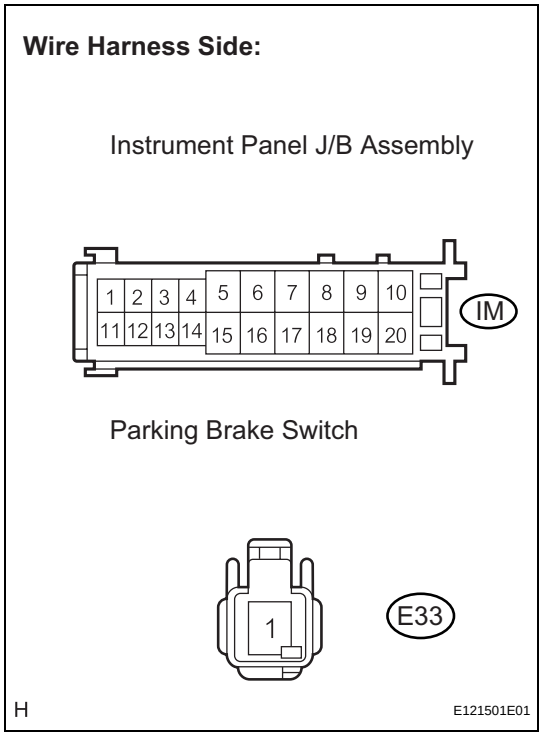
Tester Connection	Condition	Specified Condition
IC-14 - A18-1	Always	Below 1 Ω
IC-14 - Body ground	Always	10 kΩ or higher

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

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

5	CHECK HARNESS AND CONNECTOR (SWITCH - INSTRUMENT PANEL J/B ASSEMBLY)



(a) Disconnect the IM instrument panel J/B assembly connector.
(b) Disconnect the E33 switch connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
IM-2 - E33-1	Always	Below 1 Ω
IM-2 - Body ground	Always	10 kΩ or higher

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

OK

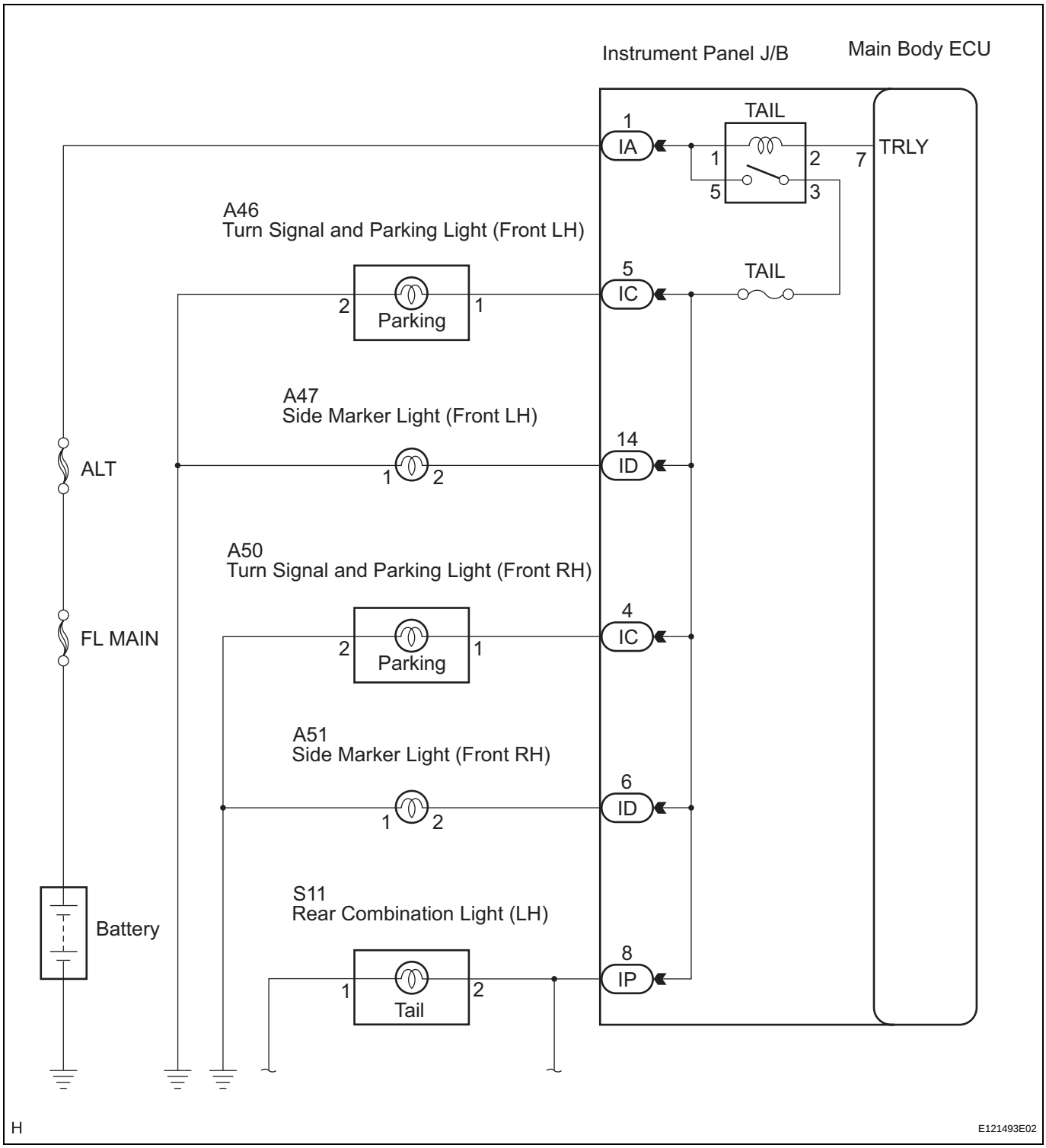
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

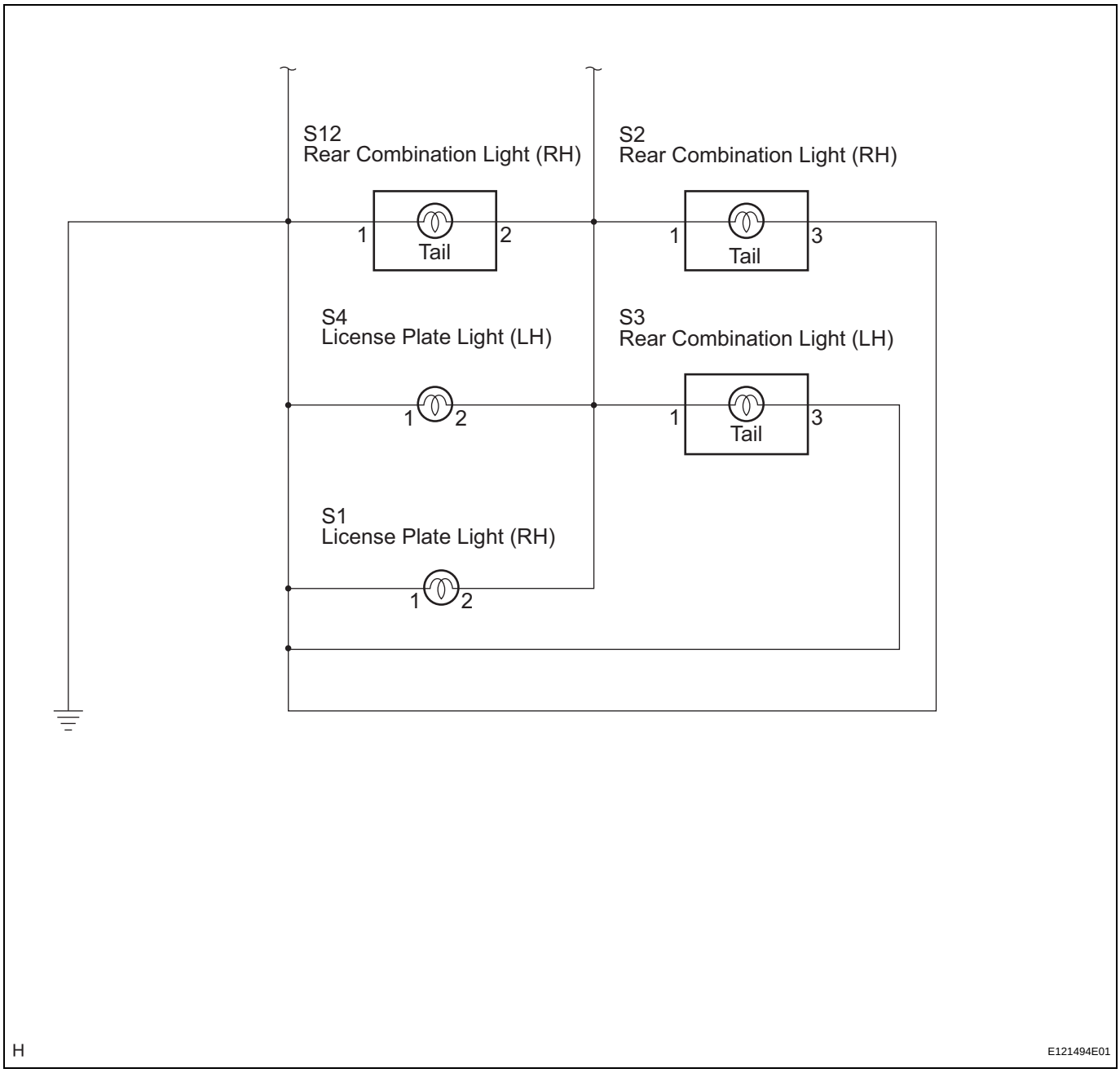
Taillight Relay Circuit

DESCRIPTION

The main body ECU receives a light control switch TAIL signal from the headlight dimmer switch assembly, and turns the taillight relay on.

WIRING DIAGRAM





INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on (IG) and turn the intelligent tester main switch on.
(c) Select the item below in the ACTIVE TEST and then check that the relay operates.

MAIN BODY (MAIN BODY ECU):

Item	Test Details	Diagnostic Note
TAIL LIGHT	Taillight relay ON / OFF	-

OK:
Taillight relay operates. (Taillights illuminate.)

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

NG

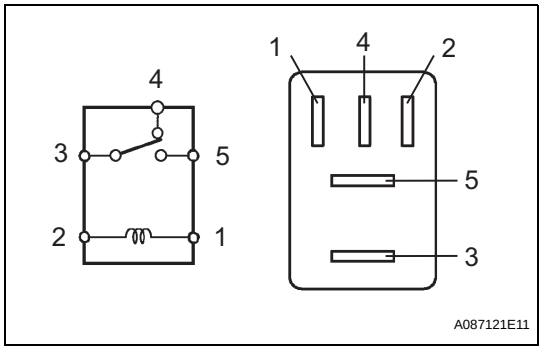
2 INSPECT FUSE (TAIL)

(a) Remove the TAIL fuse from the instrument panel J/B assembly.
(b) Measure the resistance of the fuse.
Standard resistance:
Below 1 Ω

NG → **REPLACE FUSE**

OK

3 INSPECT TAILLIGHT RELAY



(a) Remove the taillight relay from the instrument panel J/B assembly.
(b) Measure the resistance according to the value(s) in the table below.
Standard resistance

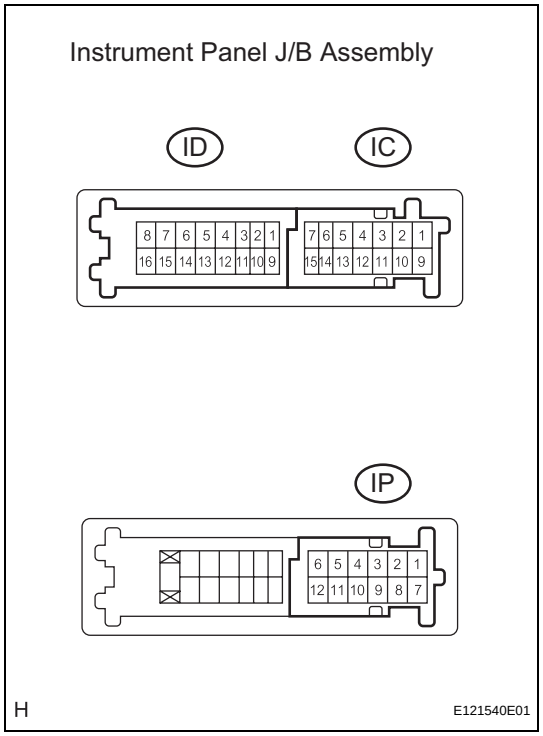
Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
	Below 1 Ω (When battery voltage is applied to terminals 1 and 2)
3 - 4	Below 1 Ω
	10 kΩ or higher (When battery voltage is applied to terminals 1 and 2)

NG → **REPLACE TAILLIGHT RELAY**

LI

OK

4 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



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

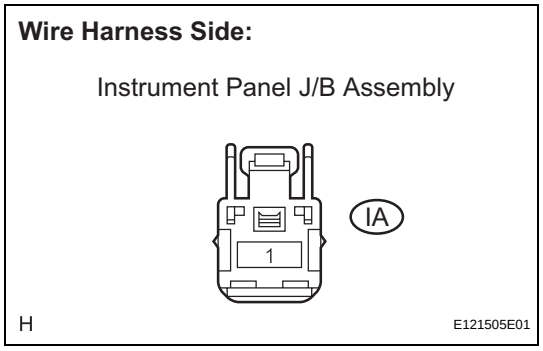
Standard voltage

Tester Connection	Condition	Specified Condition
IC-4 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V
IC-5 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V
ID-6 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V
ID-14 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V
IP-8 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

OK → **REPAIR OR REPLACE HARNESS OR CONNECTOR (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY - BODY GROUND)**

NG

5 CHECK HARNESS AND CONNECTOR (BATTERY - INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY)



(a) Disconnect the IA instrument panel J/B assembly connector.

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

Standard voltage

Tester Connection	Condition	Specified Condition
IA-1 - Body ground	Always	10 to 14 V

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

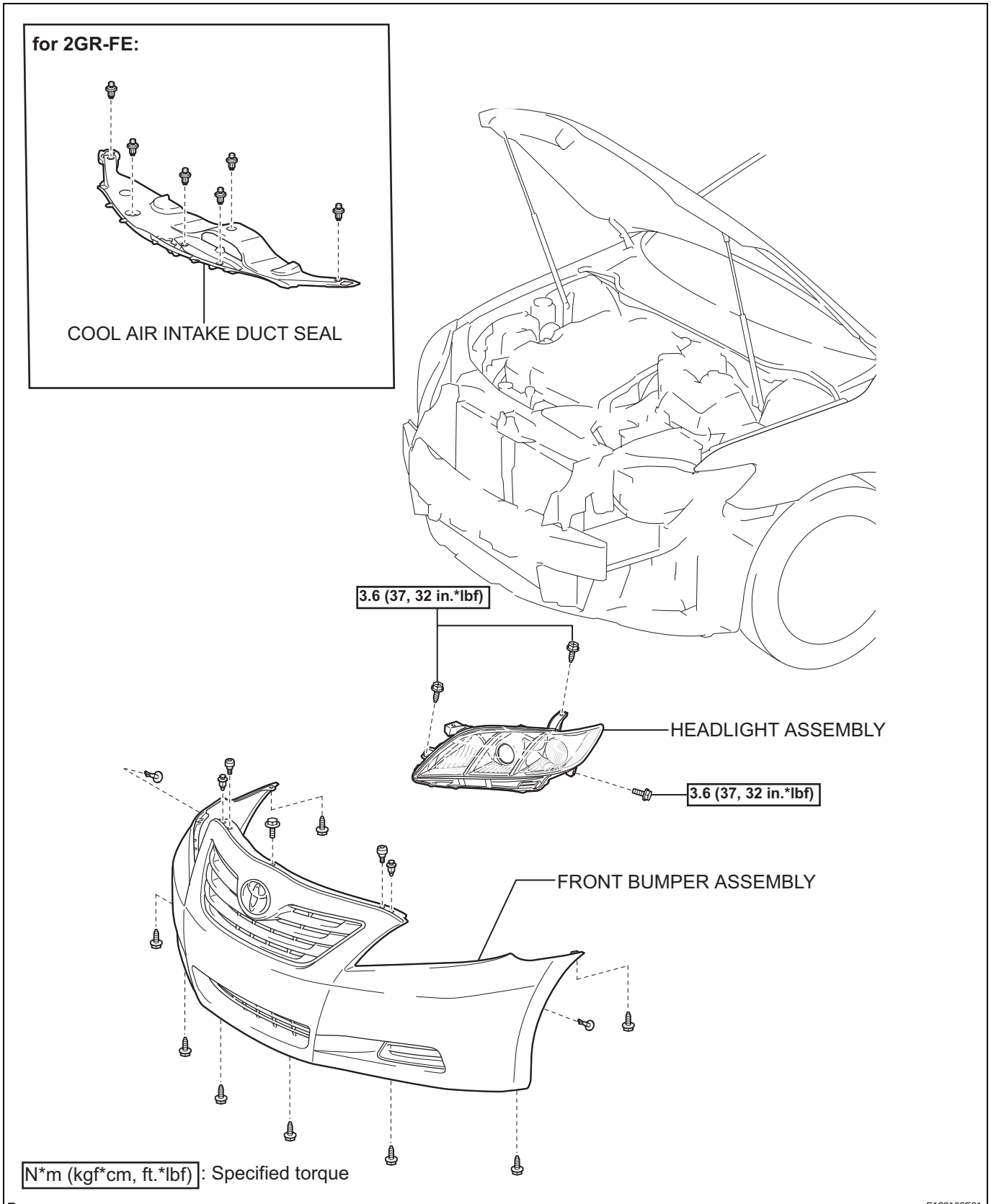
OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

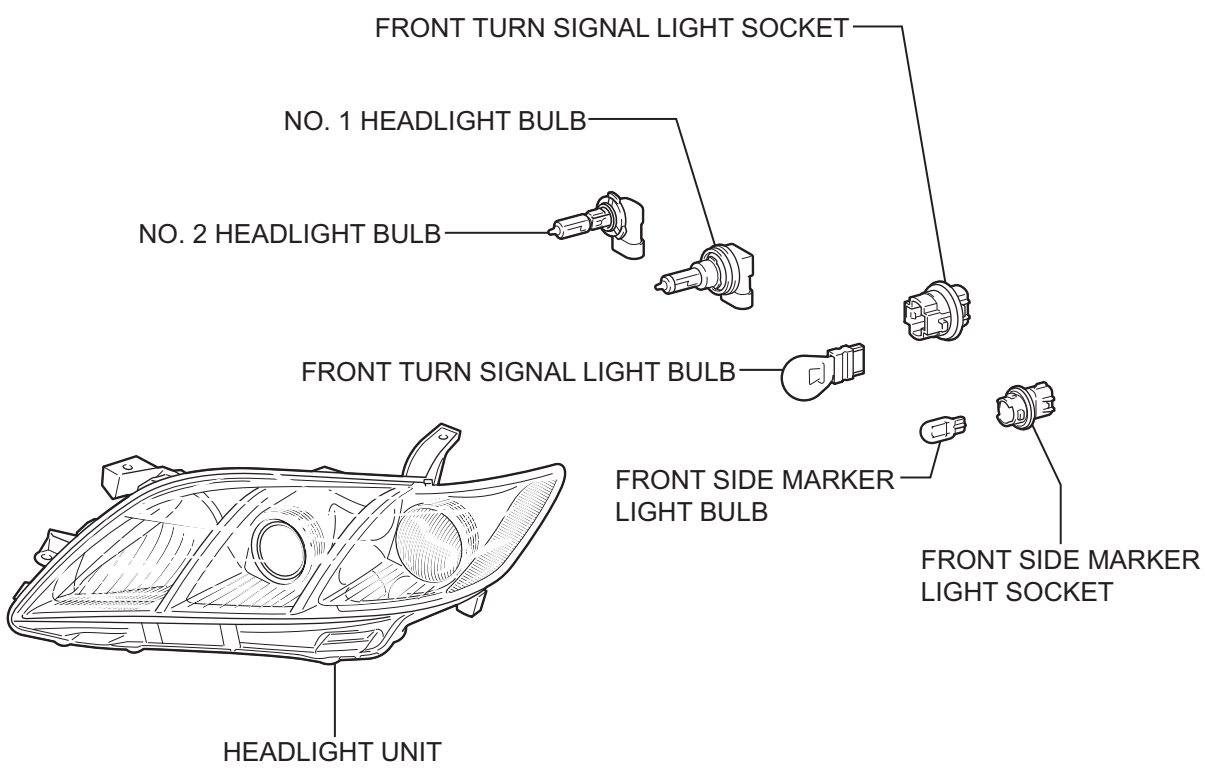
LI

HEADLIGHT ASSEMBLY

COMPONENTS



LI

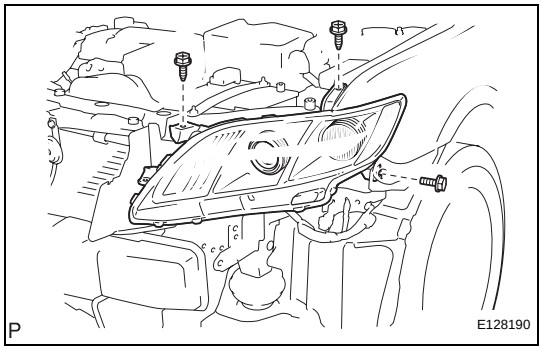


P

E128161E01

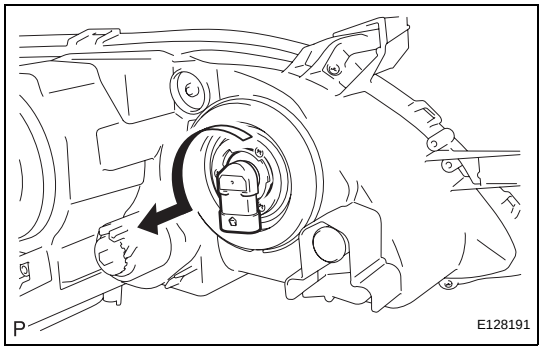
REMOVAL

1. **REMOVE COOL AIR INTAKE DUCT SEAL (for 2GR-FE) (See page ET-4)**
2. **REMOVE FRONT BUMPER ASSEMBLY (w/o Fog Light) (See page ET-5)**
3. **REMOVE FRONT BUMPER ASSEMBLY (w/ Fog Light) (See page ET-6)**
4. **REMOVE HEADLIGHT ASSEMBLY**
   (a) Remove the bolt and 2 screws.
   (b) Disconnect the connectors and remove the headlight assembly.

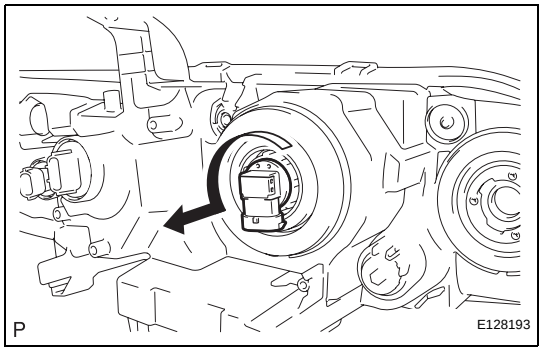


DISASSEMBLY

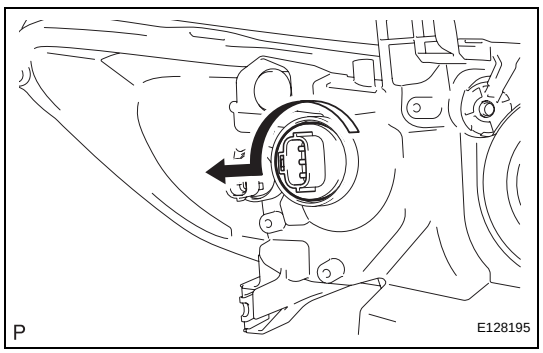
1. **REMOVE NO. 2 HEADLIGHT BULB**
   (a) Remove the No. 2 headlight bulb as shown in the illustration.



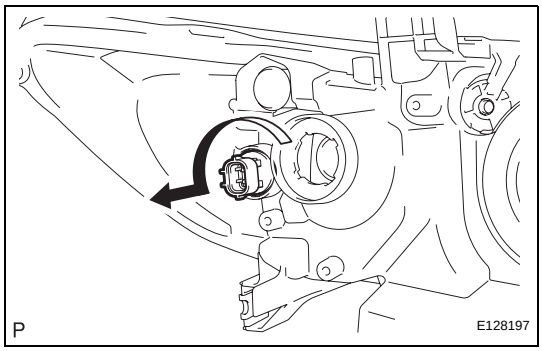
2. **REMOVE NO. 1 HEADLIGHT BULB**
   (a) Remove the No. 1 headlight bulb as shown in the illustration.



3. **REMOVE FRONT TURN SIGNAL LIGHT BULB**
   (a) Turn the front turn signal light bulb and the front turn signal light socket in the direction indicated by the arrow and remove them as a unit.
   (b) Remove the front turn signal light bulb from the front turn signal light socket.



LI



4. REMOVE FRONT SIDE MARKER LIGHT BULB

(a) Turn the front side marker light bulb and the front side marker light socket in the direction indicated by the arrow and remove them as a unit.

(b) Remove the front side marker light bulb from the front side marker light socket.

ADJUSTMENT

HINT:
It is possible that a bulb is incorrectly installed, affecting headlight aim. Bulb installation should be considered prior to performing the adjustment procedure.

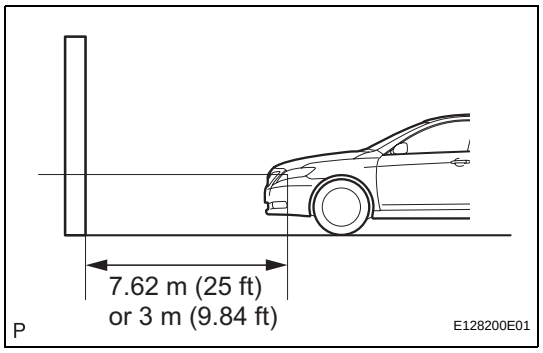
1. VEHICLE PREPARATION FOR HEADLIGHT AIM ADJUSTMENT

(a) Prepare the vehicle according to the following conditions:
- Ensure there is no damage or deformation to the body around the headlights.
- Fill the fuel tank.
- Make sure that the oil is filled to the specified level.
- Make sure that the coolant is filled to the specified level.
- Inflate the tires to the appropriate pressure.
- Unload the trunk and vehicle, ensuring that the spare tire, tools, and jack are in their original positions.
- Sit a person of average weight (68 kg, 150 lb) in the driver's seat.

2. PREPARATION FOR HEADLIGHT AIMING (Using a headlight aim test machine)

(a) Adjust the headlight aim in accordance with the headlight aim test machine instructions.

3. PREPARATION FOR HEADLIGHT AIMING (for Using a Screen)



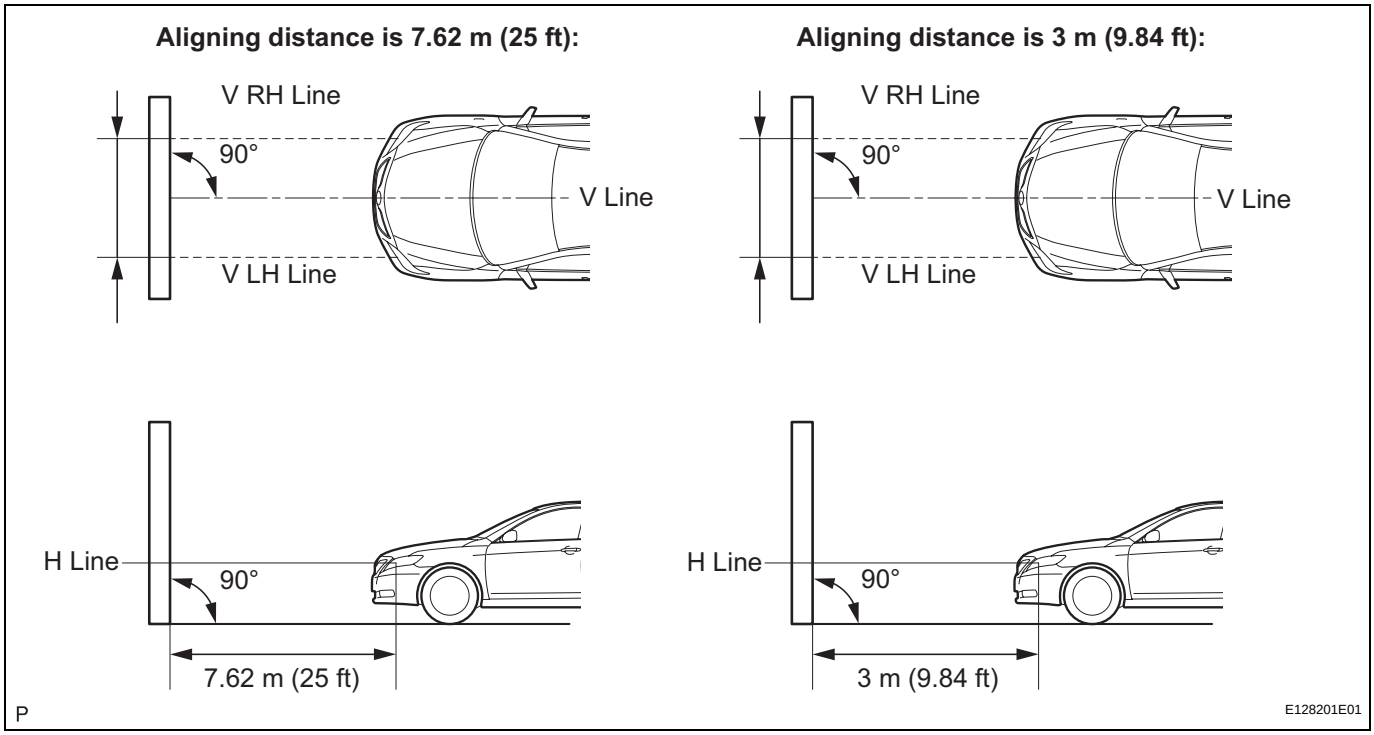
(a) Prepare the vehicle:
- Place the vehicle in a location that is dark enough to clearly observe the cutoff line. The cutoff line is a distinct line, below which light from the headlights can be observed and above which it cannot.
- Place the vehicle at a 90° angle to the wall.
- Create a 7.62 m (25 ft) distance between the vehicle (headlight bulb center) and the wall.
- Make sure that the vehicle is on a level surface.
- Bounce the vehicle up and down to settle the suspension.

