

# LIGHTING SYSTEM

## PRECAUTION

### NOTICE:

Some systems need to be initialized after reconnecting the negative (-) battery terminal (See page [IN-33](#)).

#### 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 (FOR HALOGEN HEADLIGHT)

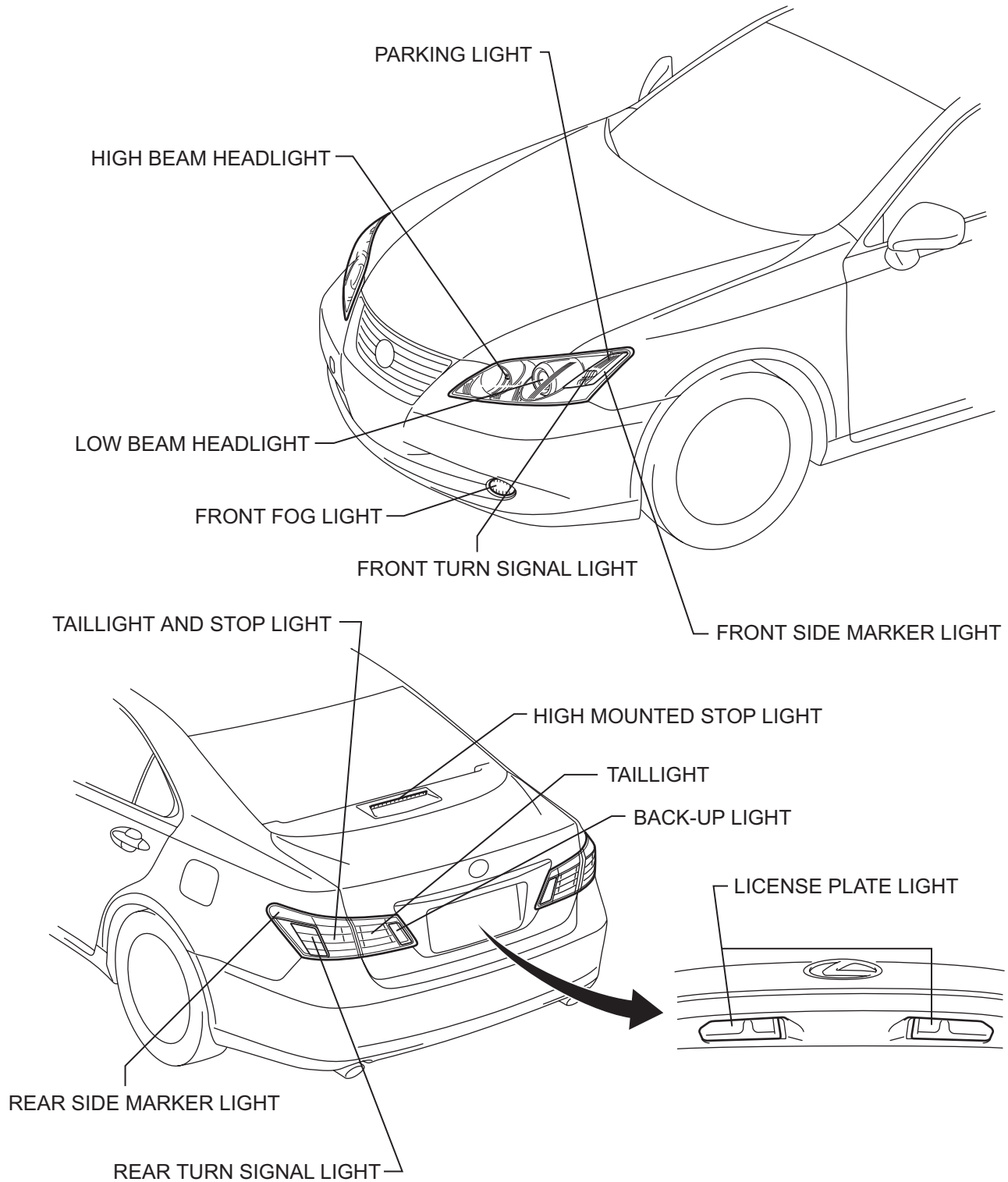
- (a) If even a thin film of oil is left on the surface of the halogen light, the bulb may be damaged because the light will burn at a higher temperature.
- (b) Handle any halogen light with great care. Dropping, hitting or damaging the bulb, in any way, may result in exploding and shattering because the internal pressure is high.
- (c) Always prepare a new bulb for immediate replacement. The lens may attract dust and moisture if removed from the vehicle for too long while replacing the bulb.
- (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.