NOTICE:
A distance of 7.62 m (25 ft) between the vehicle (headlight bulb center) and the wall is necessary for proper aim adjustment. If sufficient space is not available, secure a distance of exactly 3 m (9.84 ft) to allow for checking and adjustment of headlight aim. (The size of the target zone will change with the distance, so follow the instructions in the illustration.)

(b) Prepare a piece of thick white paper (approximately 2 m (6.6 ft) (height) x 4 m (13.1 ft) (width)) to use as a screen.

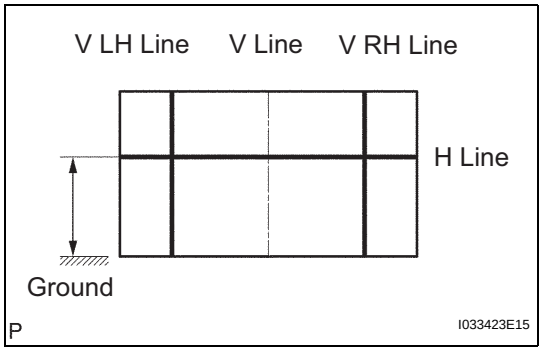
(c) Draw a vertical line down the center of the screen (V line).

(d) Set the screen as shown in the illustration.



HINT:

- Stand the screen perpendicular to the ground.
- Align the V line on the screen with the center of the vehicle.



(e) Draw base lines (H, V LH, and V RH lines) on the screen as shown in the illustration.

HINT:

- The base lines differ for "low-beam inspection" and "high-beam inspection".
- Mark the headlight bulb center marks on the screen. If the center mark cannot be observed on the headlight, use the center of the headlight bulb or the manufacturer's name marked on the headlight as the center mark.

(1) H Line (Headlight height):
Draw a horizontal line across the screen so that it passes through the center marks. The H line should be at the same height as the headlight bulb center marks of the low-beam headlights.

(2) V LH Line, V RH Line (Center mark position of left-hand (LH) and right-hand (RH) headlights):
Draw two vertical lines so that they intersect the H line at each center mark (aligned with the center of the low-beam headlight bulbs).

LI

4. HEADLIGHT AIMING INSPECTION

(a) Cover the headlight or disconnect the connector of the headlight on the opposite side to prevent light from the headlight that is not being inspected from affecting the headlight aiming inspection.

NOTICE:

Do not keep the headlight covered for more than 3 minutes. The headlight lens is made of synthetic resin, which may melt or be damaged due to excessive heat.

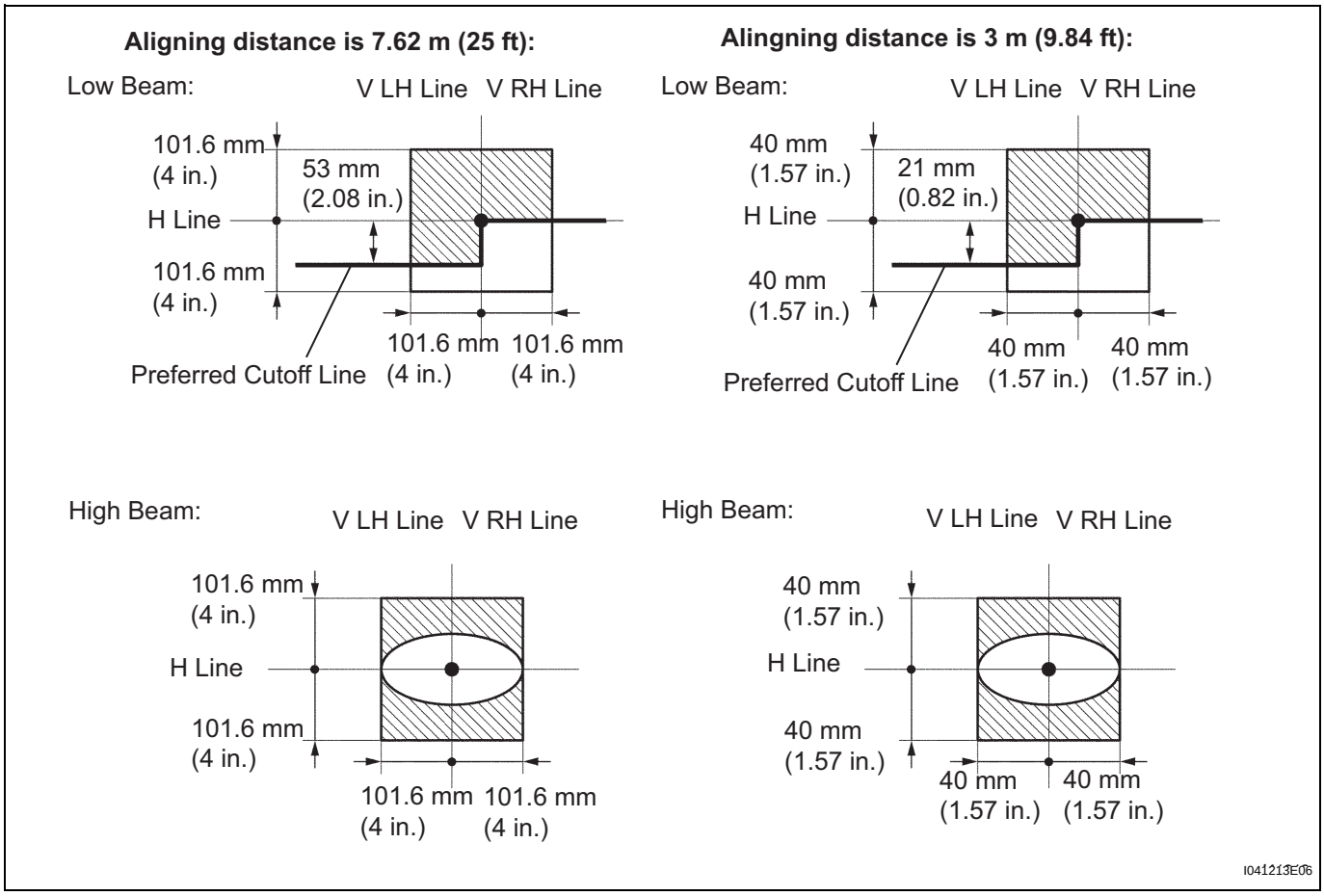
HINT:

When checking the aim of the high-beam, cover the low-beam or disconnect the connector.

(b) Start the engine.

(c) Replacement text:

Turn on the headlight and check if the cutoff line matches the preferred cutoff line in the following illustration.

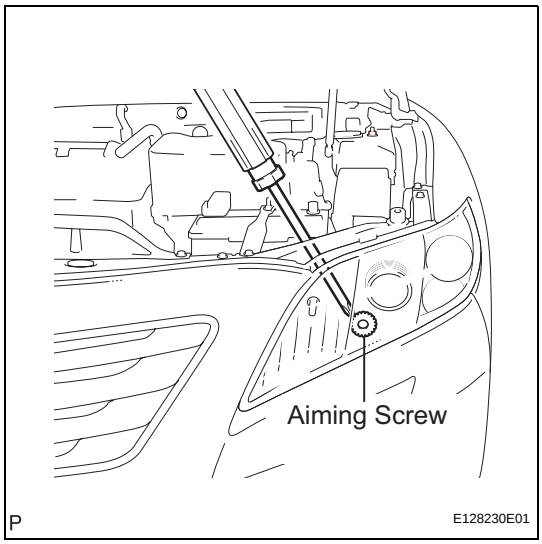


HINT:

- Since the low-beam light and the high-beam light are a unit, if the aim on the low beam is correct, the high beam should also be correct. However, check both beams just to make sure.

LI

- If the alignment distance is 7.62 m (25 ft):
  The cutoff line should be within 101.6 mm (4 in.) above or below the H line as well as 101.6 mm (4 in.) left or right of the V line with low-beam (SAE J599).
- If the alignment distance is 3 m (9.84 ft):
  The low beam cutoff line should be within 40 mm (1.57 in.) above or below the H line as well as 40 mm (1.57 in.) left or right of the V line (SAE J599).
- If the alignment distance is 7.62 m (25 ft):
  The high beam center of intensity should be within 101.6 mm (4 in.) above or below the H line as well as 101.6 mm (4 in.) left or right of the V line (SAE J599).
- If the alignment distance is 3 m (9.84 ft):
  The high beam center of intensity should be within 40 mm (1.57 in.) above or below the H line as well as 40 mm (1.57 in.) left or right of the V line (SAE J599).
- If the alignment distance is 7.62 m (25 ft):
  The low beam cutoff line should be 53 mm (2.08 in.) below the H line (preferred cutoff line target).
- If the alignment distance is 3 m (9.84 ft):
  The low beam cutoff line should be 21 mm (0.82 in.) below the H line (preferred cutoff line target).



5. HEADLIGHT AIMING ADJUSTMENT

(a) Adjust the aim vertically:
Adjust the headlight aim into the specified range by turning aiming screw with a screwdriver.
NOTICE:
The final turn of the aiming screw should be made in the clockwise direction. If the screw is tightened excessively, loosen it and then retighten it, so that the final turn of the screw is in the clockwise direction.
HINT:

- The low-beam light and the high-beam light are a unit. Adjusting the aim on the low-beam to the correct position should also result in the high-beam adjustment being correct.
- If it is not possible to correctly adjust headlight aim, check bulb, headlight unit, and headlight unit reflector installation.
- The headlight aim moves up when turning the aiming screw clockwise, and moves down when turning the aiming screw counterclockwise.

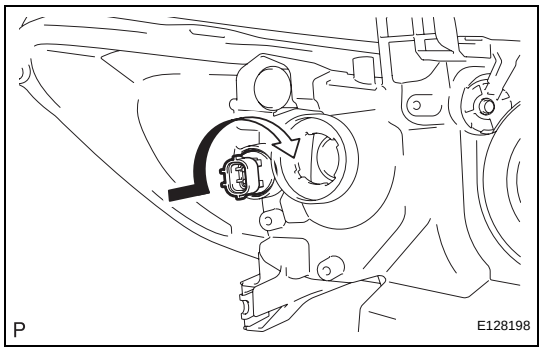
LI

REASSEMBLY

1. INSTALL FRONT SIDE MARKER LIGHT BULB

(a) Install the front side marker light bulb to the front side marker light socket.

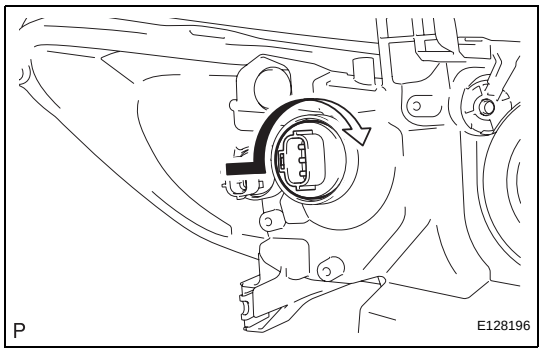
(b) Turn the front side marker light bulb and front side marker light socket in the direction indicated by the arrow and install them as a unit.



2. INSTALL FRONT TURN SIGNAL LIGHT BULB

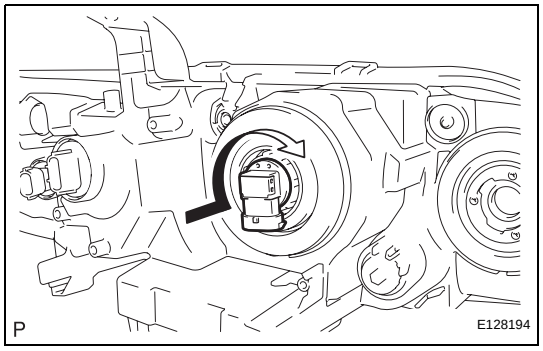
(a) Install the front turn signal light bulb to the front turn signal light socket.

(b) Turn the front turn signal light bulb and front turn signal light socket in the direction indicated by the arrow and install them as a unit.



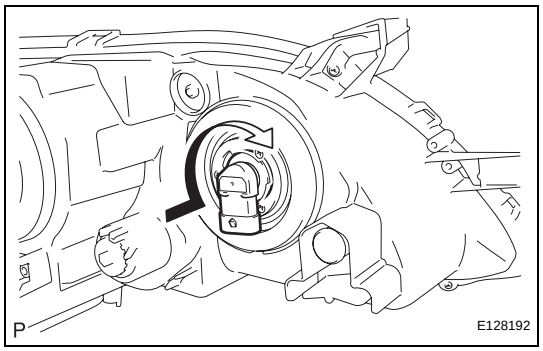
3. INSTALL NO. 1 HEADLIGHT BULB

(a) Install the No. 1 headlight bulb as shown in the illustration.



4. INSTALL NO. 2 HEADLIGHT BULB

(a) Install the No. 2 headlight bulb as shown in the illustration.



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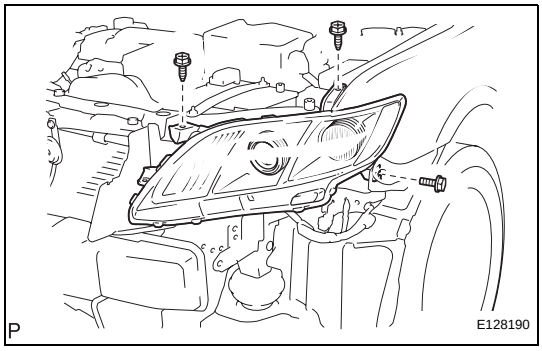
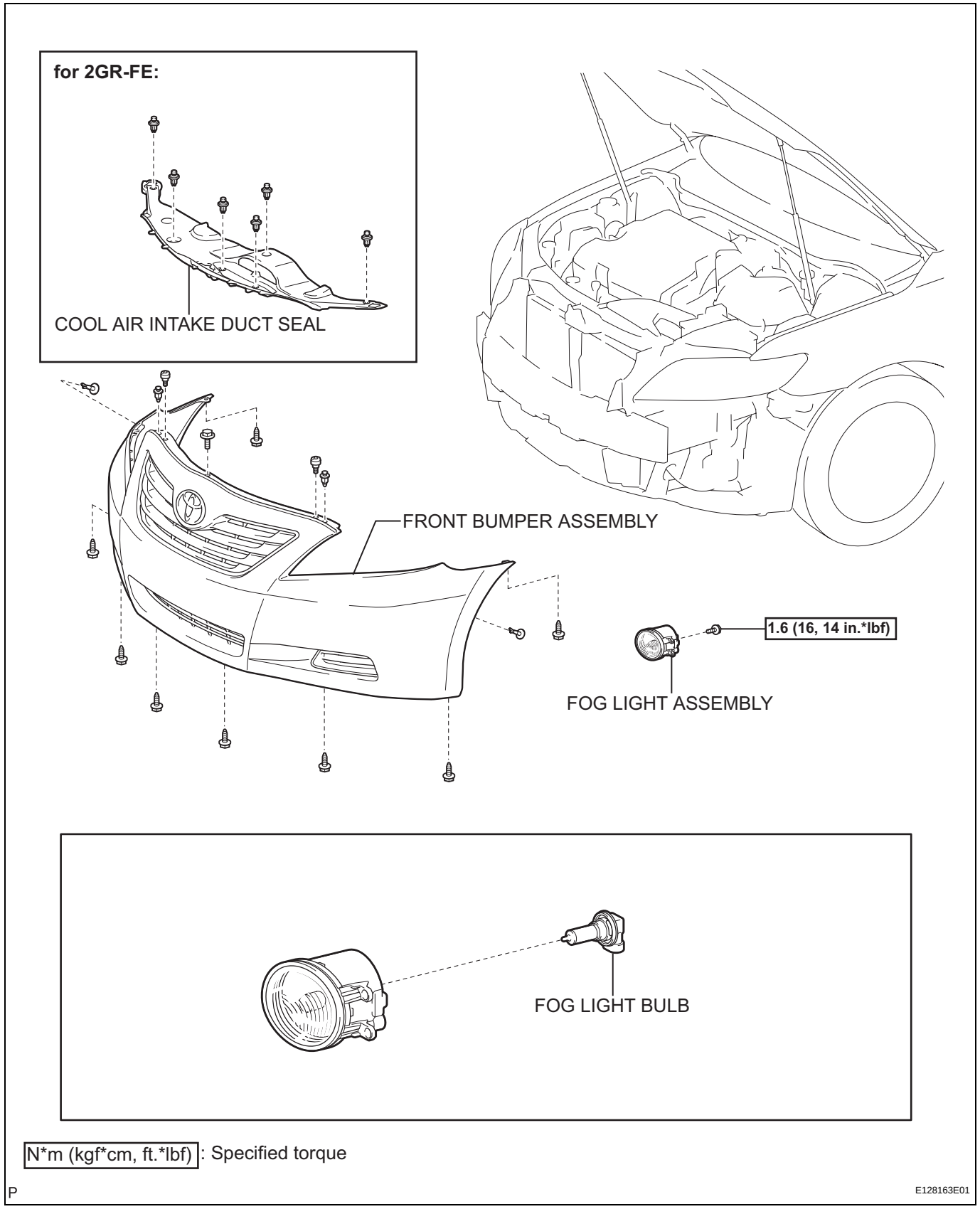


INSTALLATION

1. **INSTALL HEADLIGHT ASSEMBLY**
   (a) Connect the connectors.
   (b) Install the headlight assembly with the bolt and 2 screws.
   Torque: 3.6 N*m (37 kgf*cm, 32 in.*lbf)
2. **INSTALL FRONT BUMPER ASSEMBLY (w/o Fog Light) (See page ET-13)**
3. **INSTALL FRONT BUMPER ASSEMBLY (w/ Fog Light) (See page ET-14)**
4. **INSTALL COOL AIR INTAKE DUCT SEAL (for 2GR-FE) (See page ET-14)**
5. **VEHICLE PREPARATION FOR HEADLIGHT AIM ADJUSTMENT (See page LI-71)**
6. **PREPARATION FOR HEADLIGHT AIMING (Using a tester) (See page LI-72)**
7. **PREPARATION FOR HEADLIGHT AIMING (Using a screen) (See page LI-72)**
8. **HEADLIGHT AIMING INSPECTION (See page LI-74)**
9. **HEADLIGHT AIMING ADJUSTMENT (See page LI-75)**
10. **VEHICLE PREPARATION FOR FOG LIGHT AIM (w/ Fog Light) (See page LI-79)**
11. **PREPARATION FOR FOG LIGHT AIMING (w/ Fog Light) (See page LI-80)**
12. **FOG LIGHT AIMING INSPECTION (w/ Fog Light) (See page LI-81)**
13. **FOG LIGHT AIMING ADJUSTMENT (w/ Fog Light) (See page LI-82)**

FOG LIGHT ASSEMBLY

COMPONENTS



N*m (kgf*cm, ft.*lbf): Specified torque

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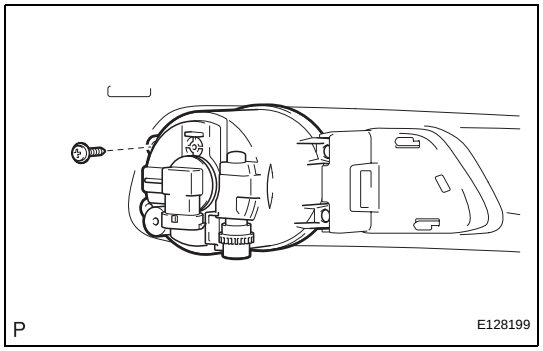
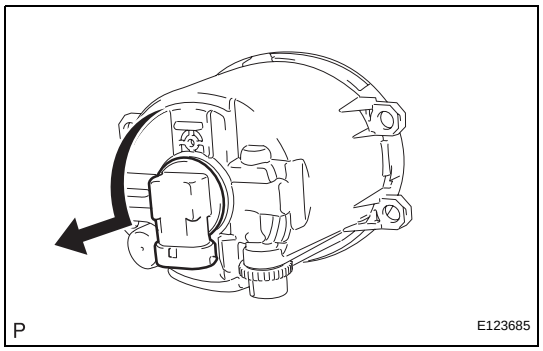
REMOVAL

1. **REMOVE COOL AIR INTAKE DUCT SEAL (for 2GR-FE) (See page ET-4)**
2. **REMOVE FRONT BUMPER ASSEMBLY (See page ET-6)**
3. **REMOVE FOG LIGHT ASSEMBLY**
   (a) Remove the screw and the fog light assembly.



DISASSEMBLY

1. **REMOVE FOG LIGHT BULB**
   (a) Remove the fog light bulb as shown in the illustration.

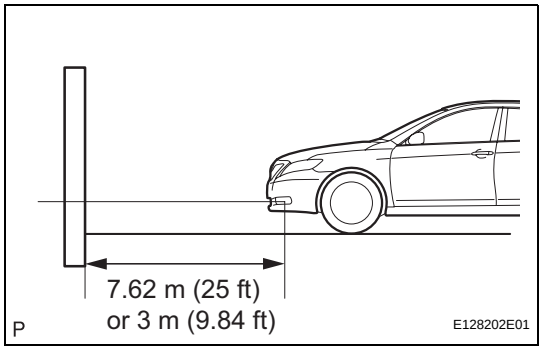


ADJUSTMENT

HINT:
It is possible that a bulb is incorrectly installed, affecting fog light aim. Bulb installation should be considered prior to performing the adjustment procedure.

1. VEHICLE PREPARATION FOR FOG LIGHT AIM

(a) Prepare the vehicle according to the following conditions:
- Ensure there is no damage or deformation to the body around the fog lights.
- Fill the fuel tank.
- Make sure that the oil is filled to the specified level.
- Make sure that the coolant is filled to the specified level.
- Inflate the tires to the appropriate pressure.
- Unload the trunk and vehicle, ensuring that the spare tire, tools, and jack are in their original positions.
- Sit a person of average weight (68 kg, 150 lb) in the driver's seat.
- Vehicles with height adjustable suspension should set the vehicle height to the lowest setting prior to adjusting the fog light aim.



2. PREPARATION FOR FOG LIGHT AIMING

(a) Prepare the vehicle:
- Place the vehicle in a location that is dark enough to clearly observe the cutoff line. The cutoff line is a distinct line, below which light from the fog lights can be observed and above which it cannot.
- Place the vehicle at a 90° angle to the wall.
- Create a 7.62 m (25 ft) distance between the vehicle (fog light bulb center) and the wall.
- Make sure that the vehicle is on a level surface.
- Bounce the vehicle up and down to settle the suspension.

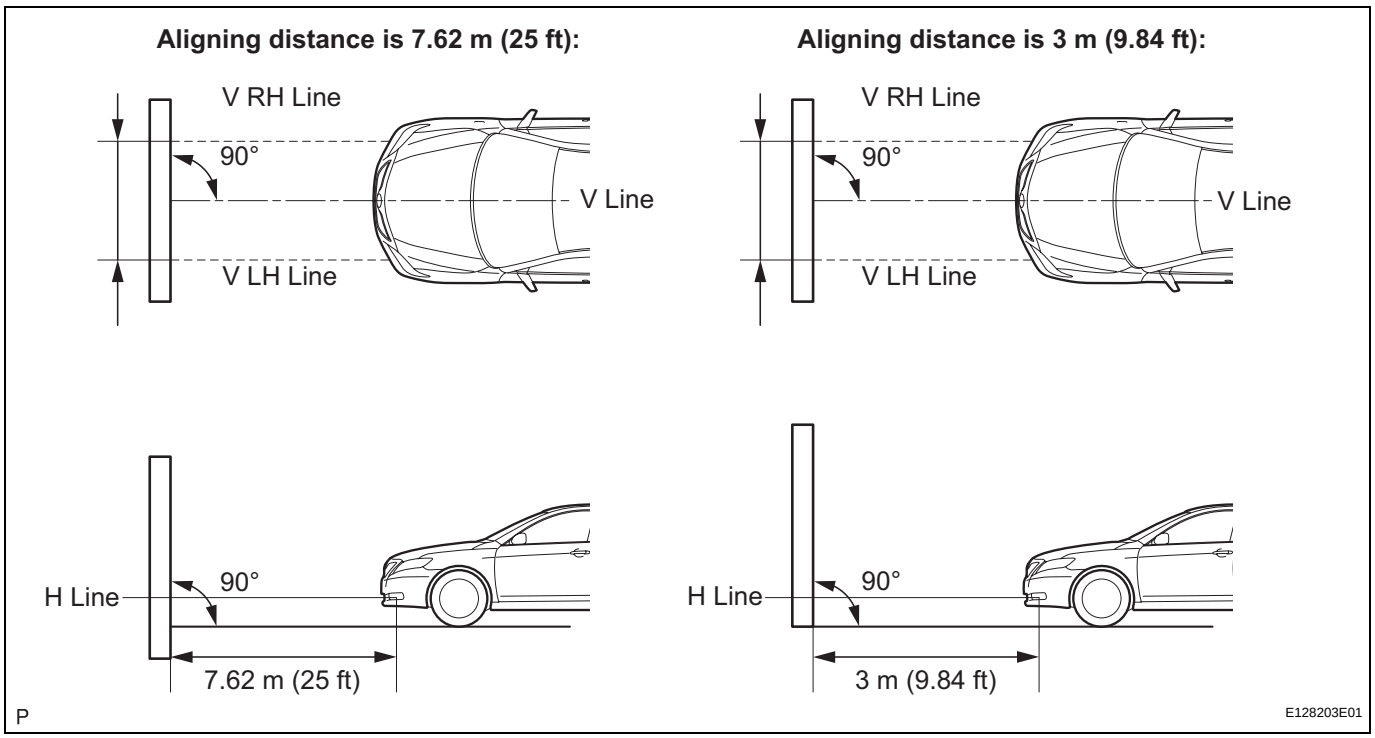
NOTICE:
A distance of 7.62 m (25 ft) between the vehicle (fog light bulb center) and the wall is necessary for proper aim adjustment. If unavailable, secure a distance of exactly 3 m (9.84 ft) for check and adjustment. (The target zone will change with the distance, so follow the instructions in the illustration.)

(b) Prepare a piece of thick white paper (approximately 2 m (6.6 ft) (height) x 4 m (13.1 ft) (width)) to use as a screen.

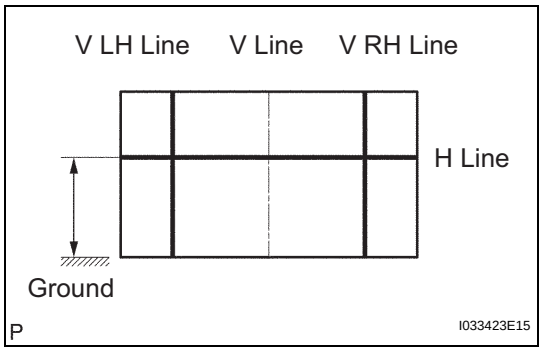
(c) Draw a vertical line down the center of the screen (V line).

LI

(d) Set the screen as shown in the illustration.



HINT:
- Stand the screen perpendicular to the ground.
- Align the V line on the screen with the center of the vehicle.



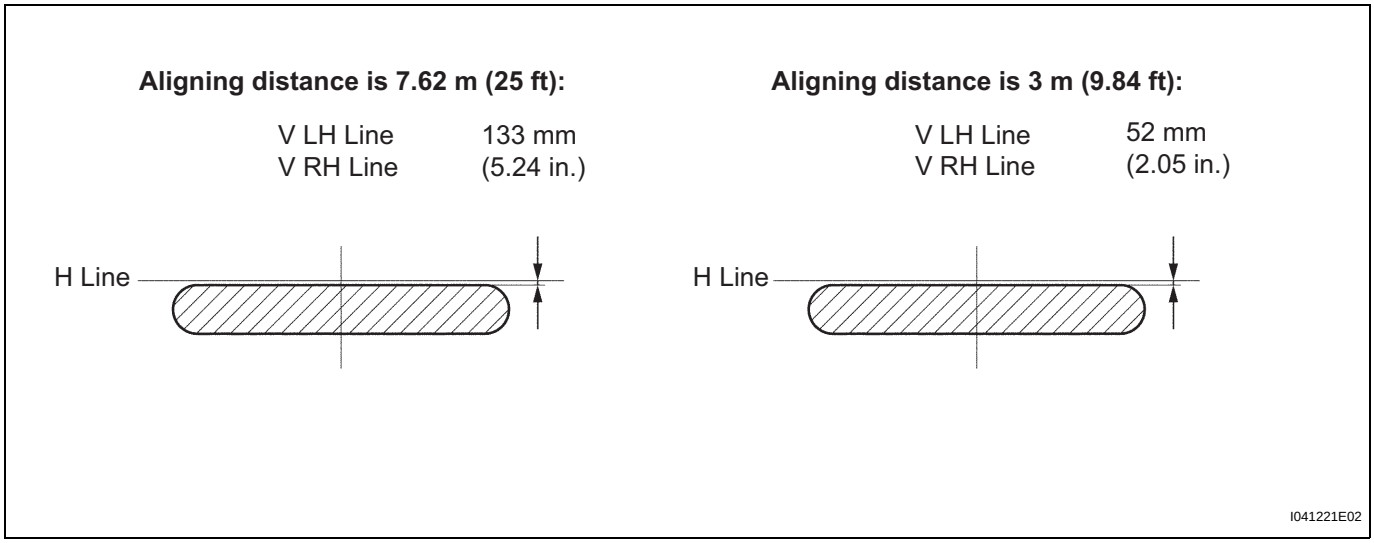
(e) Draw base lines (H, V LH, and V RH lines) on the screen as shown in the illustration.
HINT:
Mark the fog light bulb center marks on the screen. If the center mark cannot be observed on the fog light, use the center of the fog light bulb or the manufacturer's name marked on the fog light as the center mark.
(1) H Line (Fog light height):
Draw a horizontal line across the screen so that it passes through the center marks. The H line should be at the same height as the fog light bulb center marks of the low-beam fog lights.
(2) V LH Line, V RH Line (Center mark position of left-hand (LH) and right-hand (RH) fog lights):
Draw two vertical lines so that they intersect the H line at each center mark.

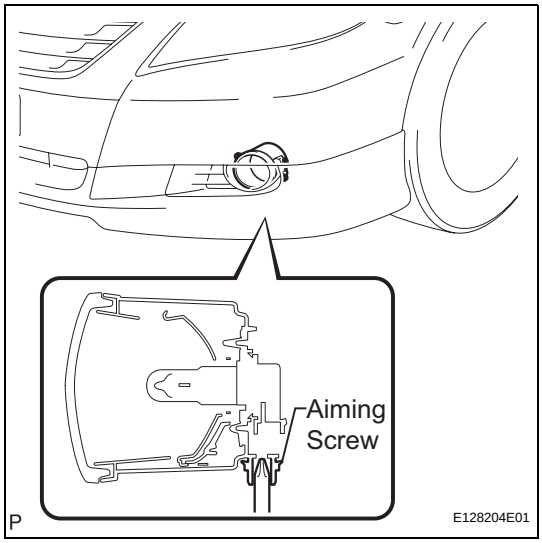
3. FOG LIGHT AIMING INSPECTION

(a) Cover the fog light or disconnect the connector of the fog light on the opposite side to prevent light from the fog light that is not being inspected from affecting the fog light aiming inspection.
NOTICE:
Do not keep the fog light covered for more than 3 minutes. The fog light lens is made of synthetic resin, which may melt or be damaged due to excessive heat.

LI

(b) Start the engine.
(c) Turn on the fog light and check if the cut off line falls within the specified area in the following illustration.

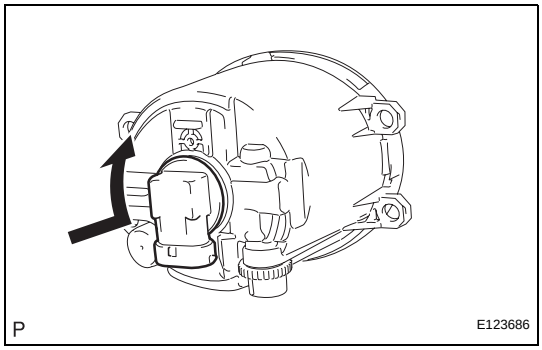




4. FOG LIGHT AIMING ADJUSTMENT

(a) Adjust the aim vertically:
Adjust the aim of each fog light to the specified range by turning each aiming screw with a screwdriver.
NOTICE:
The final turn of the aiming screw should be made in the clockwise direction. If the screw is tightened excessively, loosen it and then retighten it, so that the final turn of the screw is in the clockwise direction.
HINT:
If it is not possible to correctly adjust fog light aim, check bulb, fog light unit, and fog light unit reflector installation.

REASSEMBLY



1. INSTALL FOG LIGHT BULB

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

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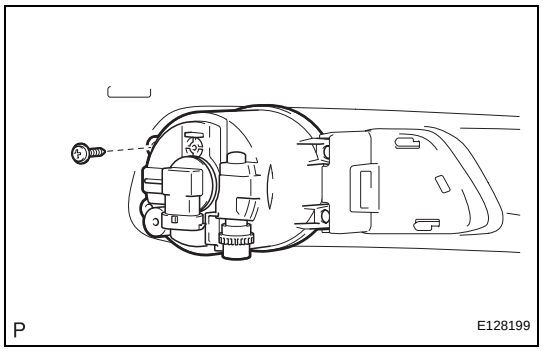
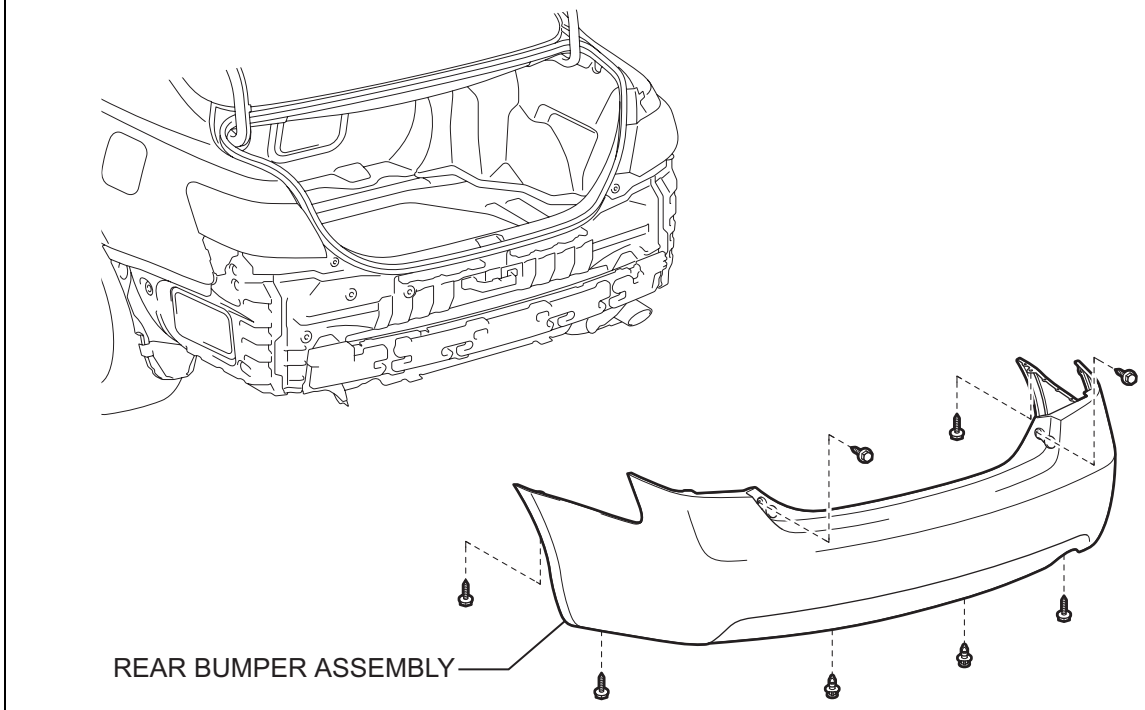


INSTALLATION

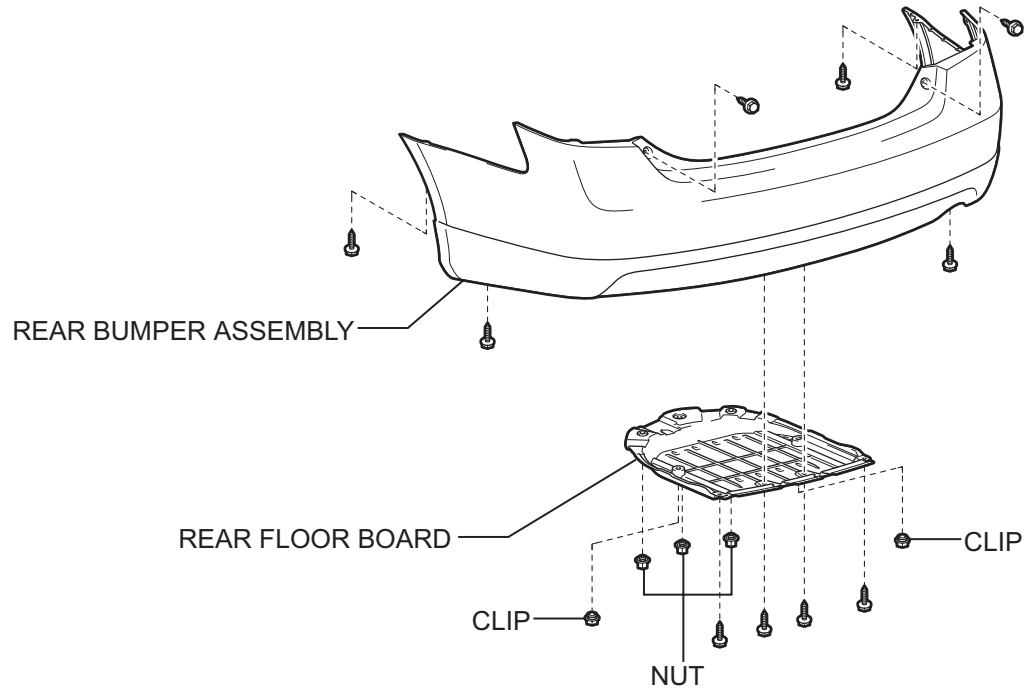
1. **INSTALL FOG LIGHT ASSEMBLY**
   (a) Install the fog light assembly with the screw.
   Torque: 1.6 N*m (16 kgf*cm, 14 in.*lbf)
2. **INSTALL FRONT BUMPER ASSEMBLY (See page ET-14)**
3. **INSTALL COOL AIR INTAKE DUCT SEAL (for 2GR-FE) (See page ET-14)**
4. **VEHICLE PREPARATION FOR FOG LIGHT AIM (See page LI-79)**
5. **PREPARATION FOR FOG LIGHT AIMING (See page LI-80)**
6. **FOG LIGHT AIMING INSPECTION (See page LI-81)**
7. **FOG LIGHT AIMING ADJUSTMENT (See page LI-82)**

REAR COMBINATION LIGHT ASSEMBLY

COMPONENTS



with Rear Lower Spoiler:



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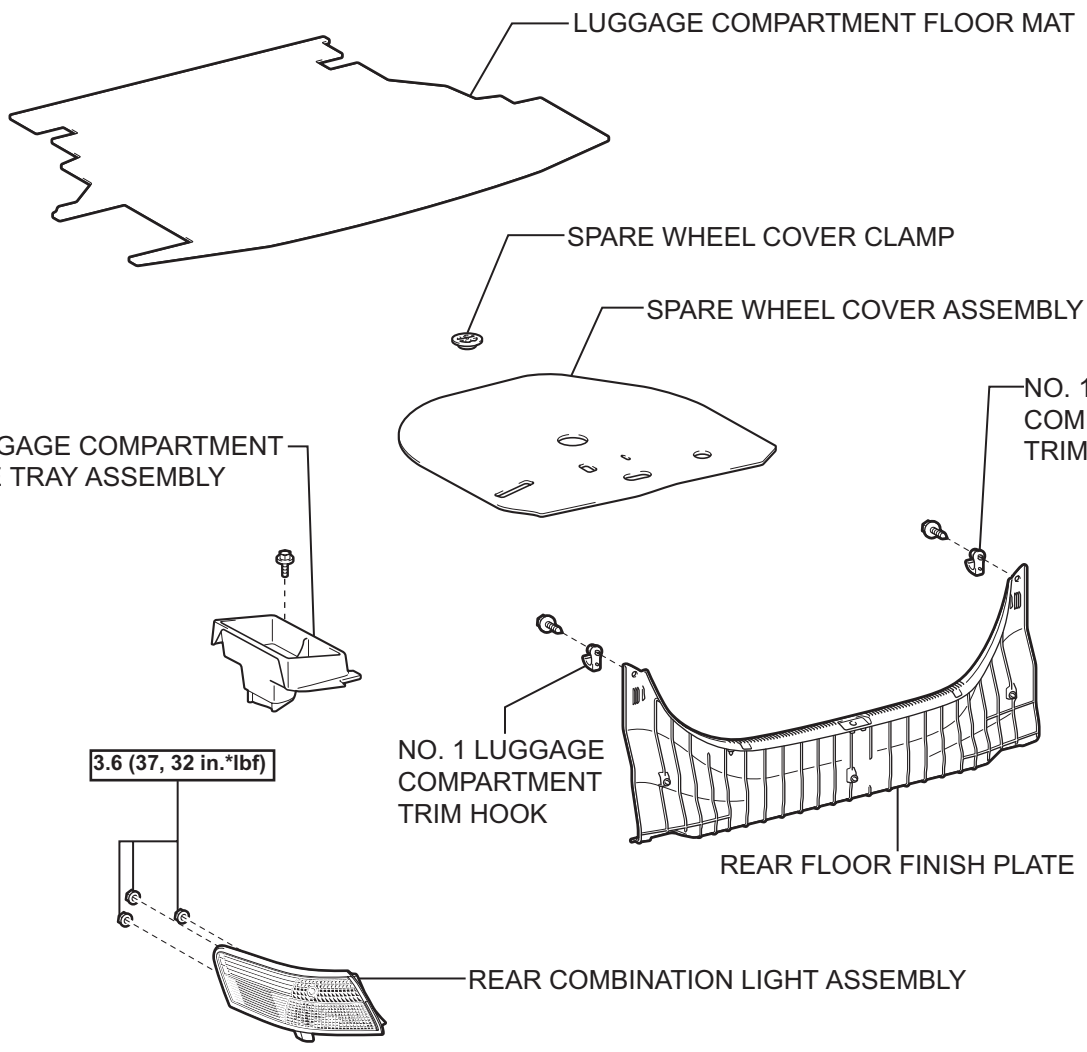

N*m (kgf*cm, ft.*lbf): Specified torque

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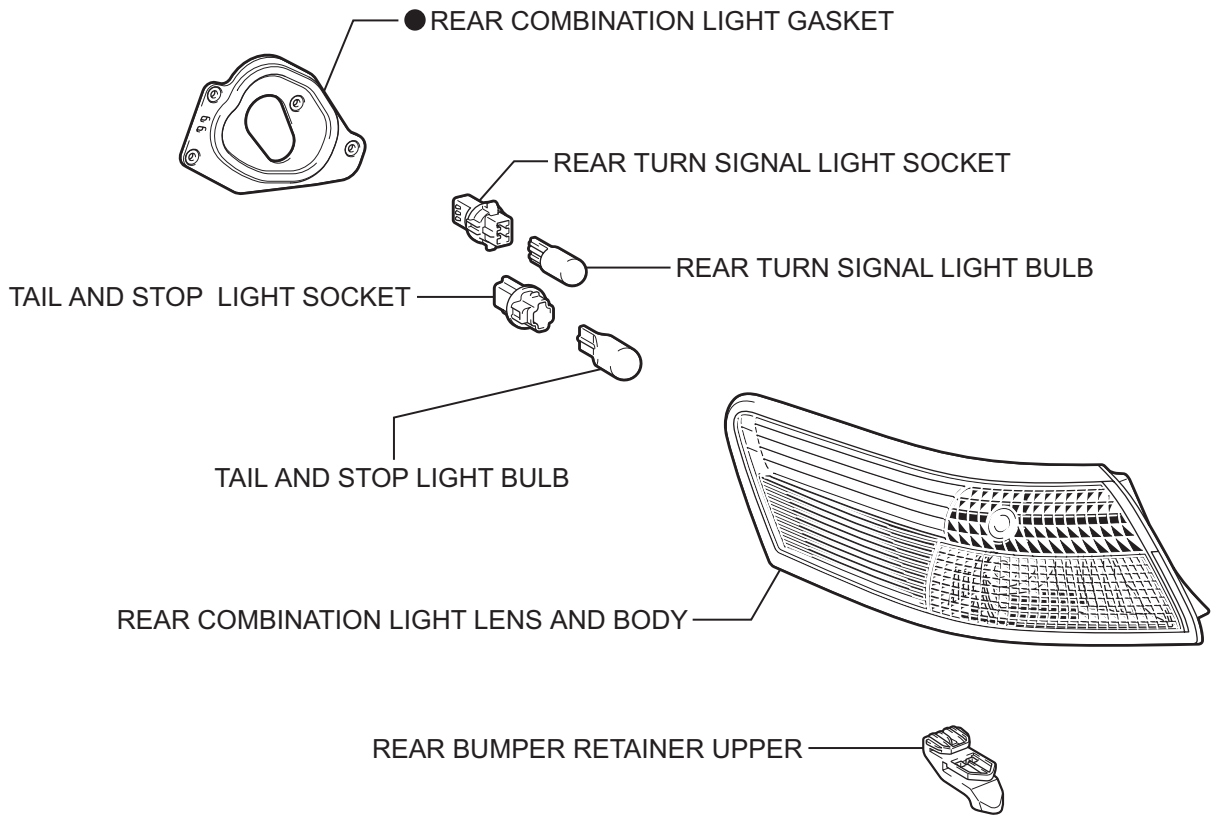
E129958E01



● Non-reusable part

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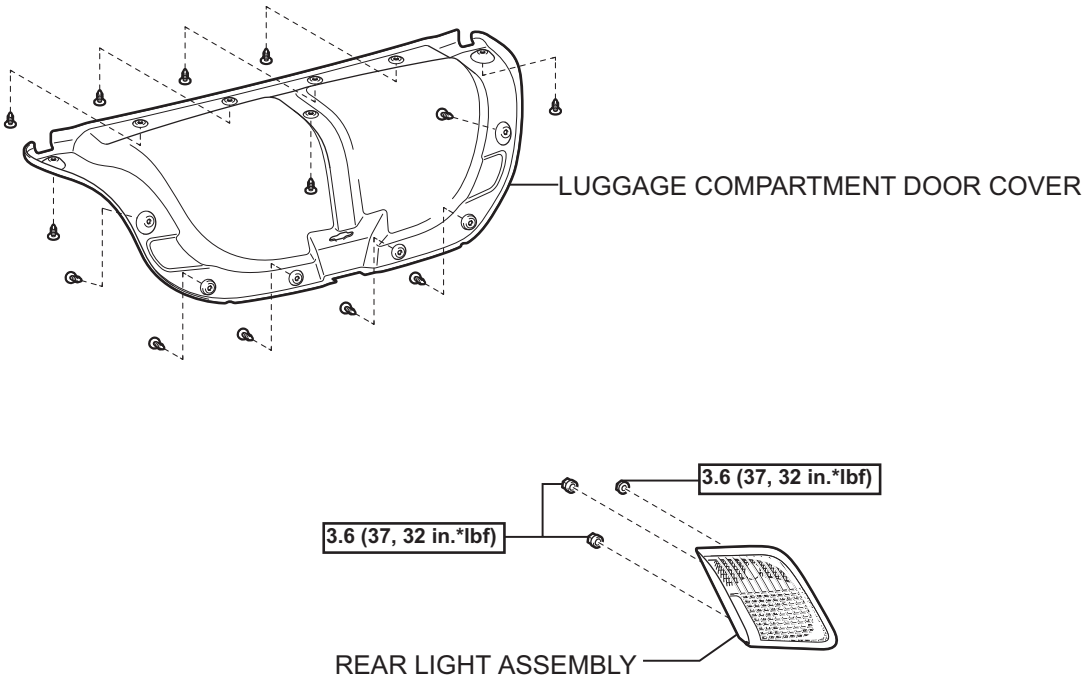
LI



LI

N*m (kgf*cm, ft.*lbf): Specified torque ● Non-reusable part

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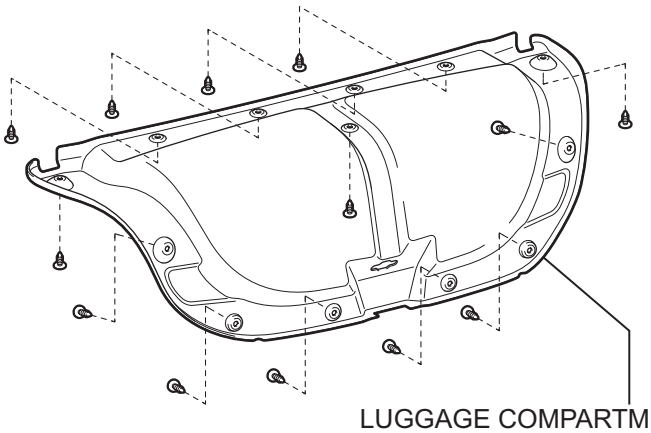
LICENSE PLATE LIGHT ASSEMBLY

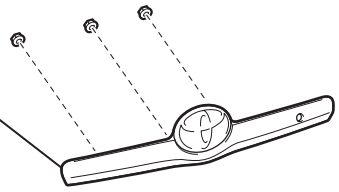
COMPONENTS



LUGGAGE COMPARTMENT DOOR COVER

LICENSE PLATE LIGHT ASSEMBLY

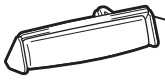
LUGGAGE COMPARTMENT DOOR LOCK CYLINDER ASSEMBLY



LUGGAGE COMPARTMENT DOOR OUTSIDE GARNISH

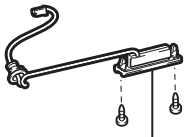
LICENSE PLATE LIGHT SOCKET

LICENSE PLATE LIGHT BULB



LICENSE PLATE LIGHT LENS

with Smart Key System:



LUGGAGE DOOR OPENING SWITCH ASSEMBLY

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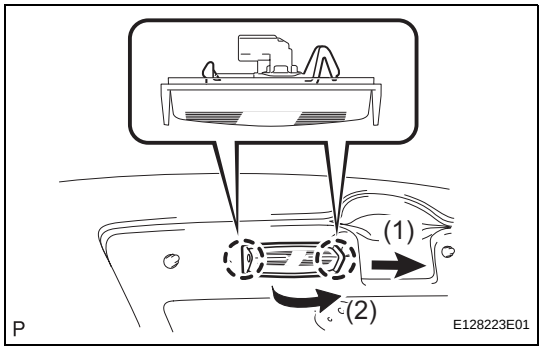
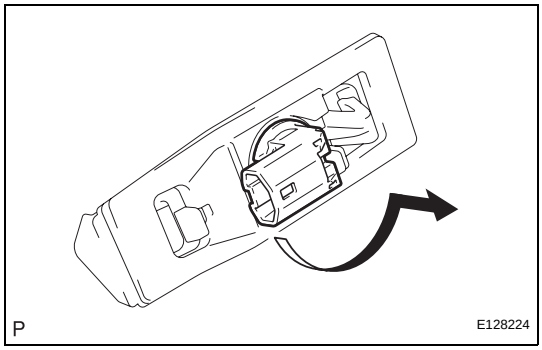
REMOVAL

1. **REMOVE LUGGAGE COMPARTMENT DOOR COVER (See page ET-61)**
2. **REMOVE LUGGAGE DOOR OPENING SWITCH ASSEMBLY (w/ Smart Key System) (See page DL-246)**
3. **REMOVE LUGGAGE COMPARTMENT DOOR LOCK CYLINDER ASSEMBLY (See page ET-61)**
4. **REMOVE LUGGAGE COMPARTMENT DOOR OUTSIDE GARNISH (See page ET-61)**
5. **REMOVE LICENSE PLATE LIGHT ASSEMBLY**
   (a) Disconnect the connector.
   (b) Disengage the 2 claws and remove the license plate light assembly as shown in the illustration.



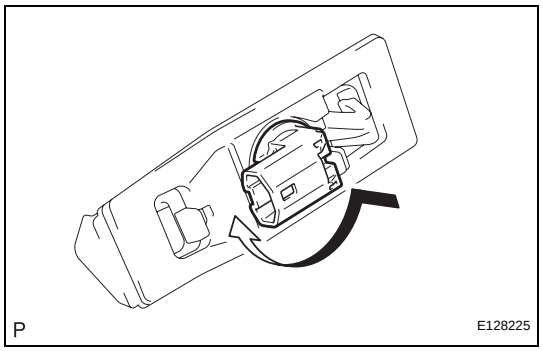
DISASSEMBLY

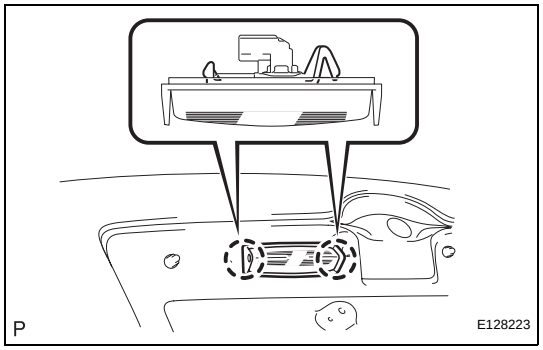
1. **REMOVE LICENSE PLATE LIGHT BULB**
   (a) Turn the license plate light bulb and the license plate light socket in the direction indicated by the arrow and remove them as a unit.
   (b) Remove the license plate light bulb from the license plate light socket.



REASSEMBLY

1. **INSTALL LICENSE PLATE LIGHT BULB**
   (a) Install the license plate light blub to the license plate light socket.
   (b) Turn the license plate light blub and the license plate light socket in the direction indicated by the arrow and install them as a unit.



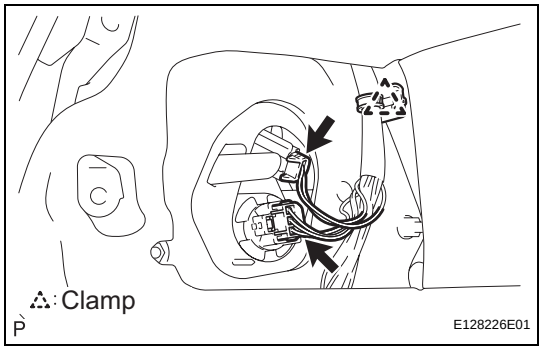


INSTALLATION

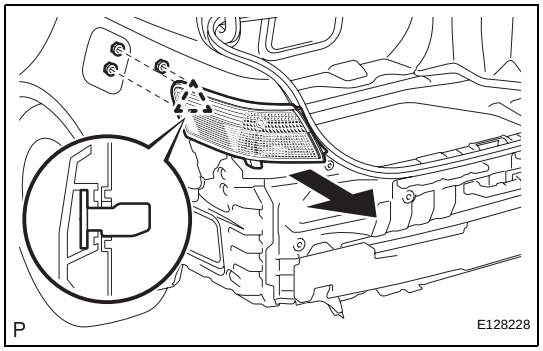
1. **INSTALL LICENSE PLATE LIGHT ASSEMBLY**
   (a) Engage the 2 claws to install the license plate light assembly.
   (b) Connect the connector.
2. **INSTALL LUGGAGE COMPARTMENT DOOR OUTSIDE GARNISH (See page ET-63)**
3. **INSTALL LUGGAGE COMPARTMENT DOOR LOCK CYLINDER ASSEMBLY (See page ET-64)**
4. **INSTALL LUGGAGE DOOR OPENING SWITCH ASSEMBLY (w/ Smart Key System) (See page DL-246)**
5. **INSTALL LUGGAGE COMPARTMENT DOOR COVER (See page ET-64)**

REMOVAL

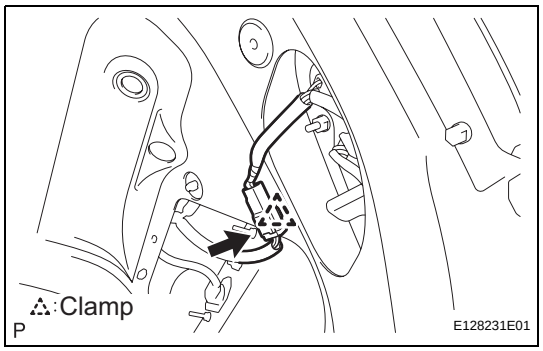
1. **REMOVE REAR BUMPER ASSEMBLY (w/o Rear Lower Spoiler) (See page ET-17)**
2. **REMOVE REAR FLOOR BOARD (w/ Rear Lower Spoiler) (See page ET-18)**
3. **REMOVE REAR BUMPER ASSEMBLY (w/ Rear Lower Spoiler) (See page ET-18)**
4. **REMOVE LUGGAGE COMPARTMENT FLOOR MAT**
5. **REMOVE SPARE WHEEL COVER CLAMP**
6. **REMOVE SPARE WHEEL COVER ASSEMBLY**
7. **REMOVE LUGGAGE COMPARTMENT SIDE TRAY ASSEMBLY (See page ED-66)**
8. **REMOVE NO. 1 LUGGAGE COMPARTMENT TRIM HOOK (See page ED-66)**
9. **REMOVE REAR FLOOR FINISH PLATE (See page ED-66)**
10. **REMOVE REAR COMBINATION LIGHT ASSEMBLY**
    (a) Disconnect the 2 connectors and clamp.



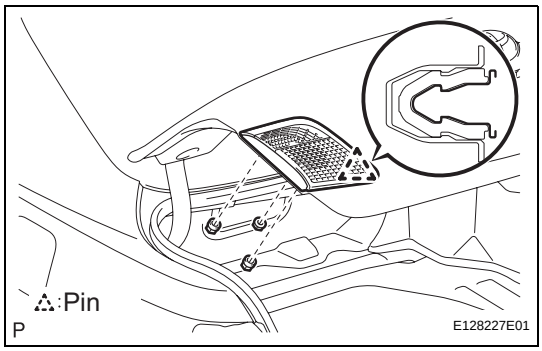
    (b) Remove the 3 nuts.
    (c) Disengage the clip and remove the rear combination light assembly.



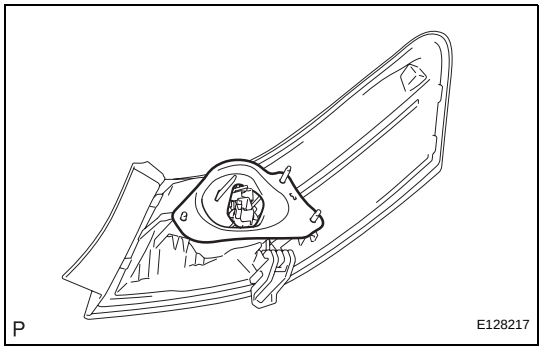
11. **REMOVE LUGGAGE COMPARTMENT DOOR COVER (See page ET-61)**
12. **REMOVE REAR LIGHT ASSEMBLY**
    (a) Disconnect the connector and clamp.



LI



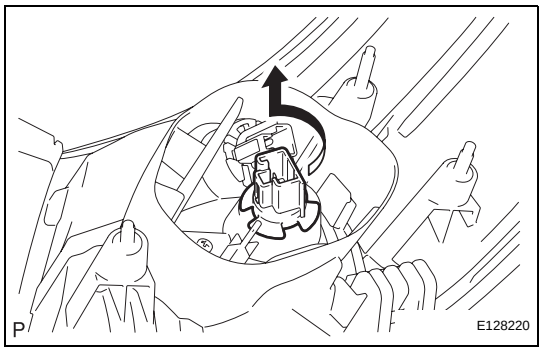
(b) Remove the 3 nuts.
(c) Disengage the pin and remove the rear light assembly.
HINT:
Be careful not to break the engaging portion of the pin when removing the rear light assembly.



DISASSEMBLY

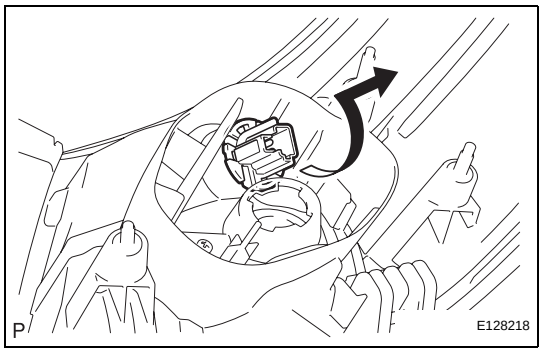
1. REMOVE REAR COMBINATION LIGHT GASKET

(a) Remove the rear combination light gasket.
NOTICE:
- **Be sure to remove the all traces of the old gasket from the body.**
- **Do not reuse the removed gasket. Be sure to install a new rear combination light gasket to prevent water ingress.**



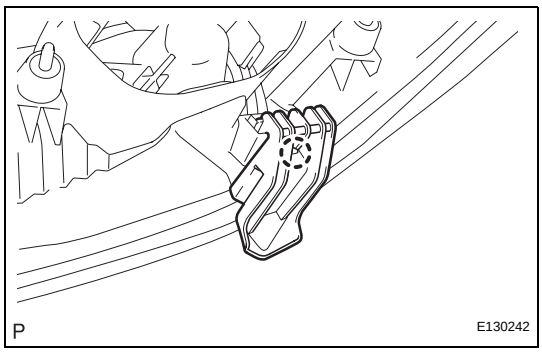
2. REMOVE TAIL AND STOP LIGHT BULB

(a) Turn the tail and stop light bulb and the rear combination light socket in the direction indicated by the arrow and disconnect them as a unit.
(b) Remove the tail and stop light bulb from the tail and stop light socket.



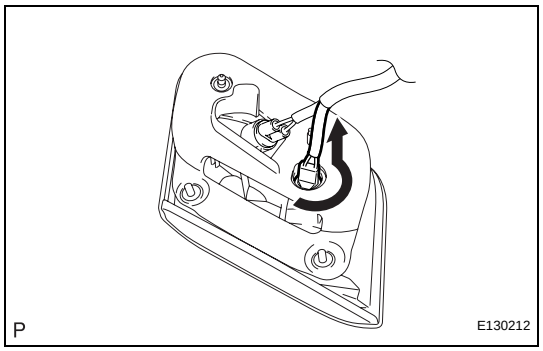
3. REMOVE REAR TURN SIGNAL LIGHT BULB

(a) Turn the rear turn signal light bulb and the rear light socket and wire in the direction indicated by the arrow and disconnect them as a unit.
(b) Remove the rear turn signal light bulb from the rear light socket and wire.



4. REMOVE REAR BUMPER RETAINER UPPER

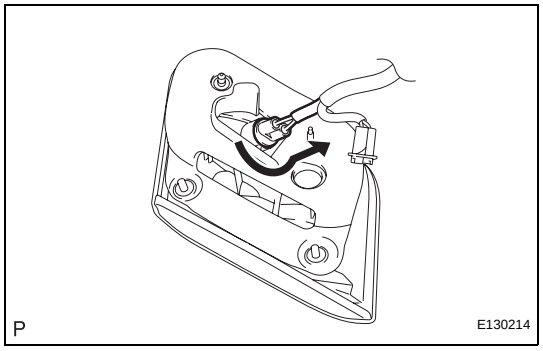
(a) Disengage the claw and remove the rear bumper retainer upper.



5. REMOVE BACK UP LIGHT BULB

(a) Turn the back up light bulb and the rear light socket and wire in the direction indicated by the arrow and remove them as a unit.

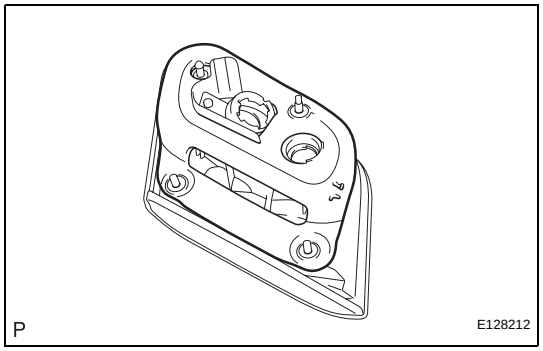
(b) Remove the back up light bulb from the rear light socket and wire.



6. REMOVE TAIL LIGHT BULB

(a) Turn the tail light bulb and the rear light socket and wire in the direction indicated by the arrow and remove them as a unit.

(b) Remove the tail light bulb from the rear light socket and wire.

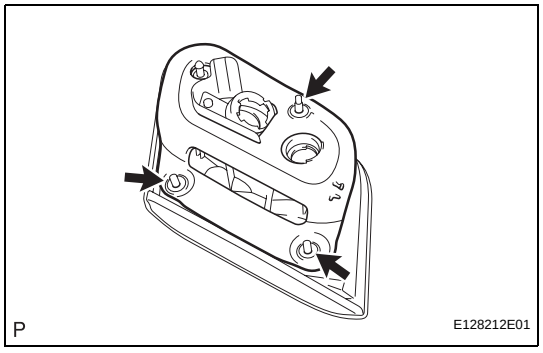


7. REMOVE REAR LIGHT GASKET

(a) Remove the rear light gasket.

NOTICE:

- **Be sure to remove all traces of the old gasket from the body.**
- **Do not reuse the removed gasket. Be sure to install a new rear light gasket to prevent water ingress.**



REASSEMBLY

1. INSTALL REAR LIGHT GASKET

(a) Remove the release paper from a new rear light gasket.

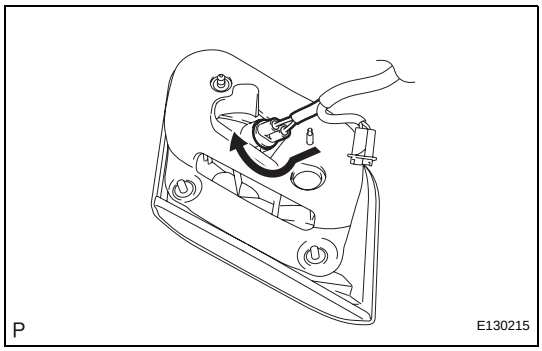
NOTICE:

- **Be sure to remove all traces of the old gasket from the body.**
- **Do not reuse the removed gasket. Be sure to install a new rear light gasket to prevent water ingress.**

(b) Align the rear light gasket with the 3 stud bolts and install the gasket as shown in the illustration.

2. INSTALL TAIL LIGHT BULB

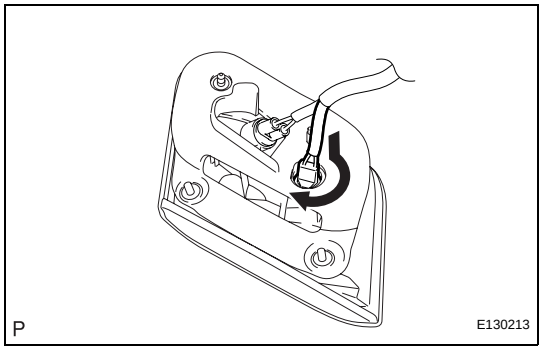
(a) Install the tail light bulb to the rear light socket and wire.



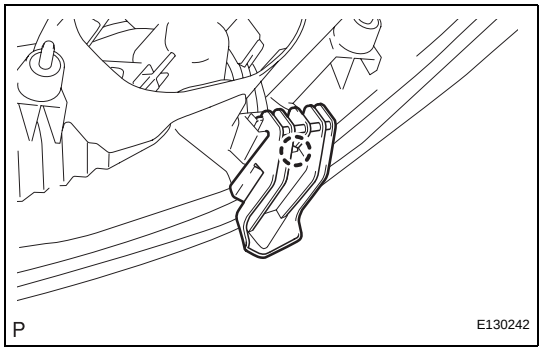
(b) Turn the tail light bulb and rear light socket and wire in the direction indicated by the arrow and install them as a unit.

3. INSTALL BACK UP LIGHT BULB

(a) Install the back up light bulb to the rear light socket and wire.



(b) Turn the back up light bulb and rear light socket and wire in the direction indicated by the arrow and install them as a unit.

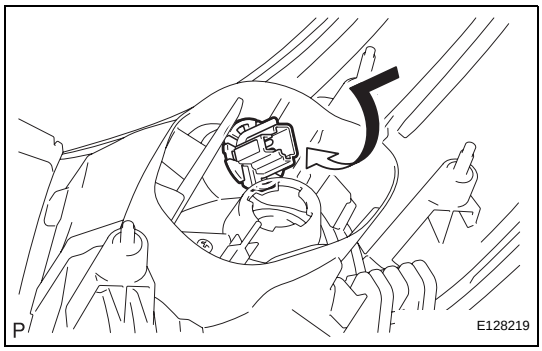


4. INSTALL REAR BUMPER RETAINER UPPER

(a) Engage the claw and install the rear bumper retainer upper.

5. INSTALL REAR TURN SIGNAL LIGHT BULB

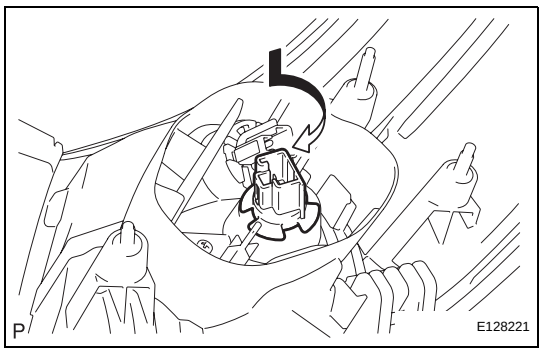
(a) Install the rear turn signal light bulb to the rear turn signal light socket.



(b) Turn the rear turn signal light bulb and rear turn signal light socket in the direction indicated by the arrow and install them as a unit.

6. INSTALL TAIL AND STOP LIGHT BULB

(a) Install the tail and stop light bulb to the tail and stop light socket.



(b) Turn the tail and stop light bulb and tail and stop light socket in the direction indicated by the arrow and install them as a unit.

7. INSTALL REAR COMBINATION LIGHT GASKET

(a) Remove the release paper from a new rear combination light gasket.

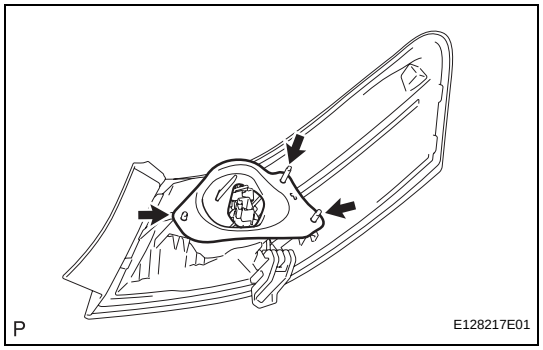
NOTICE:

- **Be sure to remove all traces of the old gasket from the body.**

LI

- **Do not reuse the removed gasket. Be sure to install a new rear combination light gasket to prevent water ingress.**

(b) Align the rear combination light gasket with the 3 stud bolts and install the gasket as shown in the illustration.

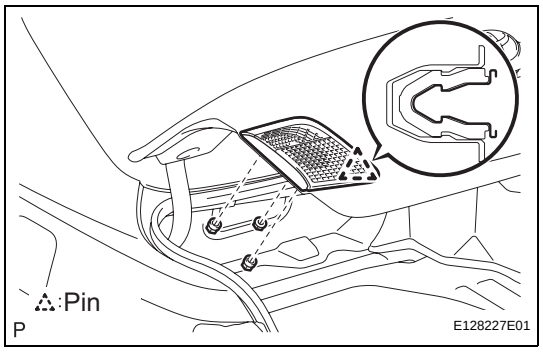


INSTALLATION

1. INSTALL REAR LIGHT ASSEMBLY

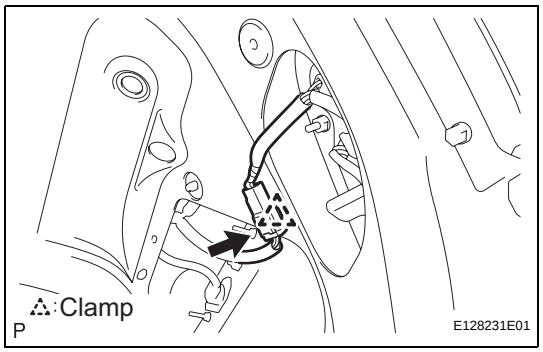
(a) Engage the pin and install the rear light assembly.

(b) Install the 3 nuts.
Torque: 3.6 N*m (37 kgf*cm, 32 in.*lbf)



(c) Connect the connector and clamp.

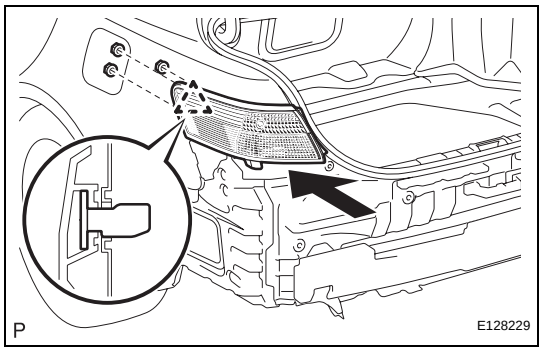
2. INSTALL LUGGAGE COMPARTMENT DOOR COVER (See page ET-64)



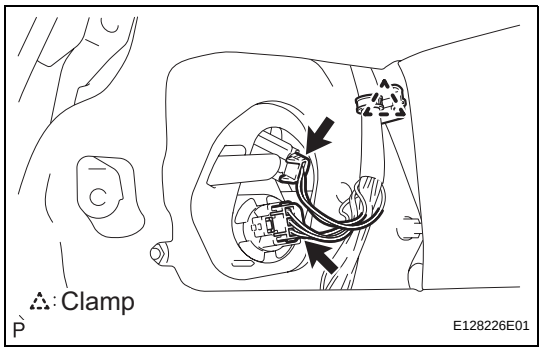
3. INSTALL REAR COMBINATION LIGHT ASSEMBLY

(a) Engage the clip and install the rear combination light assembly.

(b) Install the 3 nuts.
Torque: 3.6 N*m (37 kgf*cm, 32 in.*lbf)



LI



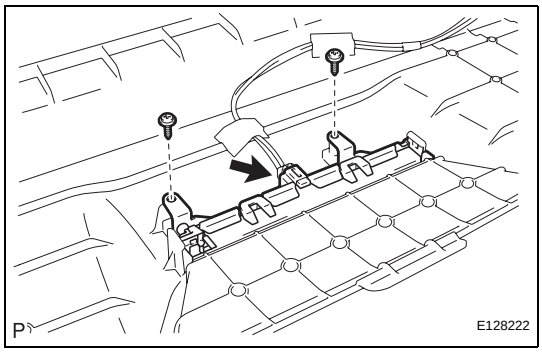
(c) Connect the 2 connectors and clamp.

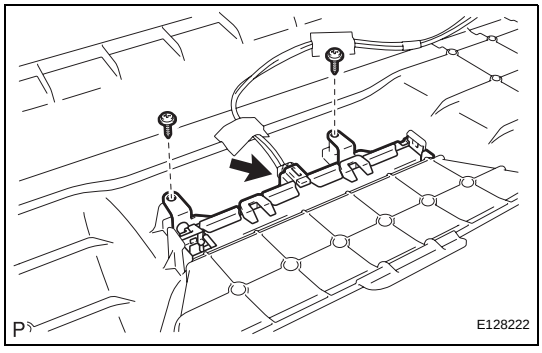
4. **INSTALL REAR FLOOR FINISH PLATE (See page ED-72)**
5. **INSTALL NO. 1 LUGGAGE COMPARTMENT TRIM HOOK (See page ED-72)**
6. **INSTALL LUGGAGE COMPARTMENT SIDE TRAY ASSEMBLY (See page ED-72)**
7. **INSTALL SPARE WHEEL COVER ASSEMBLY**
8. **INSTALL SPARE WHEEL COVER CLAMP**
9. **INSTALL LUGGAGE COMPARTMENT FLOOR MAT**
10. **INSTALL REAR BUMPER ASSEMBLY (w/o Rear Lower Spoiler) (See page ET-23)**
11. **INSTALL REAR BUMPER ASSEMBLY (w/ Rear Lower Spoiler) (See page ET-24)**
12. **INSTALL REAR FLOOR BOARD (w/ Rear Lower Spoiler) (See page ET-24)**

REMOVAL

1. REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-77)
2. REMOVE REAR SEAT HEADREST ASSEMBLY
3. REMOVE REAR CENTER SEAT HEADREST ASSEMBLY
4. REMOVE REAR SEAT BACK ASSEMBLY (for Fixed Seat Type) (See page SE-77)
5. REMOVE SEPARATE TYPE REAR SEAT BACK ASSEMBLY LH (for Fold Down Seat Type) (See page SE-47)
6. REMOVE SEPARATE TYPE REAR SEAT BACK ASSEMBLY RH (for Fold Down Seat Type) (See page SE-47)
7. REMOVE REAR SIDE SEAT BACK ASSEMBLY LH (for Fold Down Seat Type) (See page SE-48)
8. REMOVE REAR SIDE SEAT BACK ASSEMBLY RH (for Fold Down Seat Type) (See page SE-48)
9. REMOVE REAR SEAT BACK COVER (for Reclining Seat Type) (See page SE-63)
10. REMOVE SEPARATE TYPE REAR SEAT BACK ASSEMBLY LH (for Reclining Seat Type) (See page SE-63)
11. REMOVE SEPARATE TYPE REAR SEAT BACK ASSEMBLY RH (for Reclining Seat Type) (See page SE-64)
12. REMOVE CENTER SEAT BACK ASSEMBLY (for Reclining Seat Type) (See page SE-64)
13. REMOVE REAR DOOR SCUFF PLATE LH (See page IR-24)
14. DISCONNECT REAR DOOR OPENING TRIM WEATHERSTRIP LH
15. REMOVE REAR DOOR SCUFF PLATE RH (See page IR-24)
16. DISCONNECT REAR DOOR OPENING TRIM WEATHERSTRIP RH
17. REMOVE RECLINING REMOTE CONTROL LEVER SUB-ASSEMBLY LH (for Reclining Seat Type) (See page SE-68)
18. REMOVE RECLINING REMOTE CONTROL LEVER SUB-ASSEMBLY RH (for Reclining Seat Type)
19. REMOVE CHILD RESTRAINT SEAT ANCHOR BRACKET SUB-ASSEMBLY LH (See page SB-66)

20. **DISCONNECT REAR SEAT INNER WITH CENTER BELT ASSEMBLY LH (for TMC Made) (See page SB-35)**
21. **DISCONNECT REAR SEAT INNER WITH CENTER BELT ASSEMBLY LH (for TMMK Made) (See page SB-35)**
22. **REMOVE ROOF SIDE INNER GARNISH LH (See page IR-26)**
23. **REMOVE ROOF SIDE INNER GARNISH RH (See page IR-26)**
24. **DISCONNECT REAR SEAT OUTER BELT ASSEMBLY (for LH Side) (See page SB-36)**
25. **DISCONNECT REAR SEAT OUTER BELT ASSEMBLY (for RH Side) (See page SB-36)**
26. **REMOVE REAR SEAT SHOULDER BELT COVER (See page SB-36)**
27. **REMOVE REAR SEAT SHOULDER BELT HOLE COVER (See page SB-36)**
28. **REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY (See page SB-37)**
29. **REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY (for Reclining Seat Type) (See page SB-37)**
30. **REMOVE CENTER STOP LIGHT SET**
    (a) Disconnect the connector.
    (b) Remove the 2 screws and the center stop light set.





INSTALLATION

1. **INSTALL CENTER STOP LIGHT SET**
   (a) Connect the connector.
   (b) Install the center stop light set with the 2 screws.
   Torque: 1.6 N*m (16 kgf*cm, 14 in.*lbf)
2. **INSTALL PACKAGE TRAY TRIM PANEL ASSEMBLY (See page SB-38)**
3. **INSTALL PACKAGE TRAY TRIM PANEL ASSEMBLY (for Reclining Seat Type) (See page SB-39)**
4. **INSTALL REAR SEAT SHOULDER BELT HOLE COVER (See page SB-39)**
5. **INSTALL REAR SEAT SHOULDER BELT COVER (See page SB-39)**

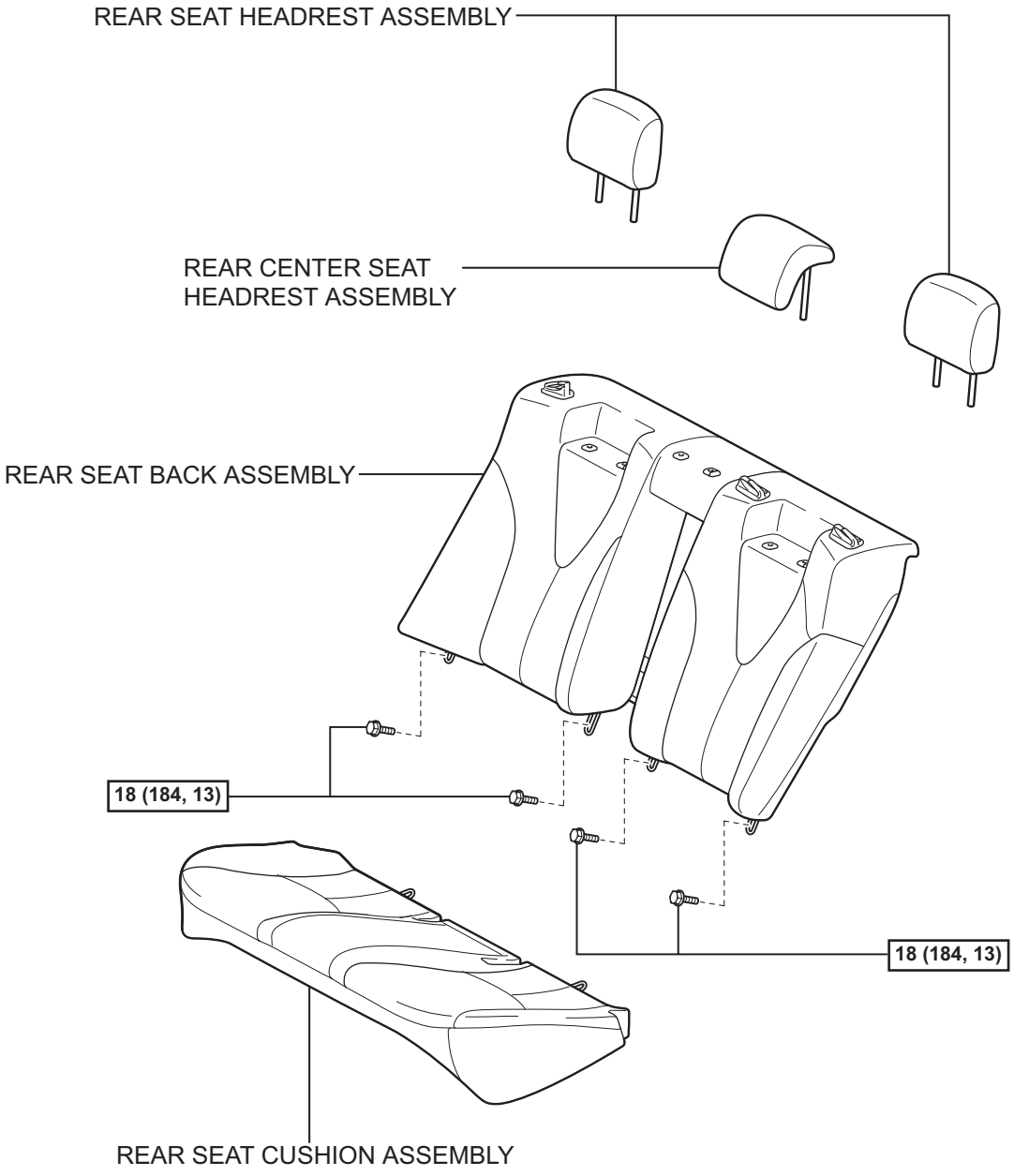
6. CONNECT REAR SEAT OUTER BELT ASSEMBLY (for LH Side) (See page SB-39)
7. CONNECT REAR SEAT OUTER BELT ASSEMBLY (for RH Side) (See page SB-40)
8. INSTALL ROOF SIDE INNER GARNISH LH (See page IR-52)
9. INSTALL ROOF SIDE INNER GARNISH RH (See page IR-52)
10. INSTALL REAR SEAT INNER WITH CENTER BELT ASSEMBLY LH (for TMC Made) (See page SB-40)
11. INSTALL REAR SEAT INNER WITH CENTER BELT ASSEMBLY LH (for TMMK Made) (See page SB-40)
12. INSTALL CHILD RESTRAINT SEAT ANCHOR BRACKET SUB-ASSEMBLY LH (See page SB-66)
13. INSTALL RECLINING REMOTE CONTROL LEVER SUB-ASSEMBLY LH (for Reclining Seat Type) (See page SE-69)
14. INSTALL RECLINING REMOTE CONTROL LEVER SUB-ASSEMBLY RH (for Reclining Seat Type)
15. CONNECT REAR DOOR OPENING TRIM WEATHERSTRIP LH
16. INSTALL REAR DOOR SCUFF PLATE LH (See page IR-56)
17. CONNECT REAR DOOR OPENING TRIM WEATHERSTRIP RH
18. INSTALL REAR DOOR SCUFF PLATE RH (See page IR-56)
19. INSTALL CENTER SEAT BACK ASSEMBLY (for Reclining Seat Type) (See page SE-71)
20. INSTALL SEPARATE TYPE REAR SEAT BACK ASSEMBLY LH (for Reclining Seat Type) (See page SE-72)
21. INSTALL SEPARATE TYPE REAR SEAT BACK ASSEMBLY RH (for Reclining Seat Type) (See page SE-71)
22. INSTALL REAR SEAT BACK COVER (for Reclining Seat Type)
23. INSTALL REAR SIDE SEAT BACK ASSEMBLY LH (for Fold Down Seat Type) (See page SE-57)
24. INSTALL REAR SIDE SEAT BACK ASSEMBLY RH (for Fold Down Seat Type)
25. INSTALL SEPARATE TYPE REAR SEAT BACK ASSEMBLY LH (for Fold Down Seat Type) (See page SE-57)

26. **INSTALL SEPARATE TYPE REAR SEAT BACK ASSEMBLY RH (for Fold Down Seat Type) (See page SE-57)**
27. **INSTALL REAR SEAT BACK ASSEMBLY (for Fixed Seat Type) (See page SE-84)**
28. **INSTALL REAR CENTER SEAT HEADREST ASSEMBLY**
29. **INSTALL REAR SEAT HEADREST ASSEMBLY**
30. **INSTALL REAR SEAT CUSHION ASSEMBLY (See page SE-84)**

HIGH MOUNTED STOP LIGHT ASSEMBLY

COMPONENTS

for Fixed Seat Type:

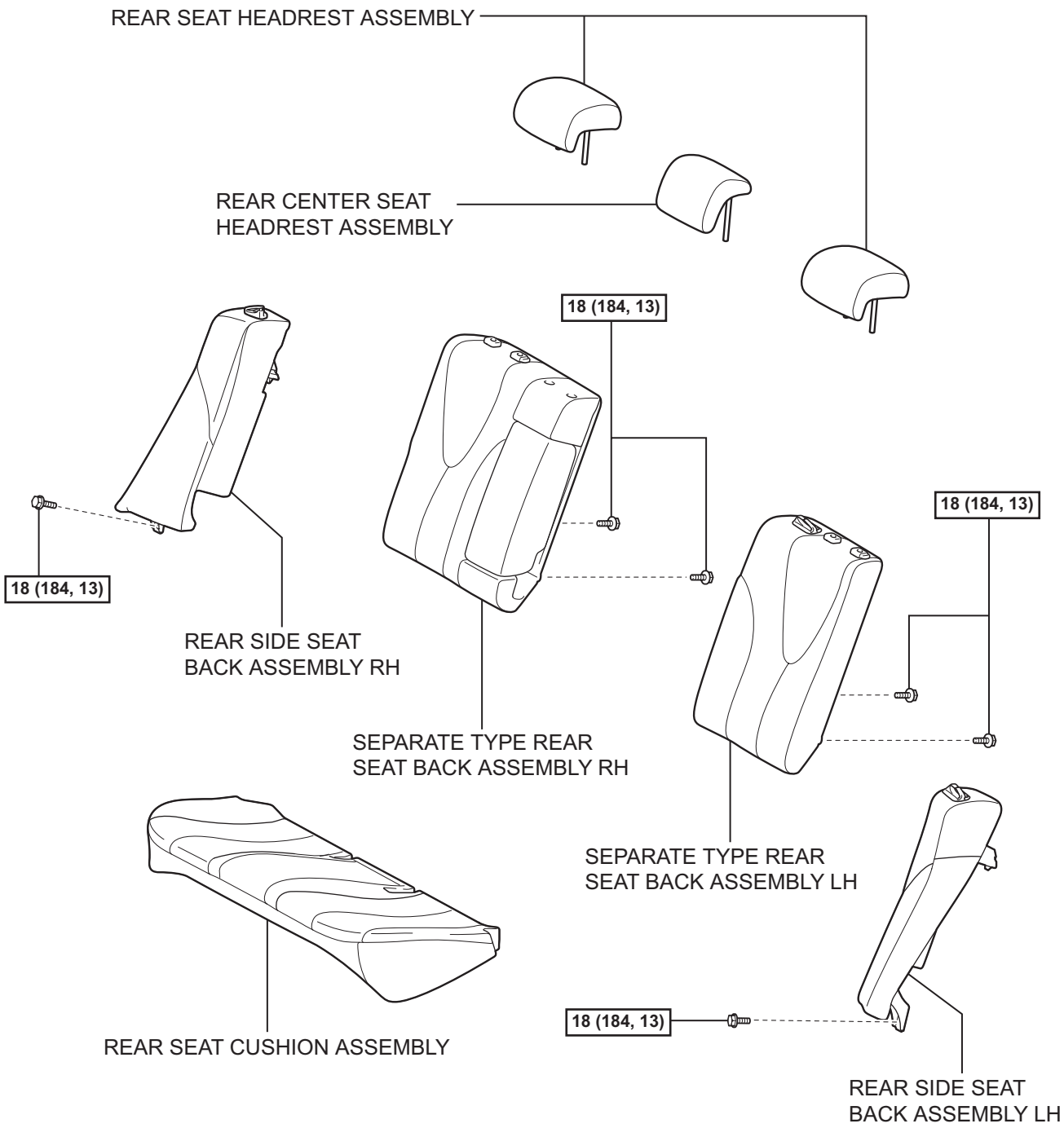


N*m (kgf*cm, ft.*lbf): Specified torque

P

B136589E02

for Fold Down Seat Type:



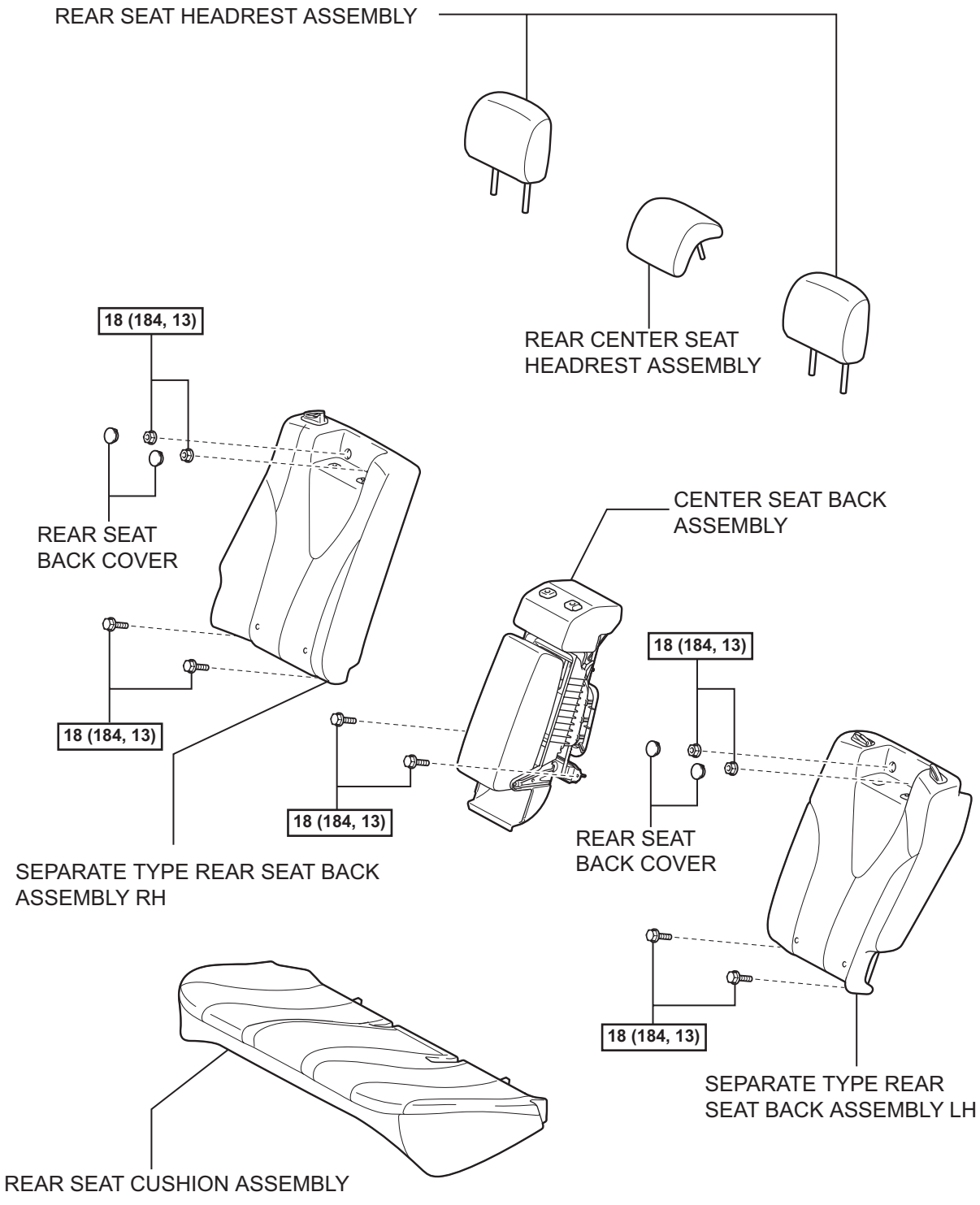
N*m (kgf*cm, ft.*lbf): Specified torque

P

B136564E02

LI

for Reclining Seat Type:

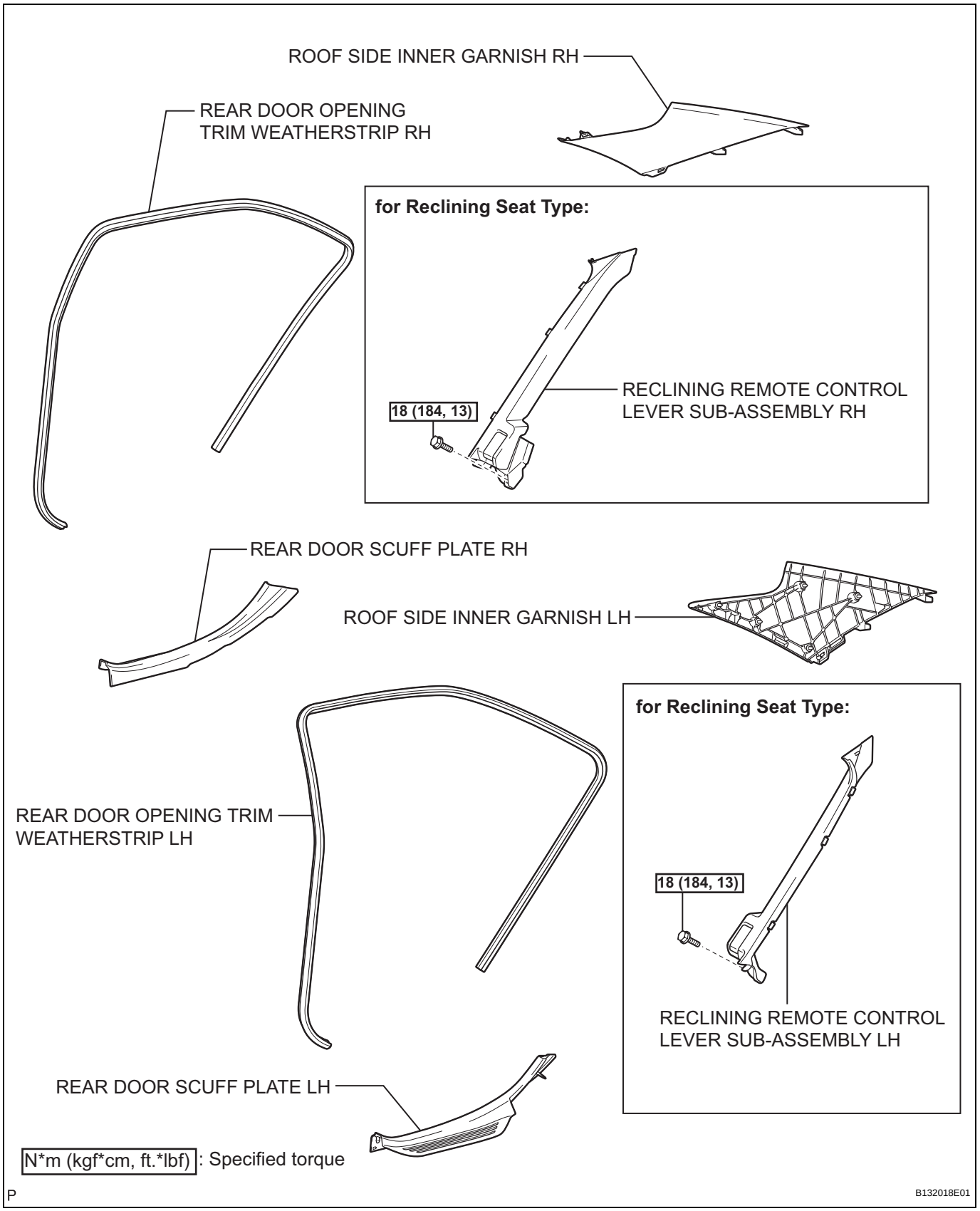


N*m (kgf*cm, ft.*lbf): Specified torque

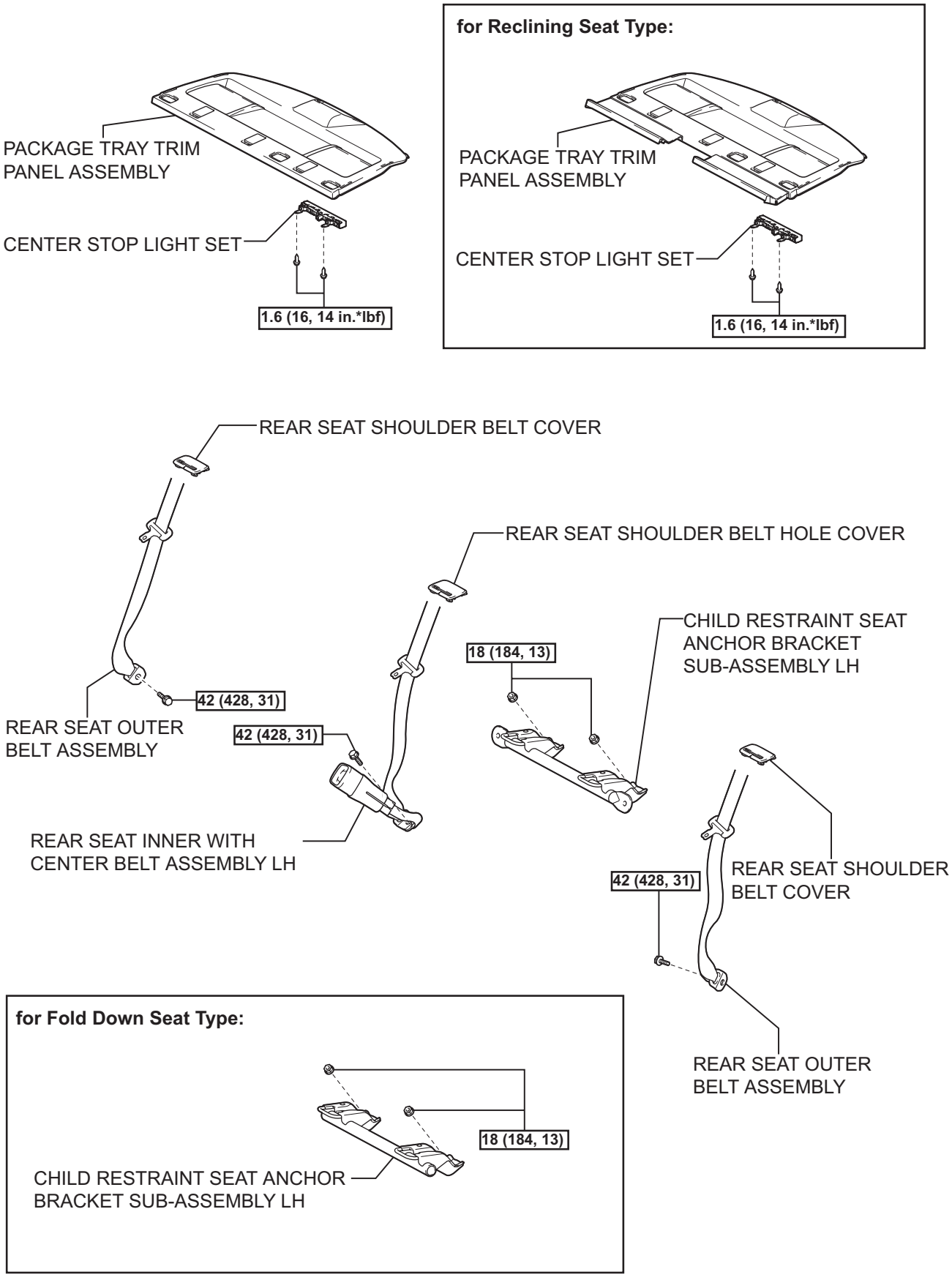
LI

P

B139095E03


ROOF SIDE INNER GARNISH RH
REAR DOOR OPENING TRIM WEATHERSTRIP RH
for Reclining Seat Type:
18 (184, 13)
RECLINING REMOTE CONTROL LEVER SUB-ASSEMBLY RH
REAR DOOR SCUFF PLATE RH
ROOF SIDE INNER GARNISH LH
REAR DOOR OPENING TRIM WEATHERSTRIP LH
for Reclining Seat Type:
18 (184, 13)
RECLINING REMOTE CONTROL LEVER SUB-ASSEMBLY LH
REAR DOOR SCUFF PLATE LH
N*m (kgf*cm, ft.*lbf): Specified torque
P
B132018E01

LI



N*m (kgf*cm, ft.*lbf): Specified torque

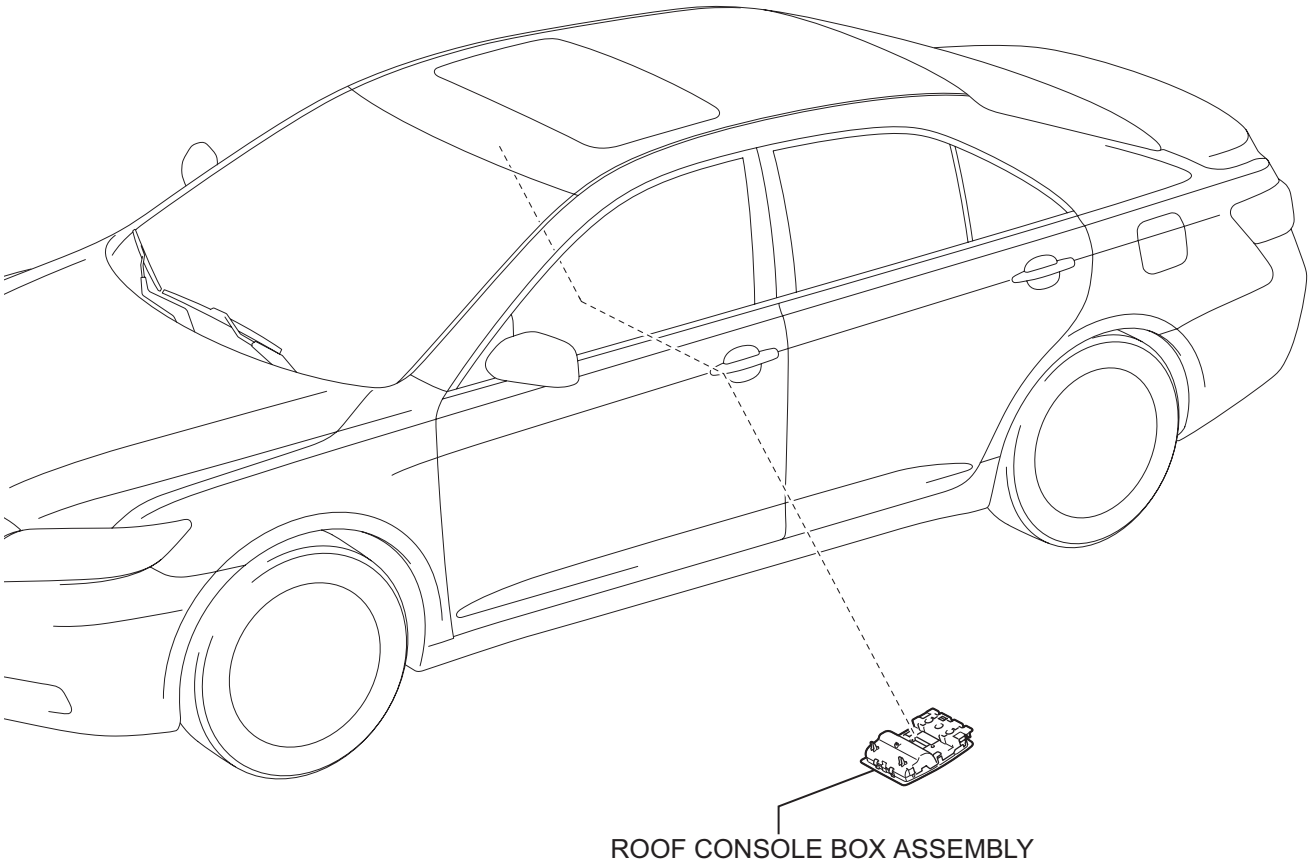
LI

P

E128169E01

PERSONAL LIGHT ASSEMBLY

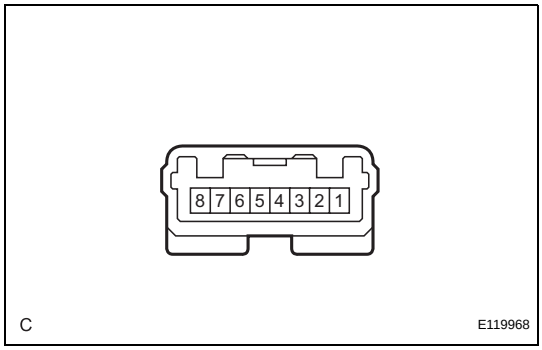
COMPONENTS



REMOVAL

1. **REMOVE ROOF CONSOLE BOX ASSEMBLY (See page IR-28)**

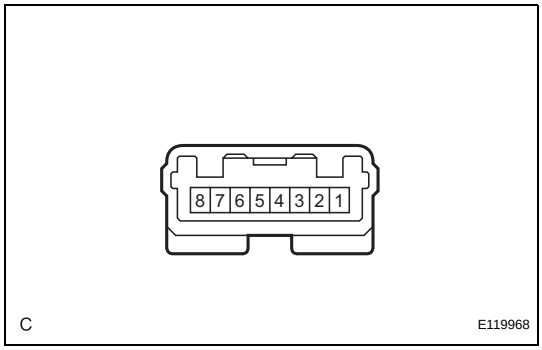
INSPECTION



1. **INSPECT ROOF CONSOLE BOX ASSEMBLY (with Sliding Roof)**
   (a) Apply battery voltage to the roof console box assembly.
   (b) Check that the interior light and personal lights come on.
   OK

Measurement Condition	Switch Condition	Specified Condition
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 6	Interior light switch in DOOR	Interior light comes on
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Interior light switch ON	Interior light comes on
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Front RH personal light switch ON	Front RH personal light comes on
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Front LH personal light switch ON	Front LH personal light comes on

If the result is not as specified, replace the roof console box assembly.



2. **INSPECT ROOF CONSOLE BOX ASSEMBLY (without Sliding Roof)**
   (a) Apply battery voltage to the roof console box assembly.
   (b) Check that each personal light comes on.
   OK

Measurement Condition	Switch Condition	Specified Condition
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Front RH personal light switch ON	Front RH personal light comes on
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Front LH personal light switch ON	Front LH personal light comes on

If the result is not as specified, replace the roof console box assembly.

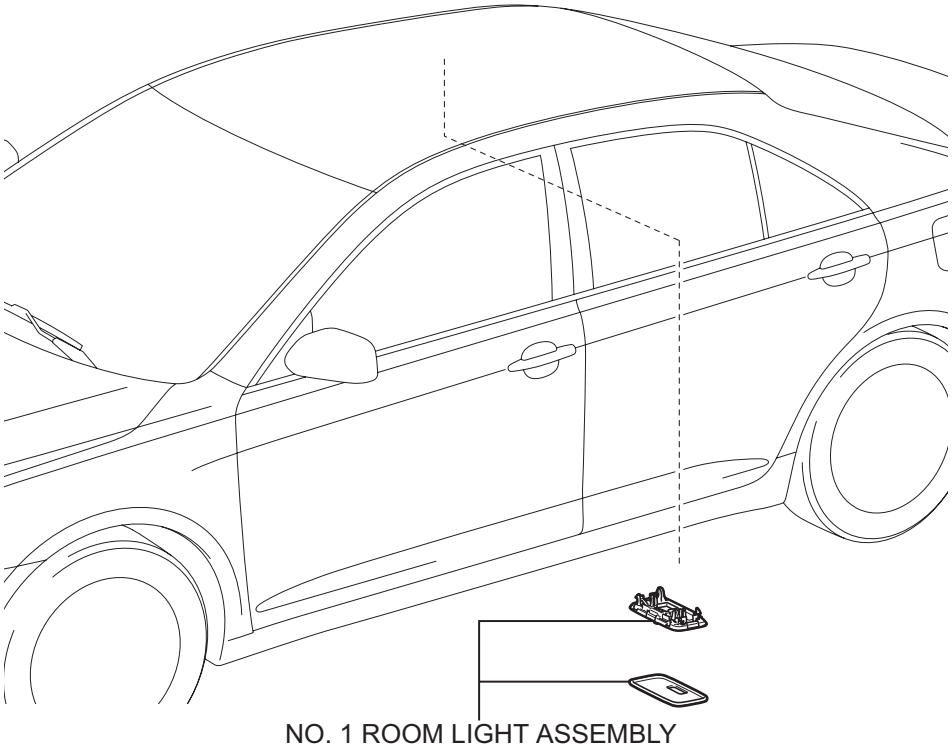
INSTALLATION

1. **INSTALL ROOF CONSOLE BOX ASSEMBLY (See page IR-50)**

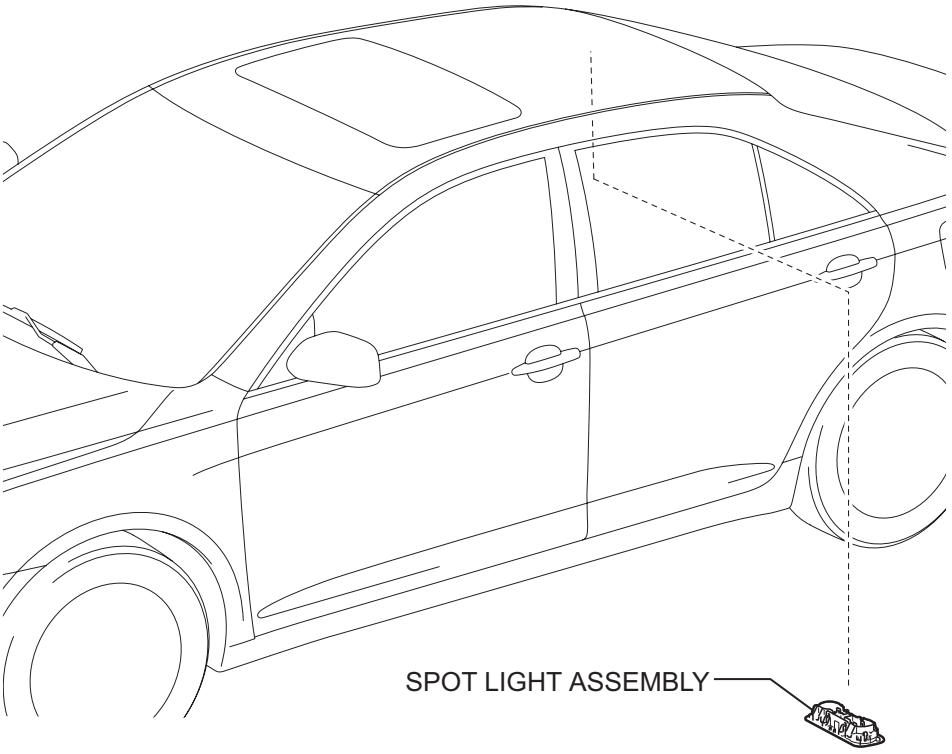
REAR ROOM LIGHT ASSEMBLY

COMPONENTS

without Sliding Roof:



with Sliding Roof:



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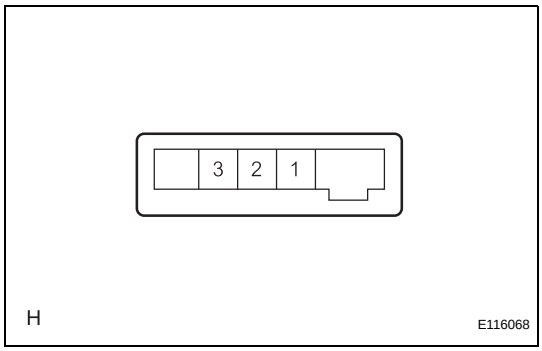
REMOVAL

1. **REMOVE NO. 1 ROOM LIGHT ASSEMBLY (w/o Sliding Roof) (See page IR-30)**
2. **REMOVE SPOT LIGHT ASSEMBLY (w/ Sliding Roof) (See page IR-30)**

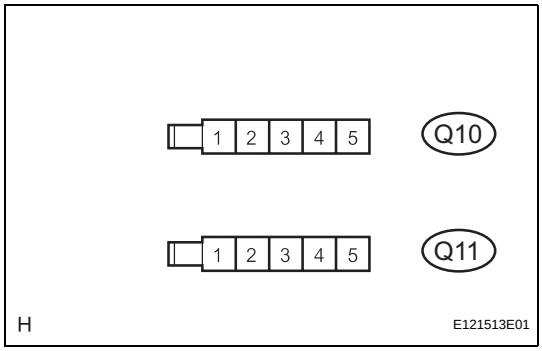
INSPECTION



1. **INSPECT NO. 1 ROOM LIGHT ASSEMBLY (without Sliding Roof)**
   (a) Apply battery voltage to the No. 1 room light assembly connector.
   (b) Check that the interior light comes on.
   OK

Measurement Condition	Switch Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	DOOR	Interior light comes on
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 3	ON	Interior light comes on

If the result is not as specified, replace the room light assembly.



2. **INSPECT SPOT LIGHT ASSEMBLY (with Sliding Roof)**
   (a) Apply battery voltage to the spot light assembly connector.
   (b) Check that the rear personal light comes on.
   OK

Measurement Condition	Switch Condition	Specified Condition
Battery positive (+) → Terminal Q10-2 Battery negative (-) → Terminal Q10-4	Pushed (ON)	Rear RH personal light comes on
Battery positive (+) → Terminal Q10-2 Battery negative (-) → Terminal Q10-3	Always	Rear RH personal light comes on
Battery positive (+) → Terminal Q11-2 Battery negative (-) → Terminal Q11-4	Pushed (ON)	Rear LH personal light comes on
Battery positive (+) → Terminal Q11-2 Battery negative (-) → Terminal Q11-5	Always	Rear LH personal light comes on

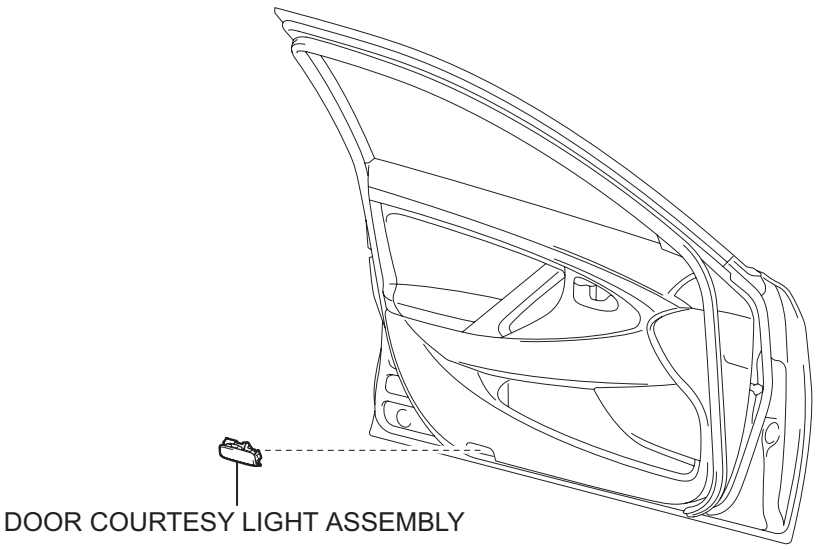
If the result is not as specified, replace the spot light assembly.

INSTALLATION

1. **INSTALL NO. 1 ROOM LIGHT ASSEMBLY (w/o Sliding Roof) (See page IR-48)**
2. **INSTALL SPOT LIGHT ASSEMBLY (w/ Sliding Roof) (See page IR-48)**

DOOR COURTESY LIGHT

COMPONENTS



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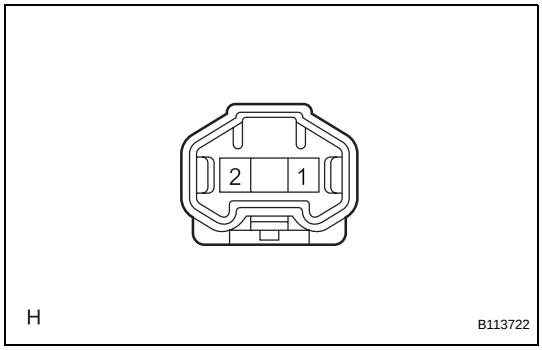


REMOVAL

1. **REMOVE DOOR COURTESY LIGHT ASSEMBLY (See page ED-15)**

INSPECTION

1. **INSPECT DOOR COURTESY LIGHT ASSEMBLY**
   (a) Apply battery voltage to the door courtesy light assembly connector.
   (b) Check that the door courtesy light comes on.
   OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Door courtesy light comes on

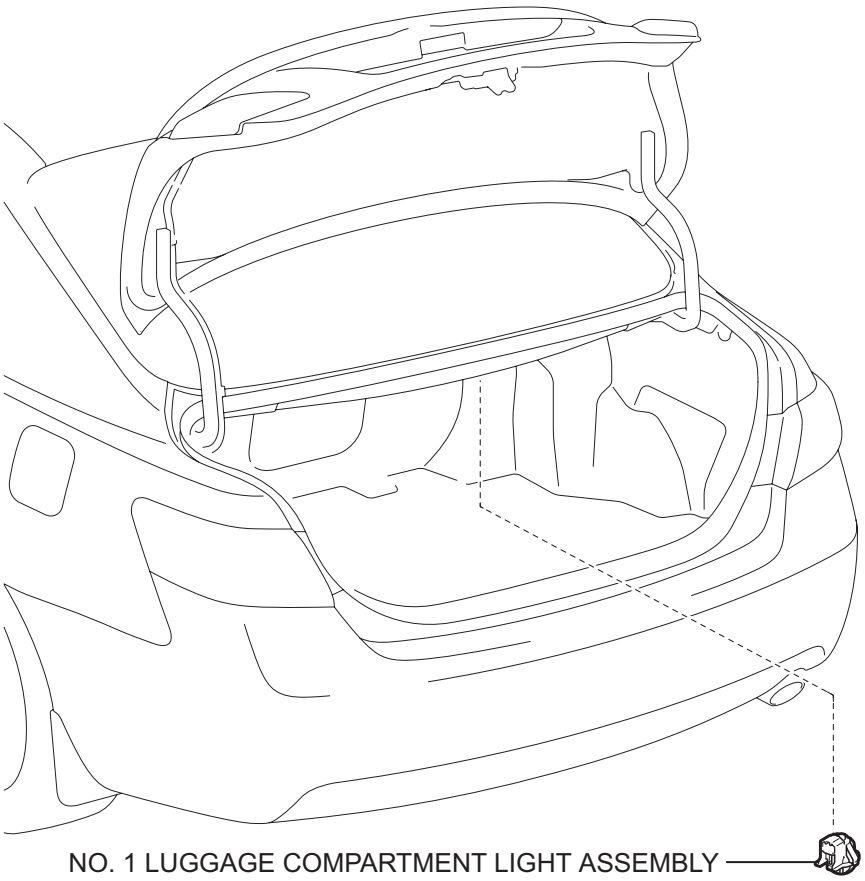
If the result is not as specified, replace the door courtesy light assembly.

INSTALLATION

1. **INSTALL DOOR COURTESY LIGHT ASSEMBLY (See page ED-34)**

LUGGAGE COMPARTMENT ROOM LIGHT

COMPONENTS



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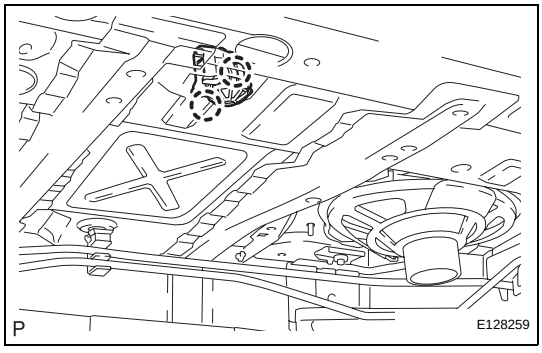
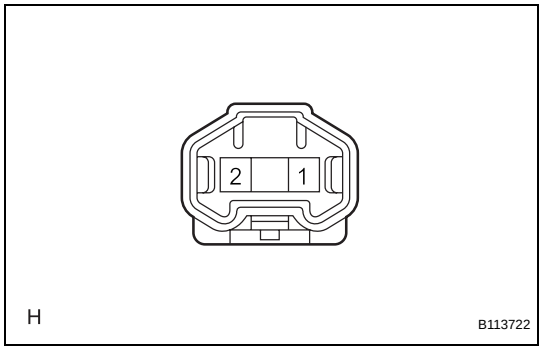


REMOVAL

1. **REMOVE NO. 1 LUGGAGE COMPARTMENT LIGHT ASSEMBLY**
   (a) Disengage the 2 claws and disconnect the No. 1 luggage compartment light assembly.
   (b) Disconnect the connector and remove the No. 1 luggage compartment light assembly.



INSPECTION

1. INSPECT NO. 1 LUGGAGE COMPARTMENT LIGHT ASSEMBLY

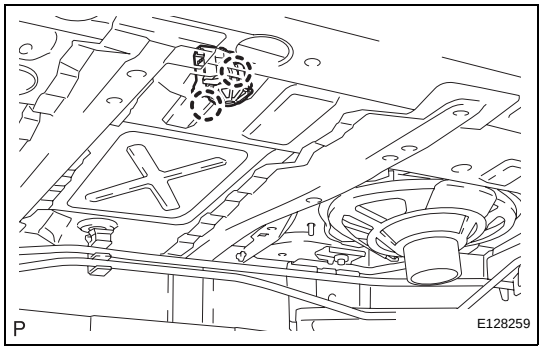
(a) Apply battery voltage to the No. 1 luggage compartment light assembly connector.

(b) Check that the No. 1 luggage compartment light comes on.

OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	**Luggage compartment light comes on**

If the result is not as specified, replace the luggage compartment light assembly.



INSTALLATION

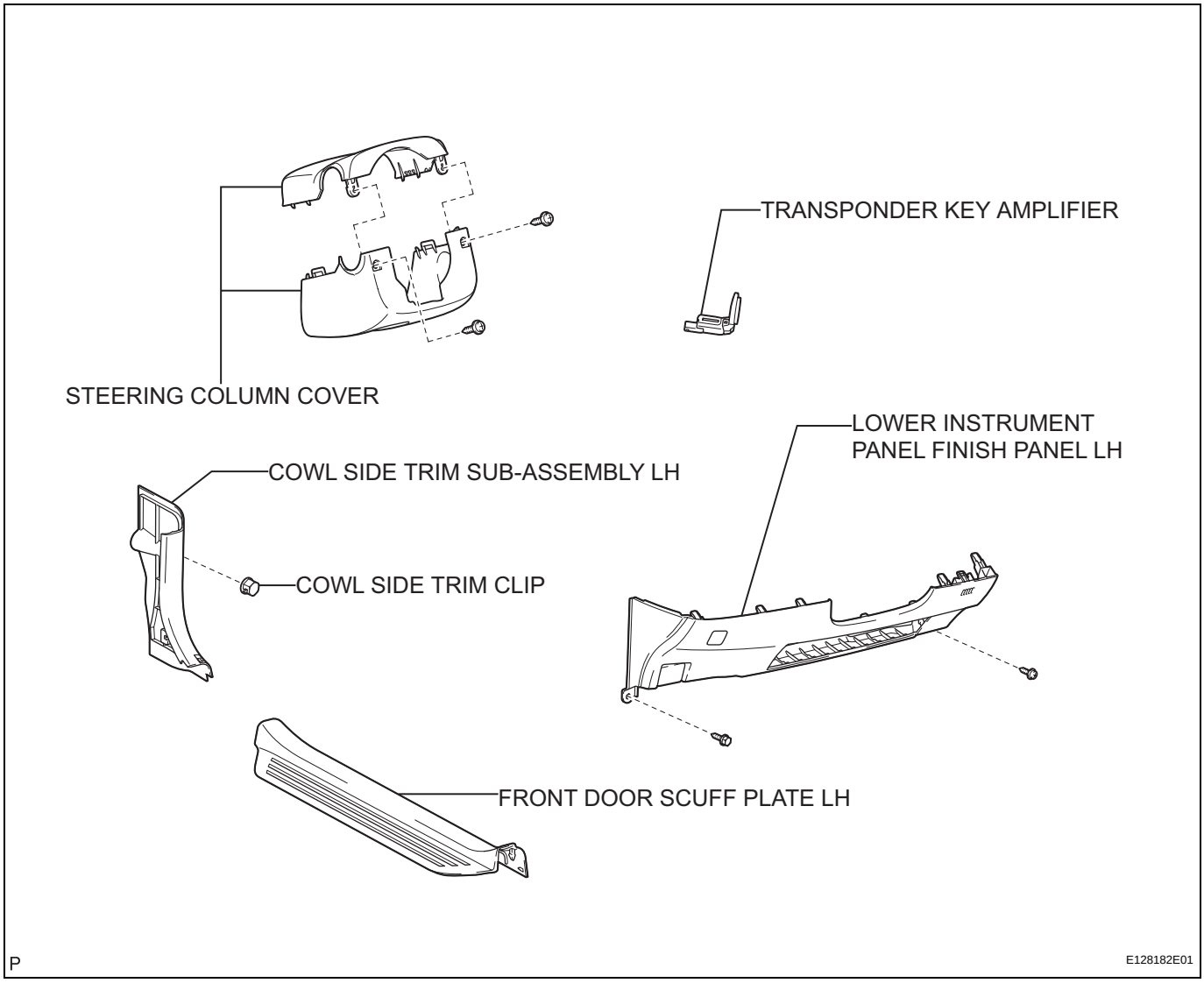
1. INSTALL NO. 1 LUGGAGE COMPARTMENT LIGHT ASSEMBLY

(a) Connect the connector.

(b) Engage the 2 claws and install the No. 1 luggage compartment light assembly.

IGNITION KEY CYLINDER LIGHT

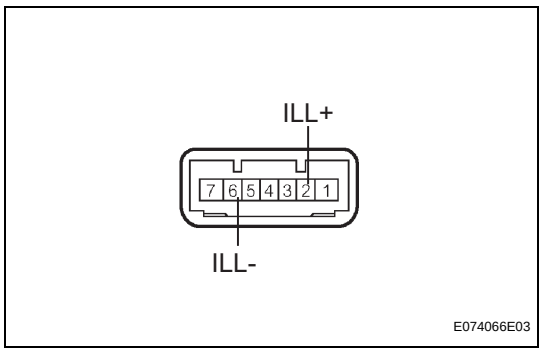
COMPONENTS



REMOVAL

1. **REMOVE FRONT DOOR SCUFF PLATE LH (See page IR-26)**
2. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH (See page IR-26)**
3. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH (for TMC Made) (See page IP-20)**
4. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH (for TMMK Made) (See page IP-21)**
5. **REMOVE STEERING COLUMN COVER (See page SR-39)**
6. **REMOVE TRANSPONDER KEY AMPLIFIER (See page SR-42)**

INSPECTION



1. **INSPECT TRANSPONDER KEY AMPLIFIER**
   (a) Apply battery voltage to the transponder key amplifier connector.
   (b) Check that the ignition key cylinder light comes on.
   OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 (ILL+) Battery negative (-) → Terminal 6 (ILL-)	Ignition key cylinder light comes on

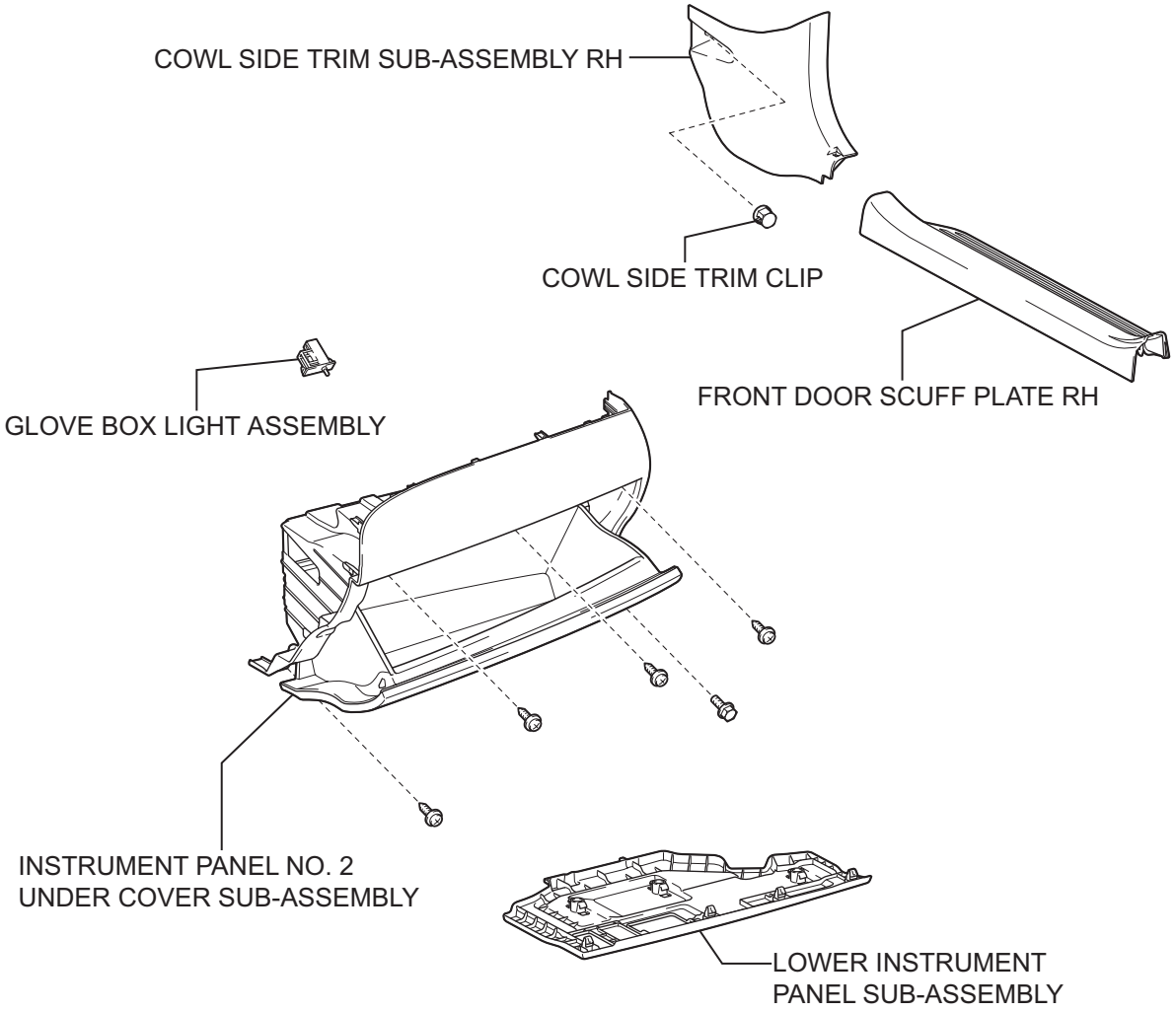
If the result is not as specified, replace the transponder key amplifier.

INSTALLATION

1. **INSTALL TRANSPONDER KEY AMPLIFIER (See page SR-46)**
2. **INSTALL STEERING COLUMN COVER (See page SR-50)**
3. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH (for TMC Made) (See page IP-58)**
4. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH (for TMMK Made) (See page IP-59)**
5. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH (See page IR-54)**
6. **INSTALL FRONT DOOR SCUFF PLATE LH (See page IR-54)**

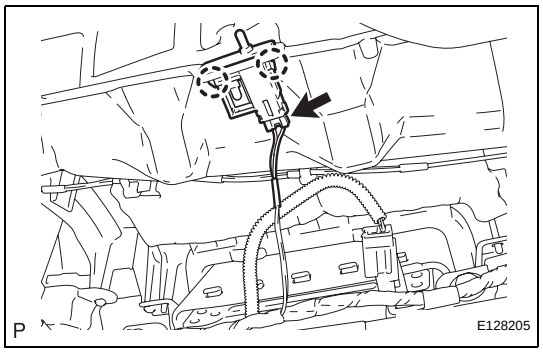
GLOVE BOX LIGHT

COMPONENTS



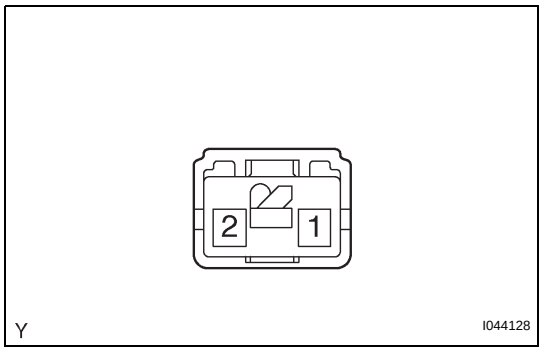
REMOVAL

1. **REMOVE FRONT DOOR SCUFF PLATE RH (See page IR-26)**
2. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY RH (See page IR-26)**
3. **REMOVE INSTRUMENT PANEL NO. 2 UNDER COVER SUB-ASSEMBLY (See page IP-23)**
4. **REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY (for TMC Made) (See page IP-23)**
5. **REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY (for TMMK Made) (See page IP-24)**
6. **REMOVE GLOVE BOX LIGHT ASSEMBLY**
   (a) Disconnect the connector.
   (b) Disengage the 2 claws and remove the glove box light assembly.



INSPECTION

1. **INSPECT GLOVE BOX LIGHT ASSEMBLY**
   (a) Apply battery voltage to the glove box light assembly connector.
   (b) Check that the glove box light comes on.
   OK

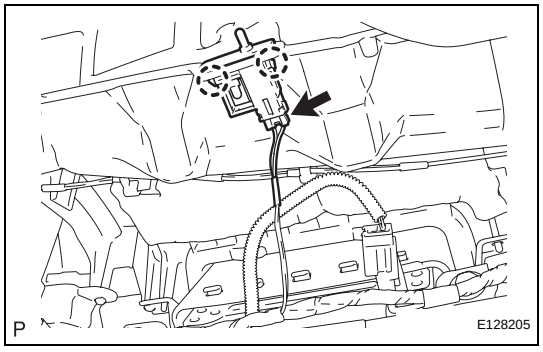


Measurement Condition	Switch Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Glove box light switch ON	Glove box light comes on

If the result is not as specified, replace the glove box light assembly.

INSTALLATION

1. **INSTALL GLOVE BOX LIGHT ASSEMBLY**
   (a) Engage the 2 claws and install the glove box light assembly.
   (b) Connect the connector.
2. **INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY (for TMC Made) (See page IP-55)**
3. **INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY (for TMMK Made) (See page IP-56)**
4. **INSTALL INSTRUMENT PANEL NO. 2 UNDER COVER SUB-ASSEMBLY (See page IP-56)**
5. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY RH (See page IR-55)**



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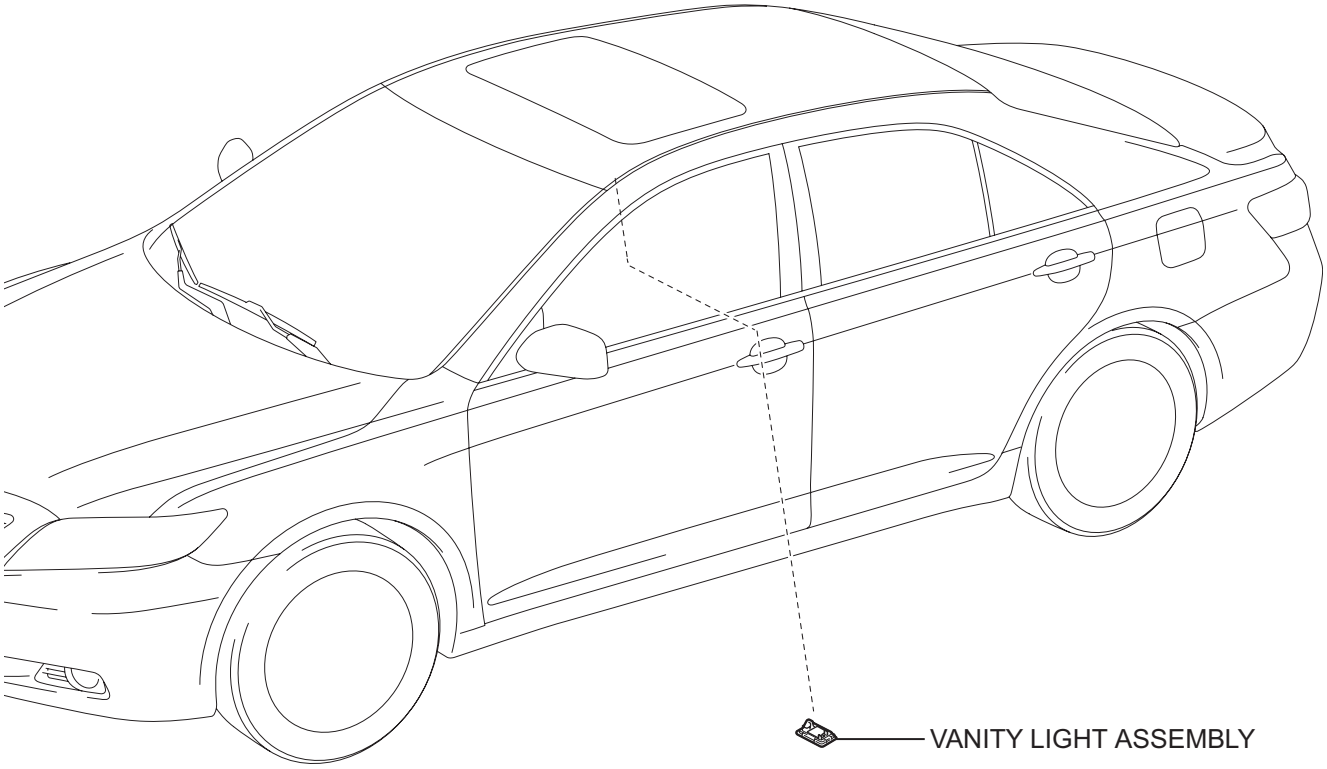
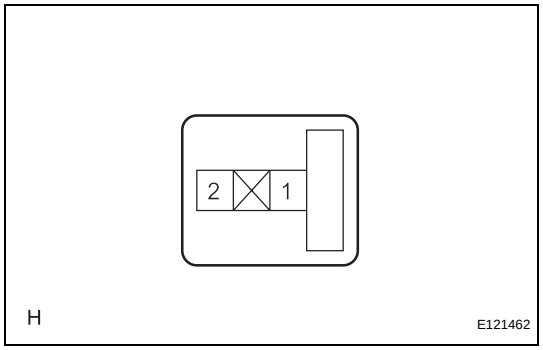
6. **INSTALL FRONT DOOR SCUFF PLATE RH (See page IR-55)**

VANITY LIGHT

COMPONENTS





REMOVAL

1. **REMOVE VANITY LIGHT ASSEMBLY (See page IR-35)**

INSPECTION

1. **INSPECT VANITY LIGHT ASSEMBLY**
   (a) Apply battery voltage to the vanity light assembly connector.
   (b) Check that the vanity light comes on.
   OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Vanity light comes on

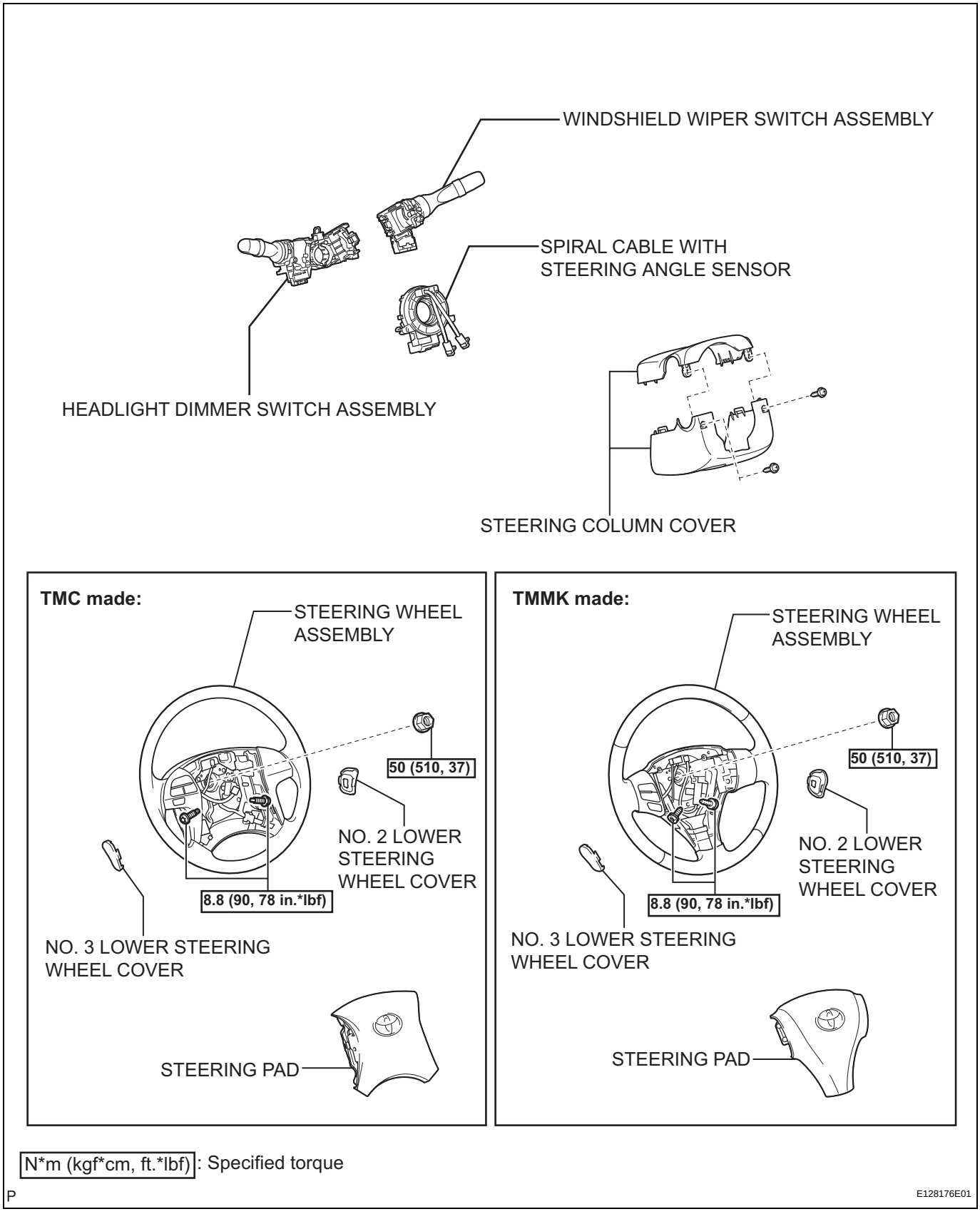
If the result is not as specified, replace the vanity light assembly.

INSTALLATION

1. **INSTALL VANITY LIGHT ASSEMBLY (See page IR-42)**

HEADLIGHT DIMMER SWITCH

COMPONENTS



N*m (kgf*cm, ft.*lbf): Specified torque

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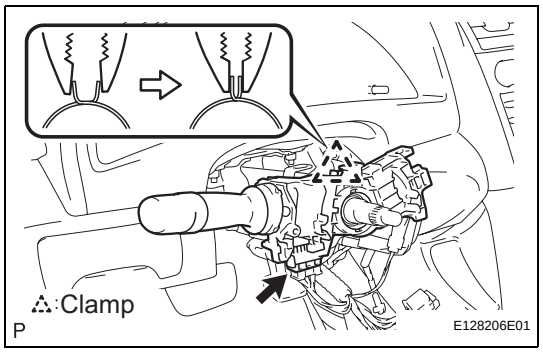
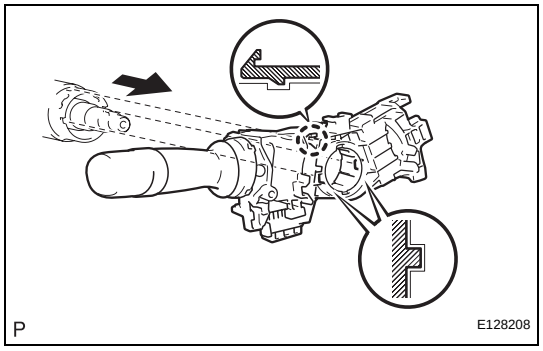
REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
   CAUTION:
   Wait for 90 seconds after disconnecting the cable to prevent airbag deployment. (See page RS-1)
2. **PLACE FRONT WHEELS FACING STRAIGHT AHEAD**
3. **REMOVE NO. 2 LOWER STEERING WHEEL COVER (See page RS-349)**
4. **REMOVE NO. 3 LOWER STEERING WHEEL COVER (See page RS-349)**
5. **REMOVE STEERING PAD (See page RS-350)**
6. **REMOVE STEERING WHEEL ASSEMBLY (See page SR-38)**
7. **REMOVE STEERING COLUMN COVER (See page SR-39)**
8. **REMOVE SPIRAL CABLE WITH STEERING ANGLE SENSOR (See page RS-364)**
9. **REMOVE WINDSHIELD WIPER SWITCH ASSEMBLY (See page WW-21)**
10. **REMOVE HEADLIGHT DIMMER SWITCH ASSEMBLY**
    (a) Disconnect the connector.
    (b) Disengage the clamp as shown in the illustration.



(c) Disengage the claw and remove the headlight dimmer switch assembly as shown in the illustration.



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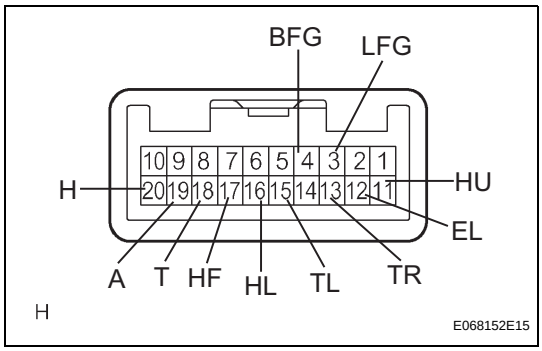


INSPECTION

1. INSPECT HEADLIGHT DIMMER SWITCH ASSEMBLY

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

Standard resistance:

Light control switch

Tester Connection	Switch Condition	Specified Condition
12 (EL) - 20 (H) - 18 (T) - 19 (A)	OFF	10 kΩ or higher
12 (EL) - 18 (T)	TAIL	Below 1 Ω
12 (EL) - 20 (H) - 18 (T)	HEAD	Below 1 Ω
12 (EL) - 19 (A)	AUTO	Below 1 Ω

Dimmer switch

Tester Connection	Switch Condition	Specified Condition
17 (HF) - 12 (EL)	FLASH	Below 1 Ω
16 (HL) - 12 (EL)	LOW	Below 1 Ω
11 (HU) - 12 (EL)	HIGH	Below 1 Ω

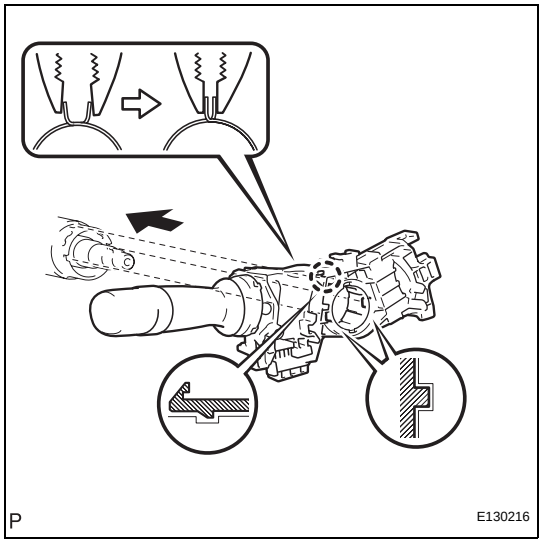
Turn signal switch

Tester Connection	Switch Condition	Specified Condition
13 (TR) - 12 (EL) - 15 (TL)	OFF	10 kΩ or higher
13 (TR) - 12 (EL)	RH	Below 1 Ω
15 (TL) - 12 (EL)	LH	Below 1 Ω

Fog light switch

Tester Connection	Switch Condition	Specified Condition
3 (LFG) - 4 (BFG)	OFF	10 kΩ or higher
3 (LFG) - 4 (BFG)	ON	Below 1 Ω

If the result is not as specified, replace the headlight dimmer switch assembly.



INSTALLATION

1. INSTALL HEADLIGHT DIMMER SWITCH ASSEMBLY

(a) Engage the claw while loosening the clamp as shown in the illustration.

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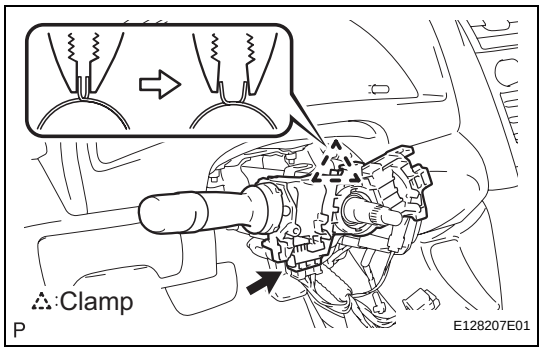
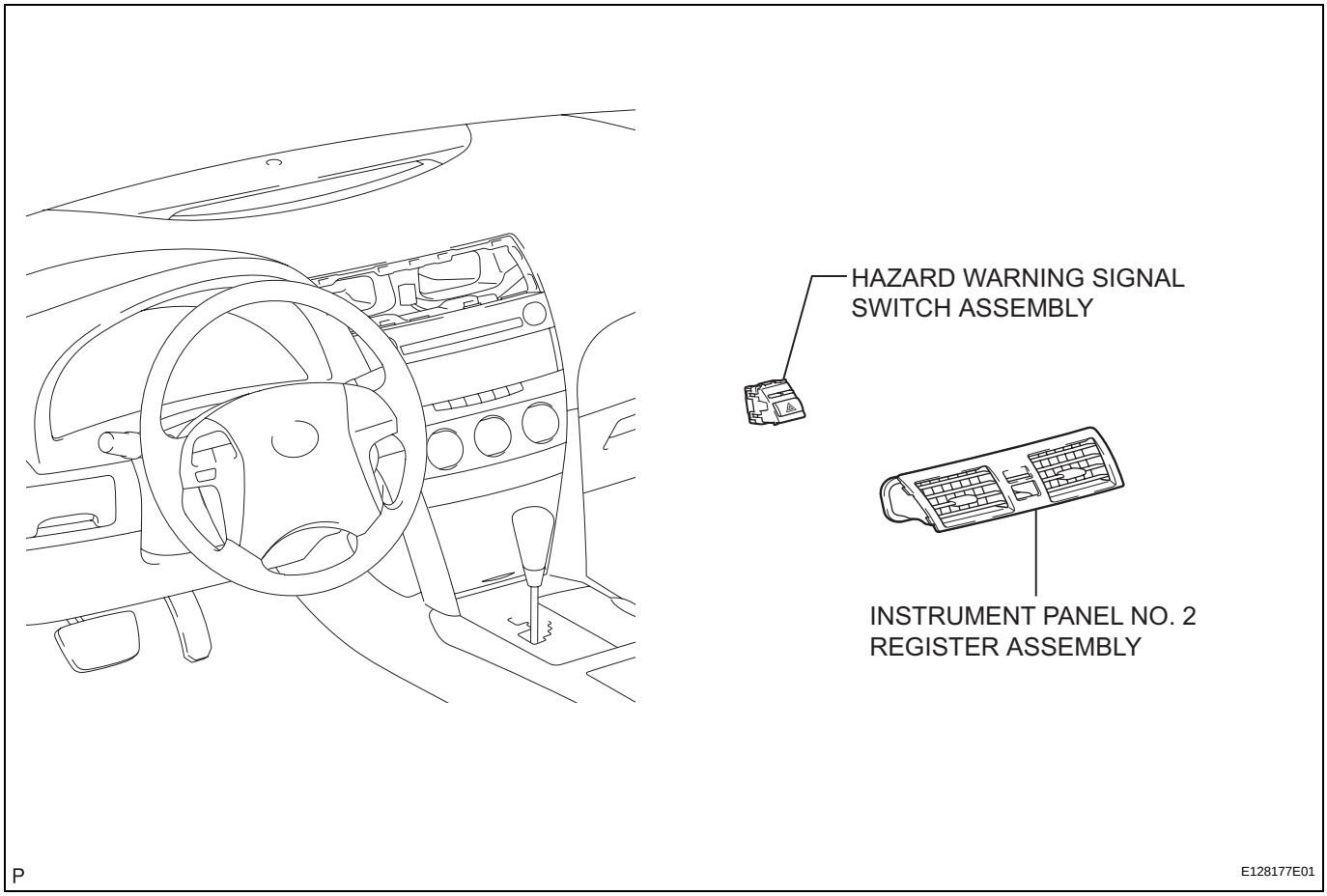


(b) Install the headlight dimmer switch assembly with the clamp.
(c) Connect the connector.

2. **INSTALL WINDSHIELD WIPER SWITCH ASSEMBLY (See page WW-23)**
3. **INSTALL SPIRAL CABLE WITH STEERING ANGLE SENSOR (See page RS-366)**
4. **INSTALL STEERING COLUMN COVER (See page SR-50)**
5. **INSTALL STEERING WHEEL ASSEMBLY (See page SR-51)**
6. **INSPECT STEERING WHEEL CENTER POINT**
7. **INSTALL STEERING PAD (See page RS-350)**
8. **INSTALL NO. 3 LOWER STEERING WHEEL COVER (See page RS-351)**
9. **INSTALL NO. 2 LOWER STEERING WHEEL COVER (See page RS-352)**
10. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
11. **INSPECT STEERING PAD (See page RS-352)**
12. **INSPECT SRS WARNING LIGHT** (See page RS-32)

HAZARD WARNING SWITCH

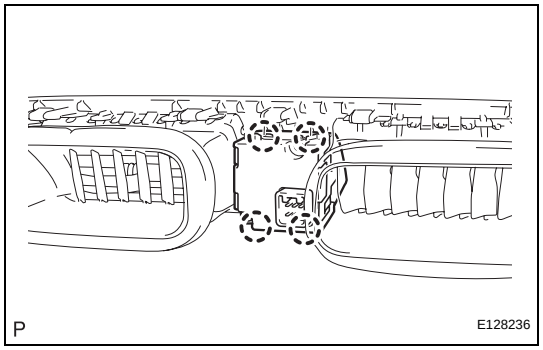
COMPONENTS



REMOVAL

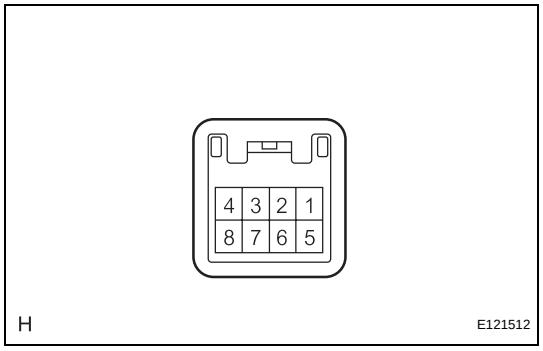
1. **REMOVE INSTRUMENT PANEL NO. 2 REGISTER ASSEMBLY (See page IP-27)**

2. **REMOVE HAZARD WARNING SIGNAL SWITCH ASSEMBLY**
   (a) Disengage the 4 claws and remove the hazard warning signal switch assembly.



INSPECTION

1. **INSPECT HAZARD WARNING SIGNAL SWITCH ASSEMBLY**
   (a) Measure the resistance according to the value(s) in the table below.
   Standard resistance



Tester Connection	Condition	Specified Condition
5 - 4	OFF	10 kΩ or higher
5 - 4	ON	Below 1 Ω

   If the result is not as specified, replace the hazard warning signal switch assembly.
   (b) Apply battery voltage to the hazard warning signal switch assembly connector.
   OK

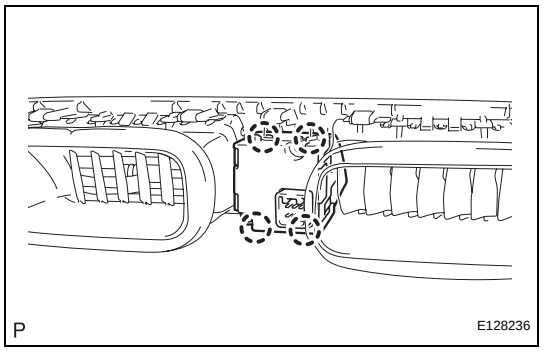
Measurement Condition	Specified Condition
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Illumination comes on

   If the result is not as specified, replace the hazard warning signal switch assembly.

INSTALLATION

1. **INSTALL HAZARD WARNING SIGNAL SWITCH ASSEMBLY**
   (a) Engage the 4 claws and install the hazard warning signal switch assembly.

2. **INSTALL INSTRUMENT PANEL NO. 2 REGISTER ASSEMBLY (See page IP-52)**



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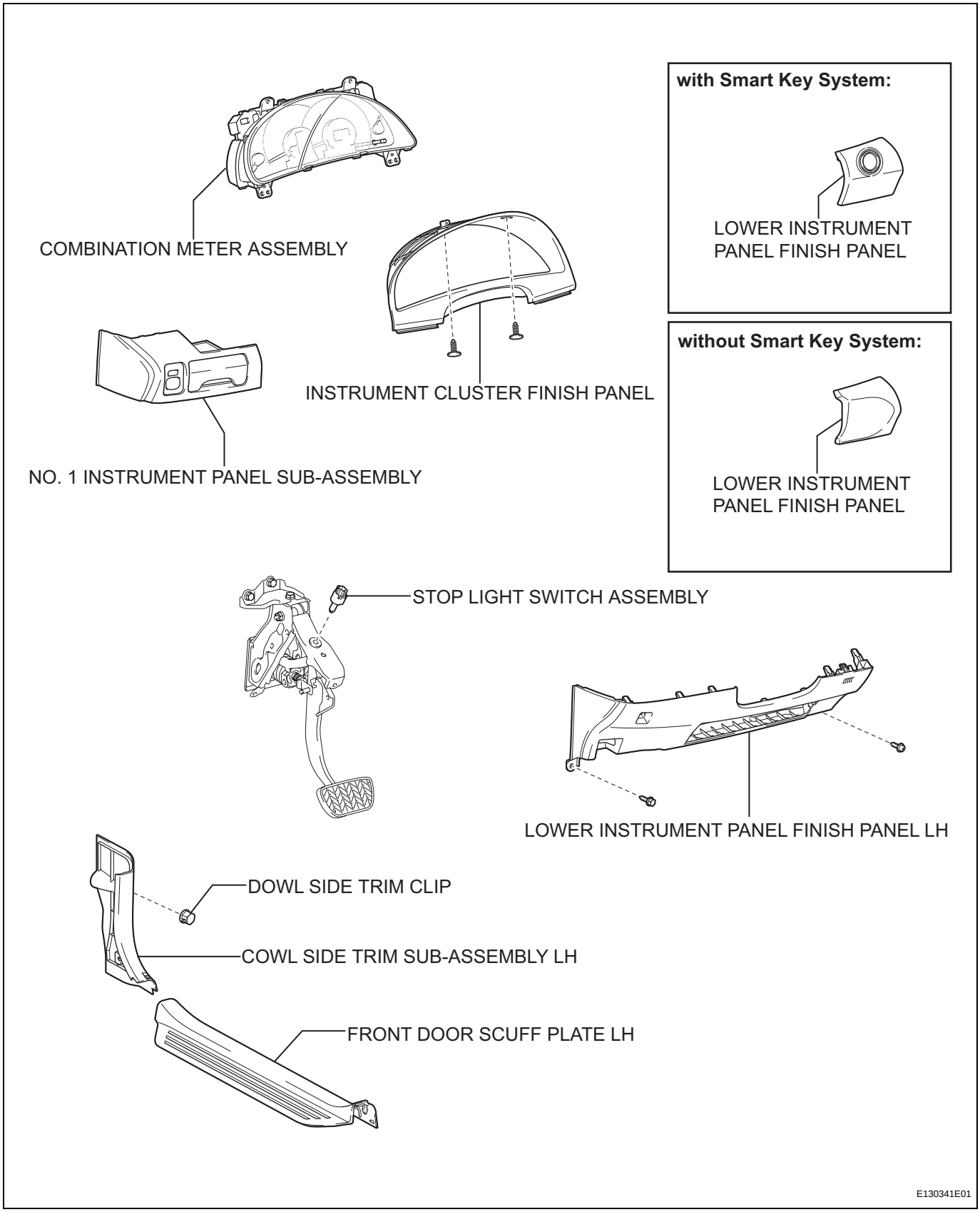
STOP LIGHT SWITCH

COMPONENTS



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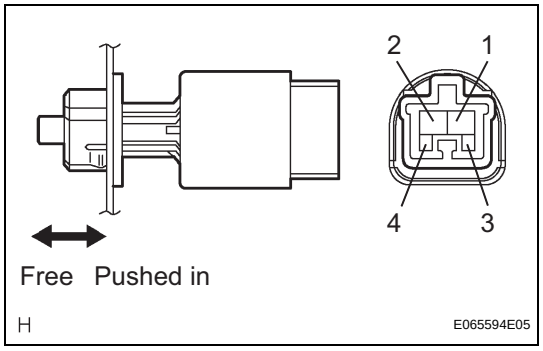
REMOVAL

1. **REMOVE FRONT DOOR SCUFF PLATE LH (See page IR-24)**
2. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH (See page IR-25)**
3. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH (See page IP-20)**
4. **REMOVE NO. 1 INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-22)**
5. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL (w/o Smart Key System) (See page IP-22)**
6. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL (w/ Smart Key System) (See page IP-22)**
7. **REMOVE INSTRUMENT CLUSTER FINISH PANEL (See page ME-65)**
8. **REMOVE COMBINATION METER ASSEMBLY (See page ME-65)**
9. **REMOVE STOP LIGHT SWITCH ASSEMBLY (See page BR-71)**

INSPECTION



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

Tester Connection	Switch Position	Specified Condition
1 - 2	Switch pin free	10 kΩ or higher
3 - 4	Switch pin free	Below 1 Ω
1 - 2	Switch pin pushed in	Below 1 Ω
3 - 4	Switch pin pushed in	10 kΩ or higher

If the result is not as specified, replace the stop light switch assembly.

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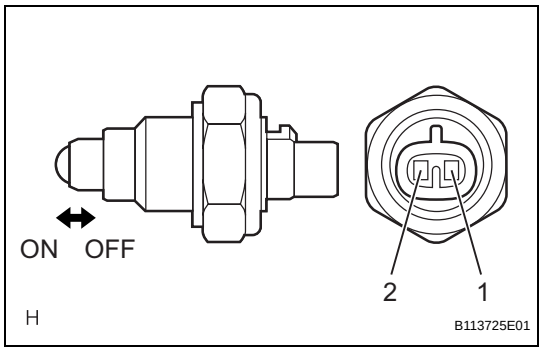
INSTALLATION

1. **INSTALL STOP LIGHT SWITCH ASSEMBLY (See page BR-72)**
2. **INSTALL COMBINATION METER ASSEMBLY (See page ME-67)**
3. **INSTALL INSTRUMENT CLUSTER FINISH PANEL (See page ME-68)**
4. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL (w/o Smart Key System) (See page IP-57)**
5. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL (w/ Smart Key System) (See page IP-57)**
6. **INSTALL NO. 1 INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-57)**
7. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH (See page IP-55)**
8. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH (See page IR-54)**
9. **INSTALL FRONT DOOR SCUFF PLATE LH (See page IR-54)**



BACK-UP LIGHT SWITCH

INSPECTION

1. INSPECT BACK-UP LIGHT BULB (for Manual Transmission)

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

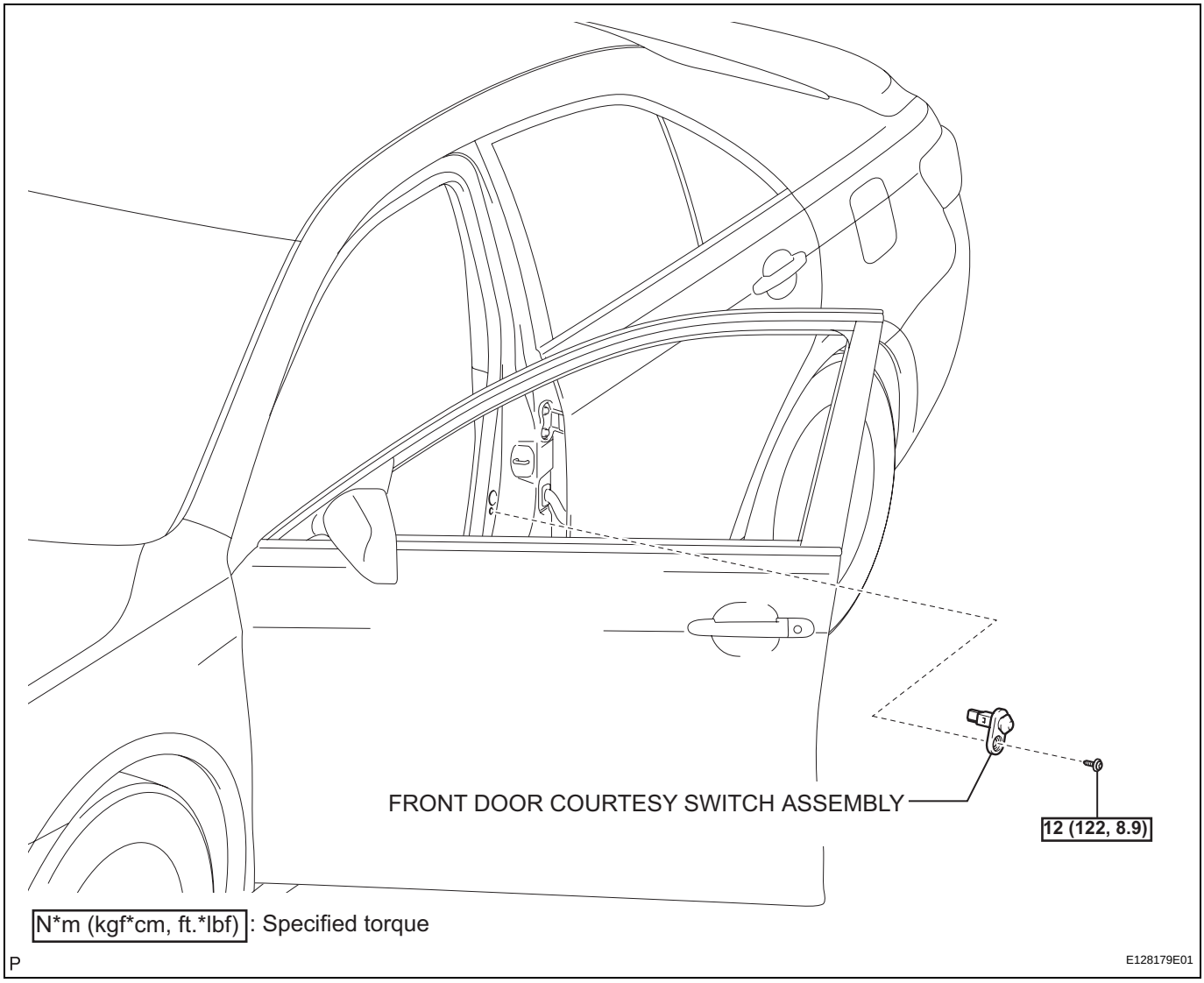
Standard resistance

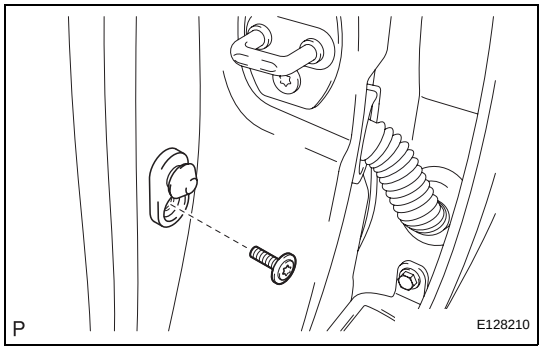
Tester Connection	Switch Operation	Specified Condition
1 - 2	Switch ON (Ball is not pressed)	10 kΩ or higher
1 - 2	Switch OFF (Ball is pressed)	Below 1 Ω

If the result is not as specified, replace the back-up light switch.

FRONT DOOR COURTESY SWITCH

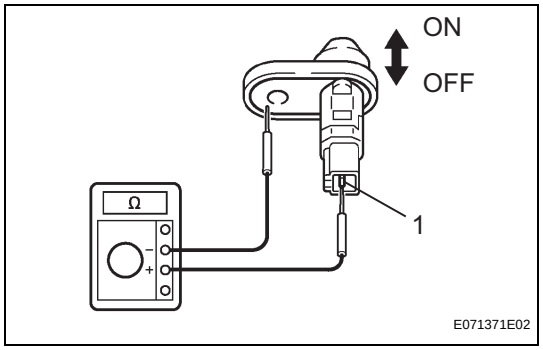
COMPONENTS





REMOVAL

1. **REMOVE FRONT DOOR COURTESY SWITCH ASSEMBLY**
   (a) Using a "TORX" socket wrench (T30), remove the "TORX" bolt.
   (b) Disconnect the connector and remove the front door courtesy switch assembly.



INSPECTION

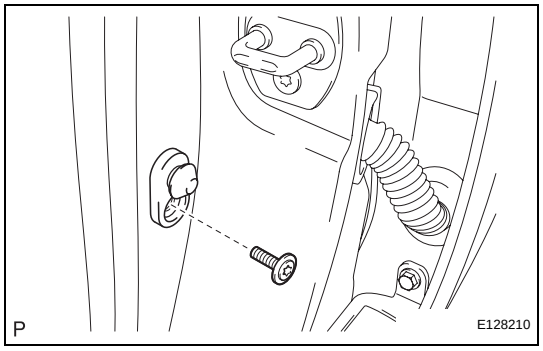
1. INSPECT FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY

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

Standard resistance

Tester Connection	Switch Operation	Specified Condition
1 - Switch body	Not pushed (ON)	Below 1 Ω
	Pushed (OFF)	10 kΩ or higher

If the result is not as specified, replace the front door courtesy light switch assembly.



INSTALLATION

1. INSTALL FRONT DOOR COURTESY SWITCH ASSEMBLY

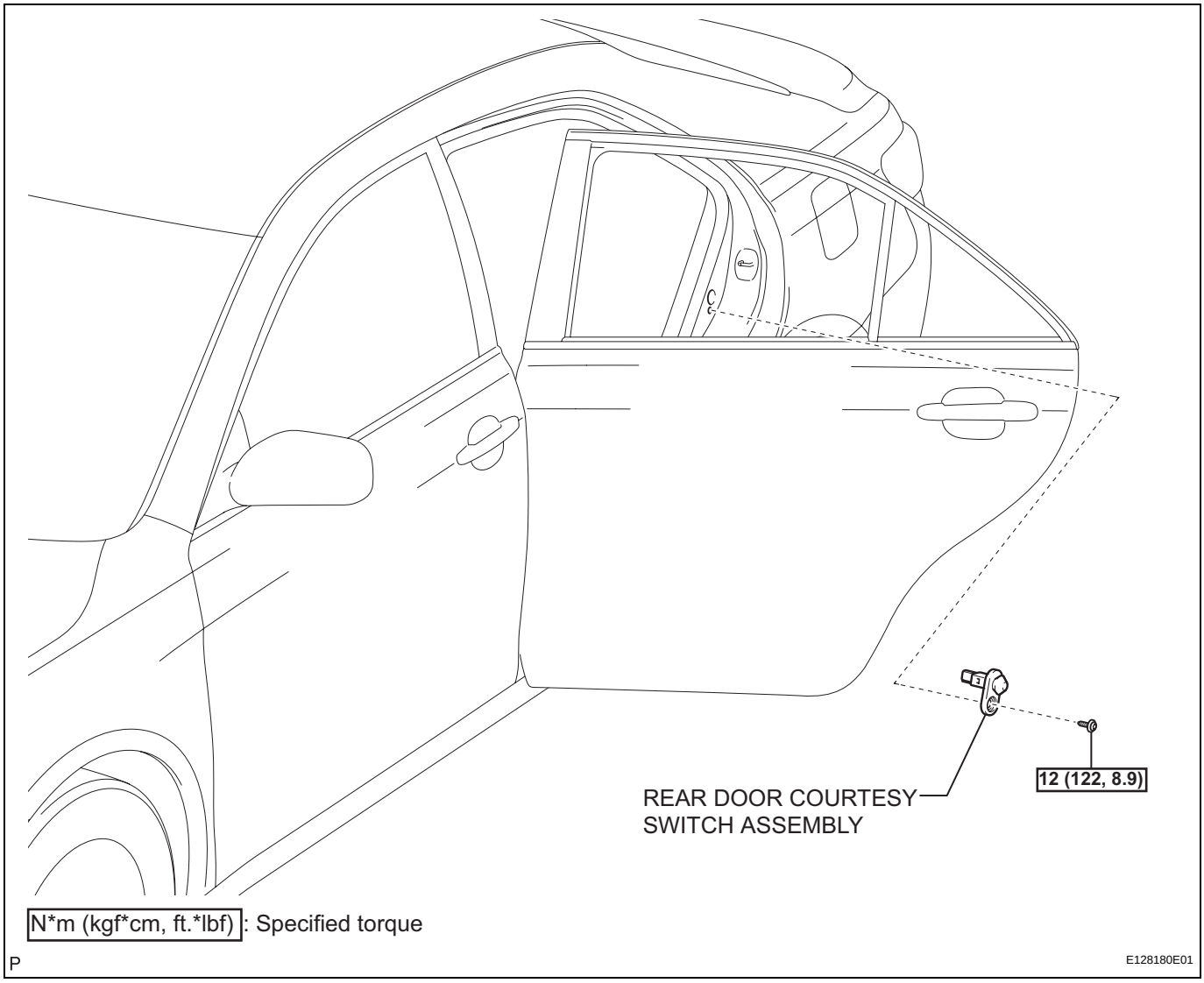
(a) Connect the connector.

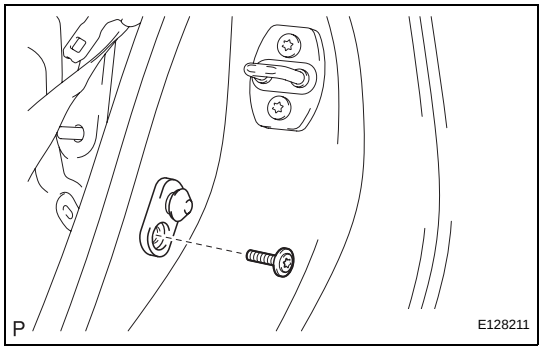
(b) Using a "TORX" socket wrench (T30), install the front door courtesy switch assembly with the "TORX" bolt.

Torque: 12 N*m (122 kgf*cm, 8.9 ft.*lbf)

REAR DOOR COURTESY SWITCH

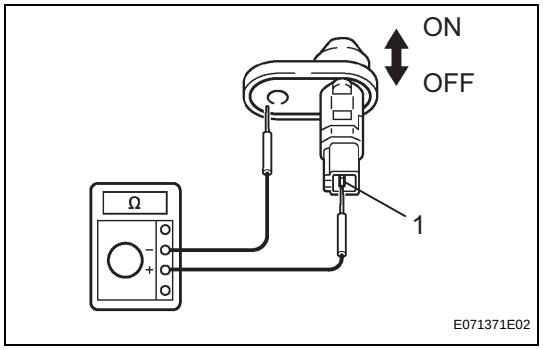
COMPONENTS





REMOVAL

1. **REMOVE REAR DOOR COURTESY SWITCH ASSEMBLY**
   (a) Using a "TORX" socket wrench (T30), remove the "TORX" bolt.
   (b) Disconnect the connector and remove the rear door courtesy switch assembly.



INSPECTION

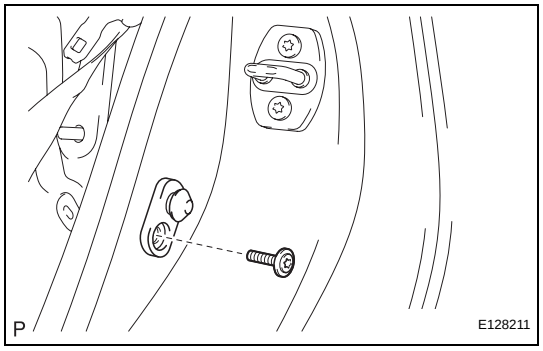
1. INSPECT REAR DOOR COURTESY LIGHT SWITCH ASSEMBLY

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

Standard resistance

Tester Connection	Switch Operation	Specified Condition
1 - Switch body	Not pushed (ON)	Below 1 Ω
	Pushed (OFF)	10 kΩ or higher

If the result is not as specified, replace the rear door courtesy light switch assembly.



INSTALLATION

1. INSTALL REAR DOOR COURTESY SWITCH ASSEMBLY

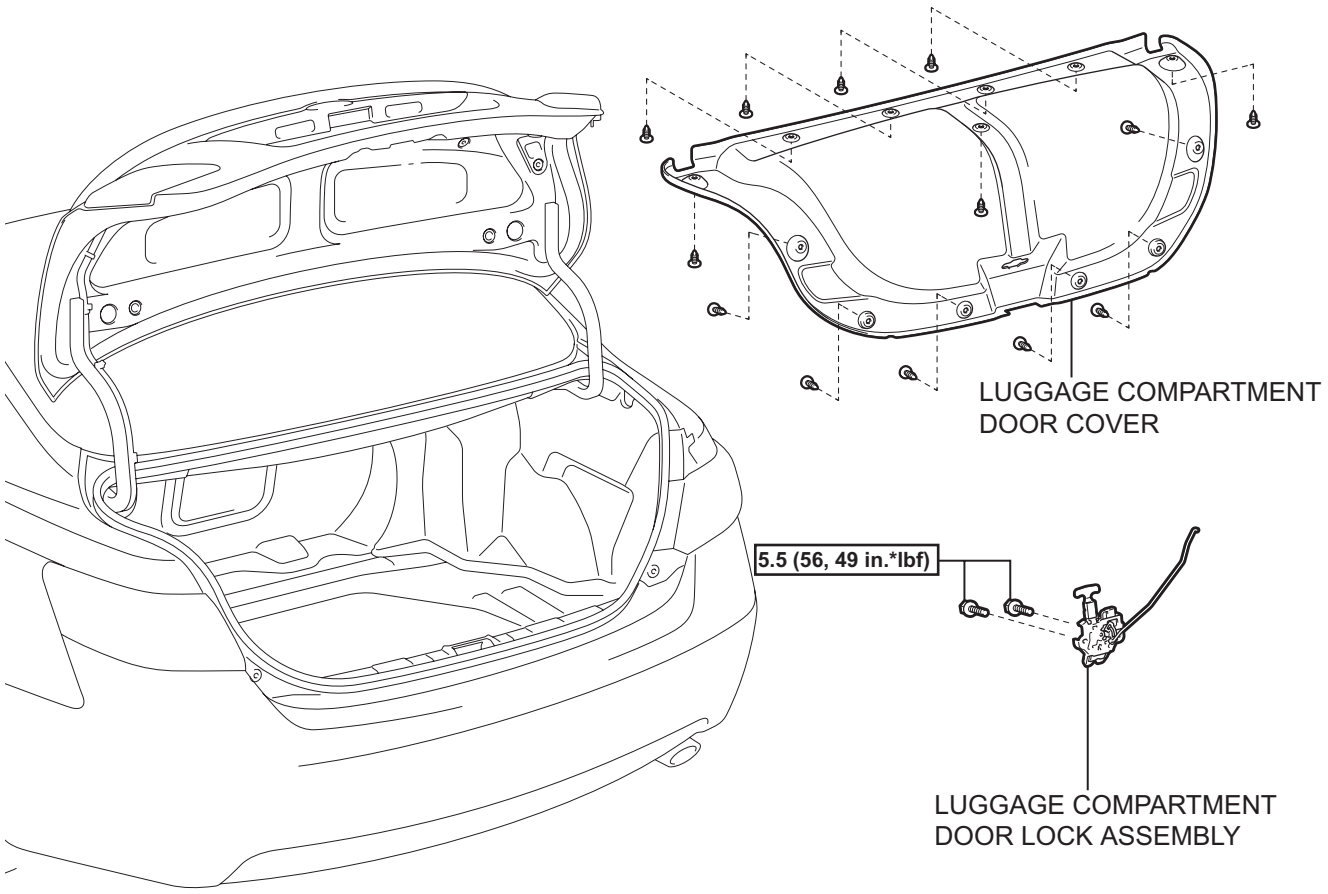
(a) Connect the connector.

(b) Using a "TORX" socket wrench (T30), install the rear door courtesy switch assembly with the "TORX" bolt.

Torque: 12 N*m (122 kgf*cm, 8.9 ft.*lbf)

BACK DOOR COURTESY SWITCH

COMPONENTS



N*m (kgf*cm, ft.*lbf): Specified torque

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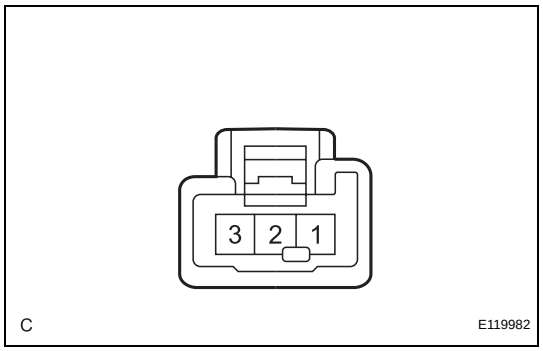
REMOVAL

1. **REMOVE LUGGAGE COMPARTMENT DOOR COVER (See page ET-61)**
2. **REMOVE LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY (See page ED-63)**

INSPECTION



1. **INSPECT LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY**
   (a) Measure the resistance according to the value(s) in the table below.
   Standard resistance

Tester Connection	Condition	Specified Condition
1 - 2	Door is closed	10 kΩ or higher
1 - 2	Door is open	Below 1 Ω

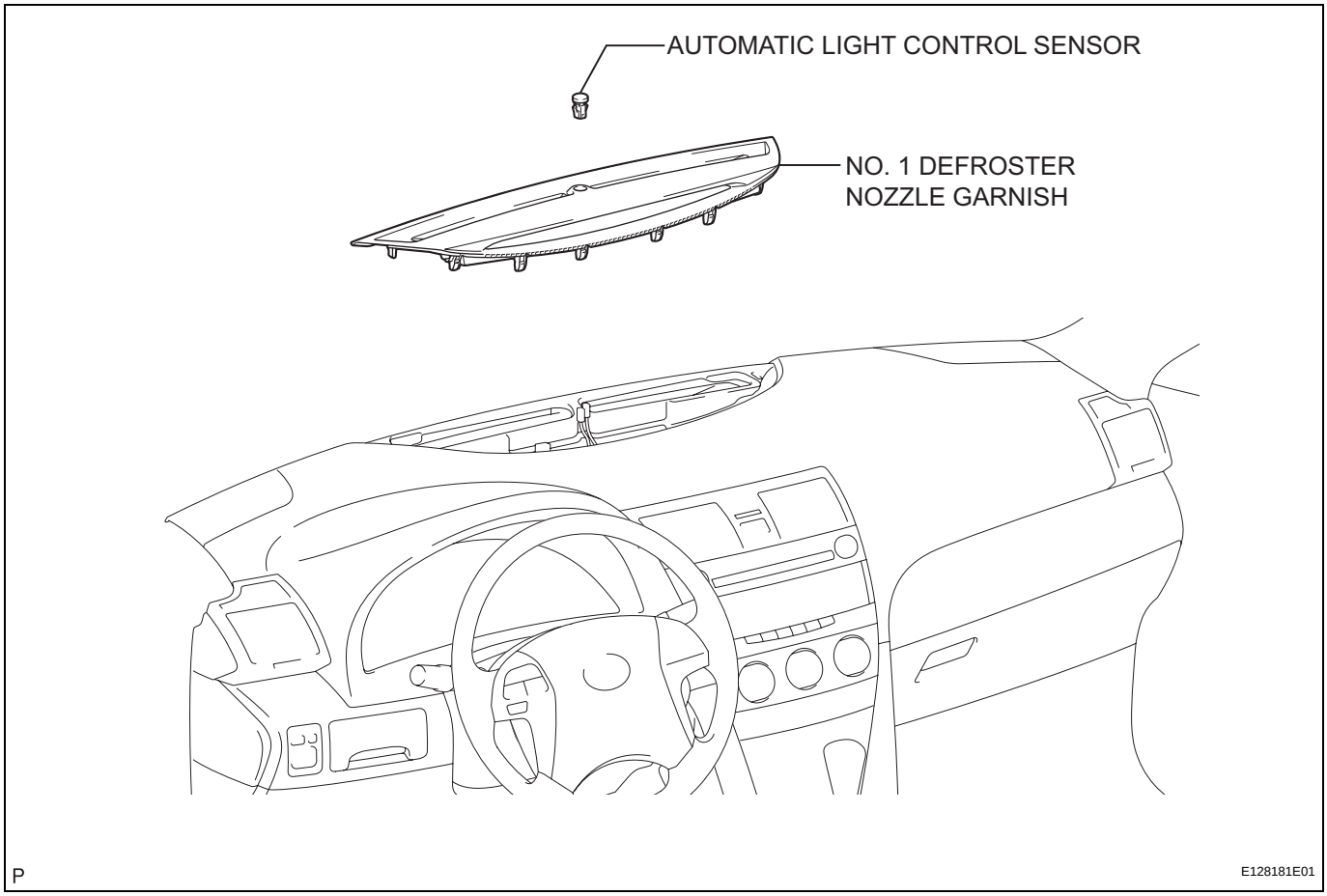
If the result is not as specified, replace the luggage compartment door lock assembly.

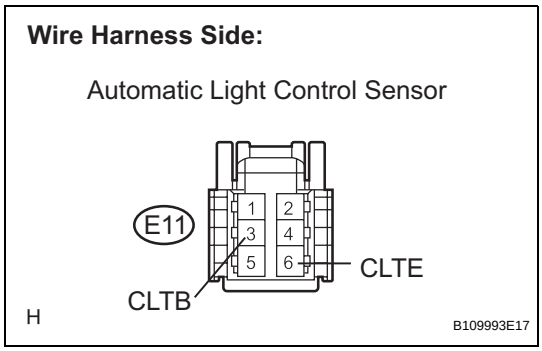
INSTALLATION

1. **INSTALL LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY (See page ED-64)**
2. **INSTALL LUGGAGE COMPARTMENT DOOR COVER (See page ET-64)**

AUTOMATIC LIGHT CONTROL SENSOR

COMPONENTS





ON-VEHICLE INSPECTION

1. INSPECT AUTOMATIC LIGHT CONTROL SENSOR (for Manual Air Conditioning System)

(a) Disconnect the E11 automatic light control sensor connector.

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

Standard voltage

Tester Connection	Condition	Specified Condition
E11-3 (CLTB) - E11-6 (CLTE)	Ignition switch off	Below 1 V
	Ignition switch on (IG)	10 to 14 V

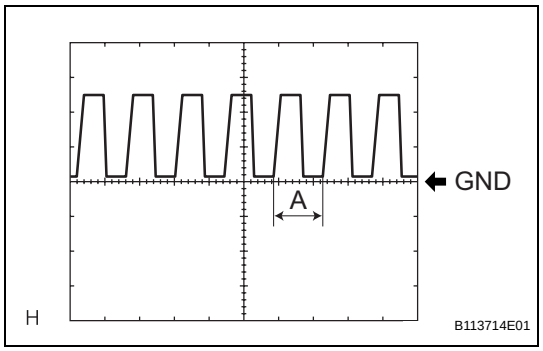
Standard resistance

Tester Connection	Specified Condition
E11-6 (CLTE) - Body ground	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the automatic light control sensor connector.

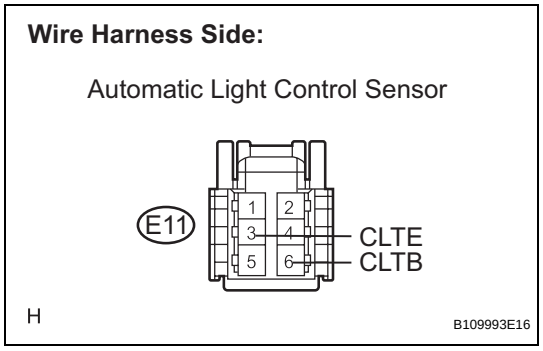
(d) Connect an oscilloscope to the automatic light control sensor connector.



(e) Check the waveform.
OK

Tester Connection	Tool Setting	Condition	Specified Condition
E11-6 (CLTE) - E11-4 (CLTS)	5 V/DIV., 5 ms./ DIV	Ignition switch on (IG), light control switch in AUTO	Correct waveform is as shown

HINT:
If the ambient light becomes brighter, width A becomes narrower.
If the result is not as specified, replace the automatic light control sensor.



2. INSPECT AUTOMATIC LIGHT CONTROL SENSOR (for Automatic Air Conditioning System)

(a) Disconnect the E11 automatic light control sensor connector.

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

Standard voltage

Tester Connection	Condition	Specified Condition
E11-6 (CLTB) - E11-3 (CLTE)	Ignition switch off	Below 1 V
	Ignition switch on (IG)	10 to 14 V

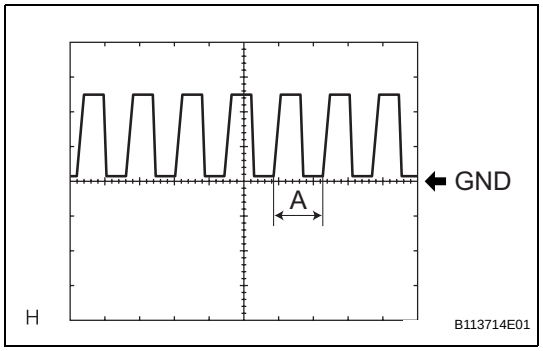
Standard resistance

Tester Connection	Specified Condition
E11-3 (CLTE) - Body ground	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the automatic light control sensor connector.

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



(e) Check the waveform.
OK

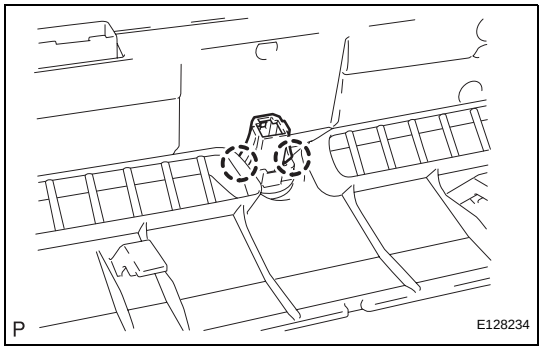
Tester Connection	Tool Setting	Condition	Specified Condition
E11-3 (CLTE) - E11-5 (CLTS)	5 V/DIV., 5 ms./ DIV	Ignition switch on (IG), light control switch in AUTO	Correct waveform is as shown

HINT:
If the ambient light becomes brighter, width A becomes narrower.
If the result is not as specified, replace the automatic light control sensor.

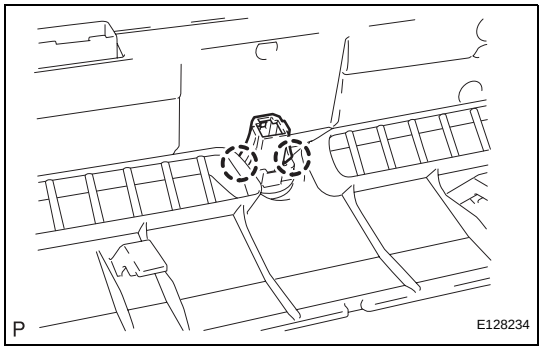
REMOVAL

1. **REMOVE NO. 1 DEFROSTER NOZZLE GARNISH (See page IP-32)**

2. **REMOVE AUTOMATIC LIGHT CONTROL SENSOR**
   (a) Disengage the 2 claws and remove the automatic light control sensor.



INSTALLATION

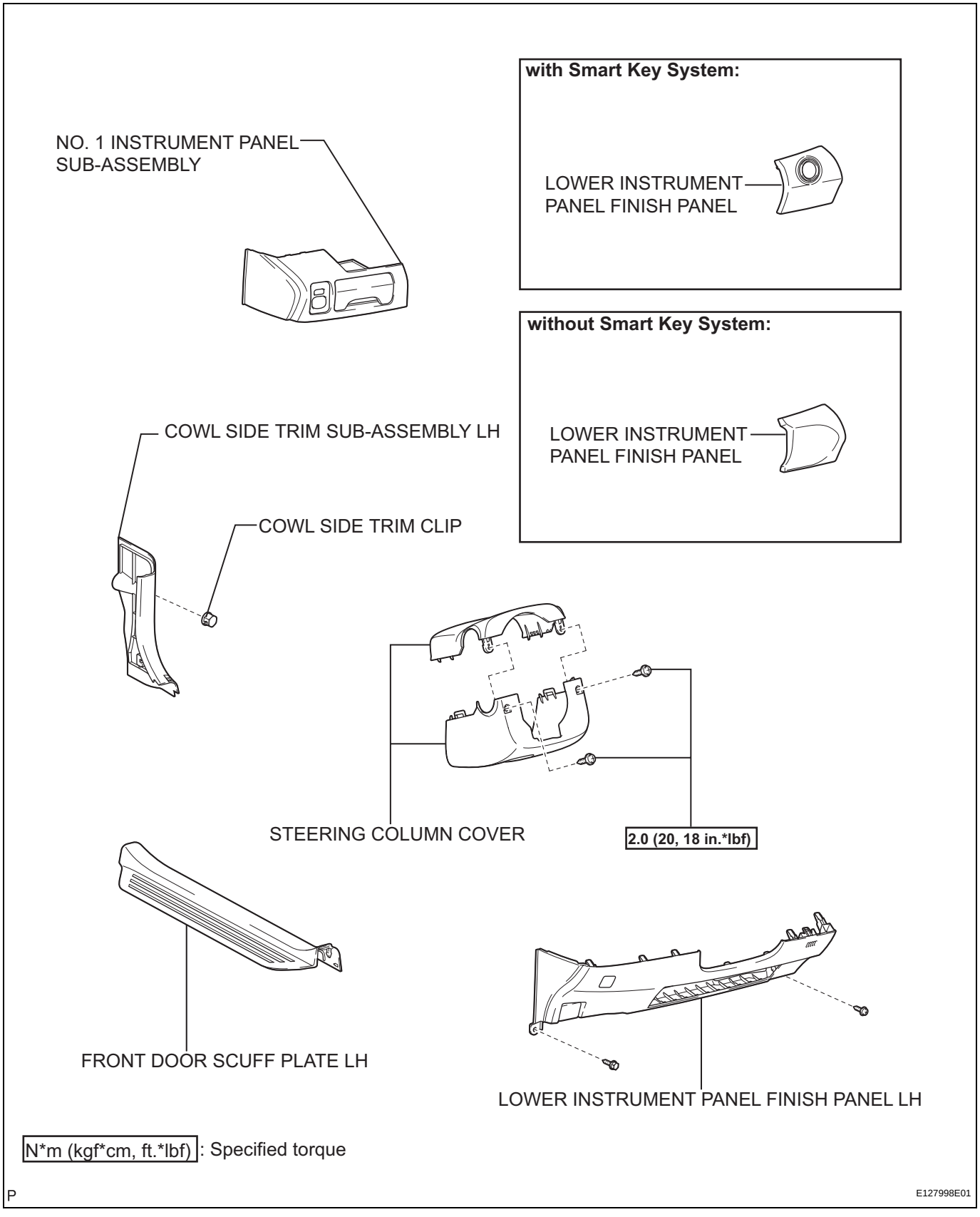


1. **INSTALL AUTOMATIC LIGHT CONTROL SENSOR**
   (a) Engage the 2 claws and install the automatic light control sensor.

2. **INSTALL NO. 1 DEFROSTER NOZZLE GARNISH (See page IP-48)**

TURN SIGNAL FLASHER ASSEMBLY

COMPONENTS



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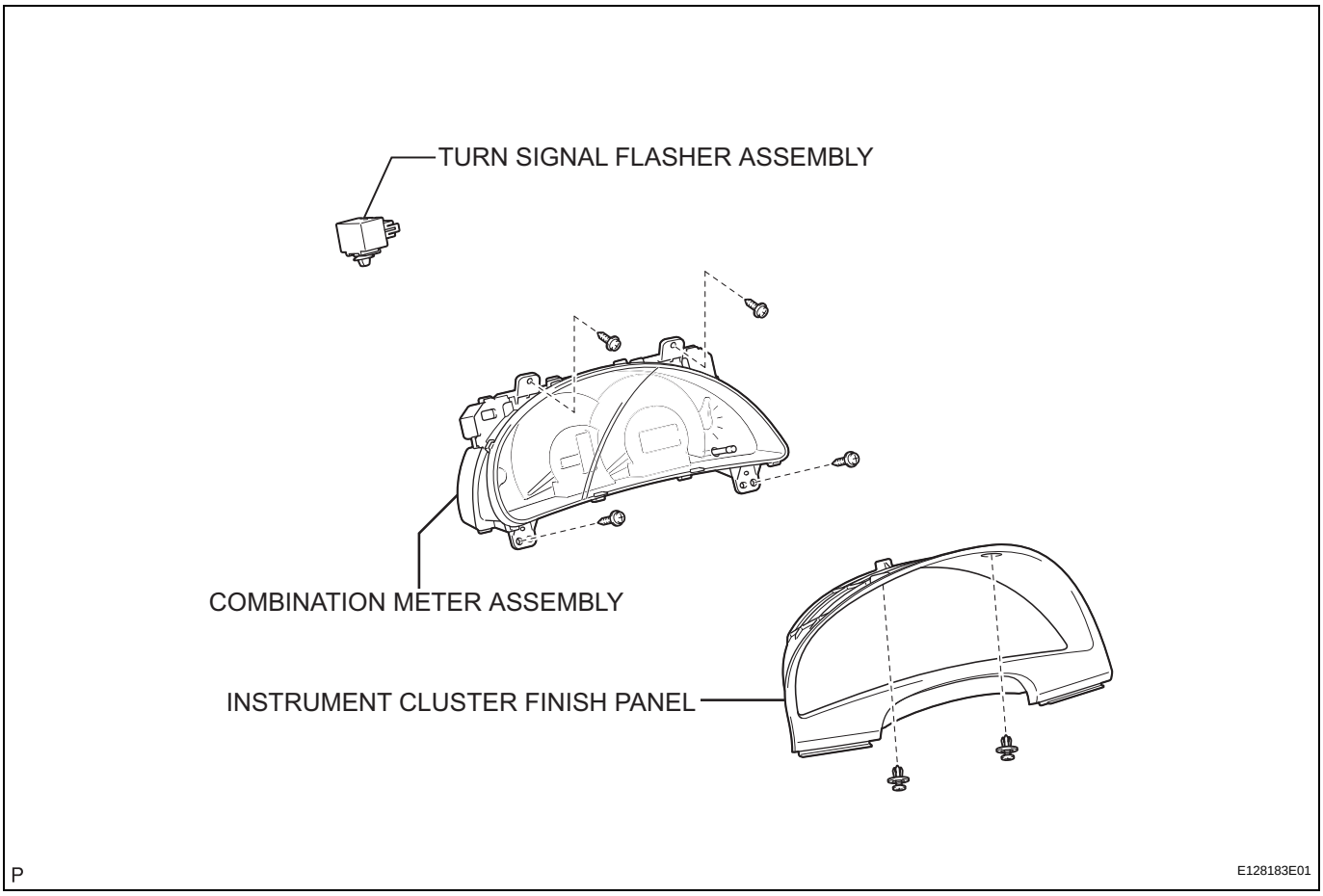
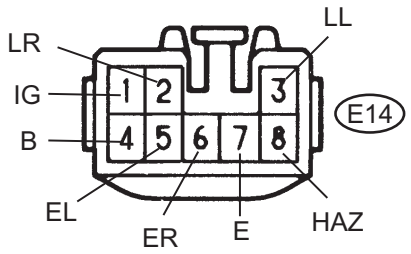


Wire Harness Side:



ON-VEHICLE INSPECTION

1. INSPECT TURN SIGNAL FLASHER ASSEMBLY

(a) Disconnect the E14 turn signal flasher assembly connector.

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

Standard voltage

Tester Connection	Condition	Specified Condition
E14-1 (IG) - Body ground	Ignition switch off	Below 1 V
E14-1 (IG) - Body ground	Ignition switch on (IG)	10 to 14 V
E14-4 (B) - Body ground	Always	10 to 14 V

Standard resistance

Tester Connection	Condition	Specified Condition
E14-5 (EL) - Body ground	Turn signal switch OFF	10 kΩ or higher
E14-5 (EL) - Body ground	Turn signal switch in LH position	Below 1 Ω
E14-6 (ER) - Body ground	Turn signal switch OFF	10 kΩ or higher
E14-6 (ER) - Body ground	Turn signal switch in RH position	Below 1 Ω
E14-7 (E) - Body ground	Always	Below 1 Ω
E14-8 (HAZ) - Body ground	Hazard warning switch OFF	10 kΩ or higher

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Tester Connection	Condition	Specified Condition
E14-8 (HAZ) - Body ground	Hazard warning switch ON	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the turn signal flasher assembly connector.

(d) Measure the voltage according to the valve(s) in the table below.

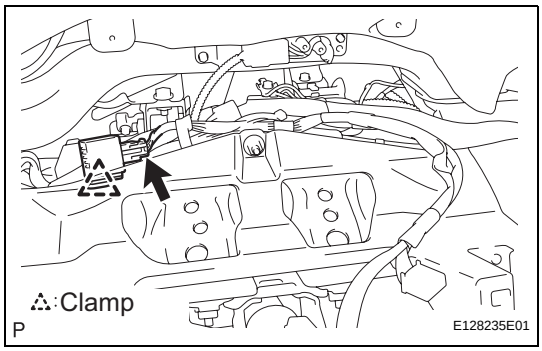
Standard voltage

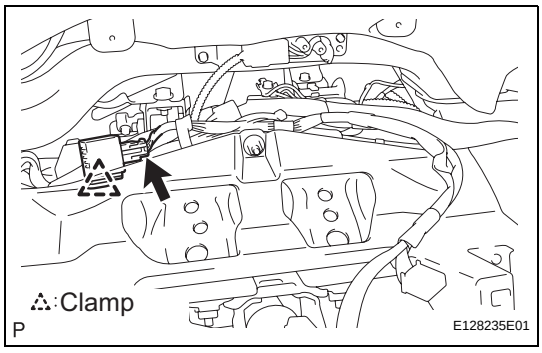
Tester Connection	Condition	Specified Condition
E14-2 (LR) - Body ground	Hazard warning switch OFF	Below 1 V
E14-2 (LR) - Body ground	Hazard warning switch ON	10 to 14 V (60 to 120 times per minute)
E14-2 (LR) - Body ground	Turn signal switch OFF	Below 1 V
E14-2 (LR) - Body ground	Ignition switch on (IG) and turn signal switch in RH position	10 to 14 V (60 to 120 times per minute)
E14-3 (LL)- Body ground	Hazard warning switch OFF	Below 1 V
E14-3 (LL) - Body ground	Hazard warning switch ON	10 to 14 V (60 to 120 times per minute)
E14-3 (LL) - Body ground	Turn signal switch OFF	Below 1 V
E14-3 (LL) - Body ground	Ignition switch on (IG) and turn signal switch in LH position	10 to 14 V (60 to 120 times per minute)
E14-5 (EL) - Body ground	Ignition switch on (IG) and turn signal switch OFF	10 to 14 V
E14-5 (EL) - Body ground	Ignition switch on (IG) and turn signal switch in LH position	Below 1 V
E14-6 (ER) - Body ground	Ignition switch on (IG) and turn signal switch OFF	10 to 14 V
E14-6 (ER) - Body ground	Ignition switch on (IG) and turn signal switch in RH position	Below 1 V
E14-8 (HAZ) - Body ground	Hazard warning switch OFF	10 to 14 V
E14-8 (HAZ) - Body ground	Hazard warning switch ON	Below 1 V

If the result is not as specified, replace the turn signal flasher assembly.

REMOVAL

1. **REMOVE FRONT DOOR SCUFF PLATE LH (See page IR-24)**
2. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH (See page IR-25)**
3. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH (See page IP-20)**
4. **REMOVE STEERING COLUMN COVER (See page SR-39)**
5. **REMOVE NO. 1 INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-22)**
6. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL (w/o Smart Key System) (See page IP-22)**
7. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL (w/ Smart Key System) (See page IP-22)**
8. **REMOVE INSTRUMENT CLUSTER FINISH PANEL (See page ME-65)**
9. **REMOVE COMBINATION METER ASSEMBLY (See page ME-65)**
10. **REMOVE TURN SIGNAL FLASHER ASSEMBLY**
    (a) Disconnect the connector.
    (b) Remove the clamp and the turn signal flasher assembly.

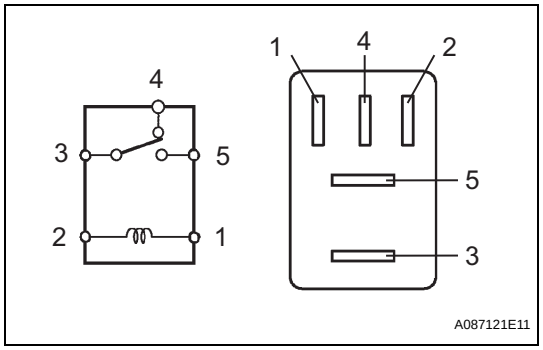




INSTALLATION

1. **INSTALL TURN SIGNAL FLASHER ASSEMBLY**
    (a) Install the clamp and the turn signal flasher assembly.
    (b) Connect the connector.
2. **INSTALL COMBINATION METER ASSEMBLY (See page ME-67)**
3. **INSTALL INSTRUMENT CLUSTER FINISH PANEL (See page ME-68)**
4. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL (w/o Smart Key System) (See page IP-57)**
5. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL (w/ Smart Key System) (See page IP-57)**
6. **INSTALL NO. 1 INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-57)**
7. **INSTALL STEERING COLUMN COVER (See page SR-50)**

8. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH (See page IP-58)**
9. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH (See page IR-54)**
10. **INSTALL FRONT DOOR SCUFF PLATE LH (See page IR-54)**



TAILLIGHT RELAY

ON-VEHICLE INSPECTION

1. INSPECT TAILLIGHT RELAY

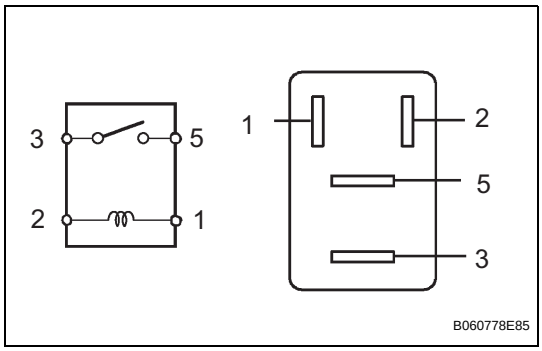
(a) Remove the taillight relay from the instrument panel J/B assembly.

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

Standard resistance

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

If the result is not as specified, replace the taillight relay.



FOG LIGHT RELAY

ON-VEHICLE INSPECTION

1. INSPECT FOG LIGHT RELAY

(a) Remove the fog light relay from the instrument panel J/B assembly.

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

Standard resistance

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

If the result is not as specified, replace the fog light relay.