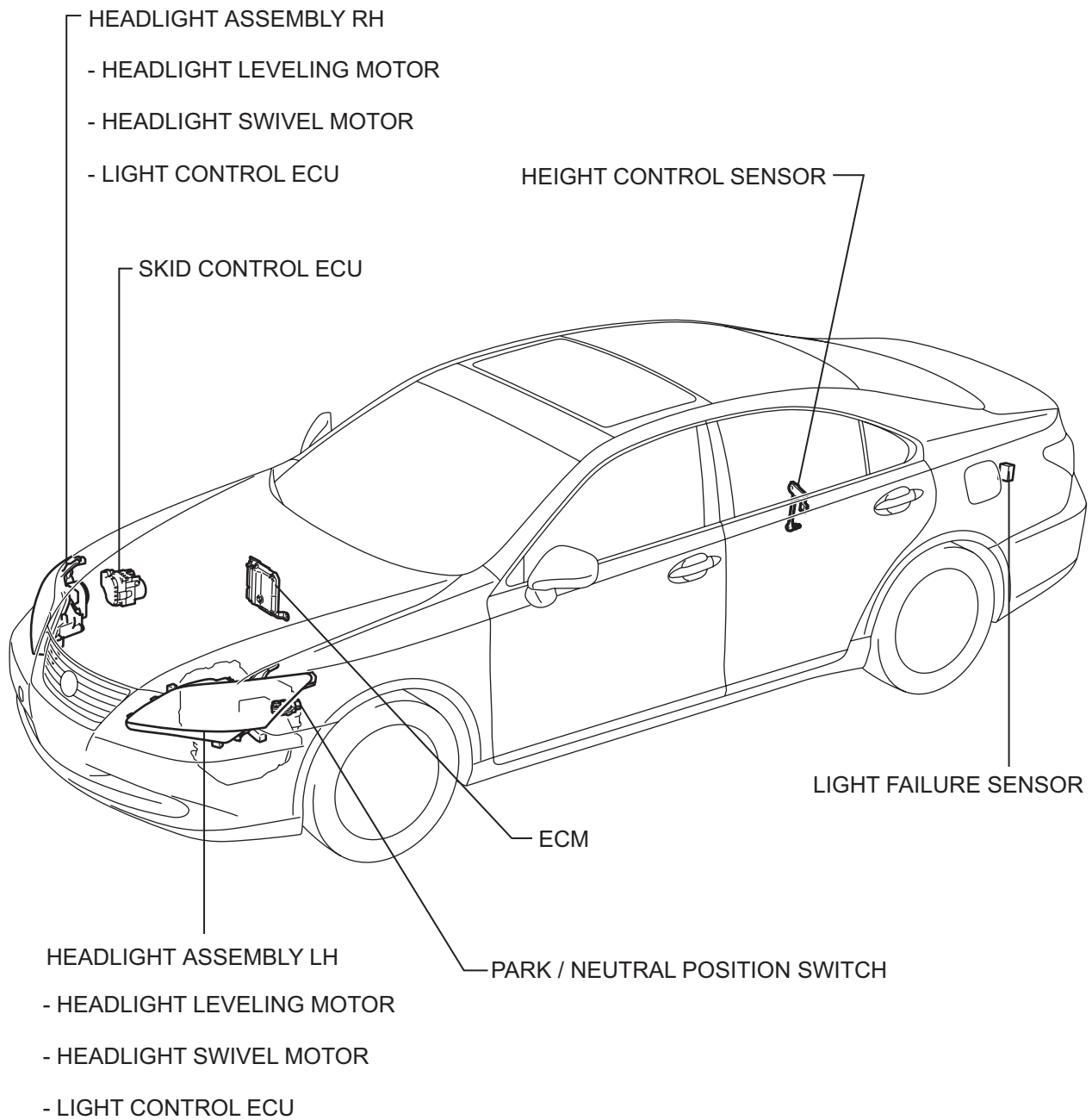
#### 3. PRECAUTION FOR HEADLIGHT BULB REPLACEMENT (FOR HID HEADLIGHT)

- (a) When any defects such as deformation, cracks, dents, chipping, etc. is identified on the discharge headlight (especially, on the light control ECU), replace it with a new one.
- (b) Even if the operation seems to be normal, the fail-safe function may be defective.
- (c) Since the bulb of the discharge headlight and halogen bulbs (for headlight or fog light) have pressurized gas inside and can easily be broken if scratched or dropped, special care should be taken. When handling the bulb, hold the plastic or metal part and do not touch the glass part with bare hands.
- (d) Never touch the high voltage socket of the discharge headlight with the light control switch in the HEAD position, as this could generate momentary high voltage of 20,000 V and lead to a serious accident.
- (e) Never connect a tester to the high voltage socket of the discharge headlight for measurement, as this may result in a serious accident because of high voltage.

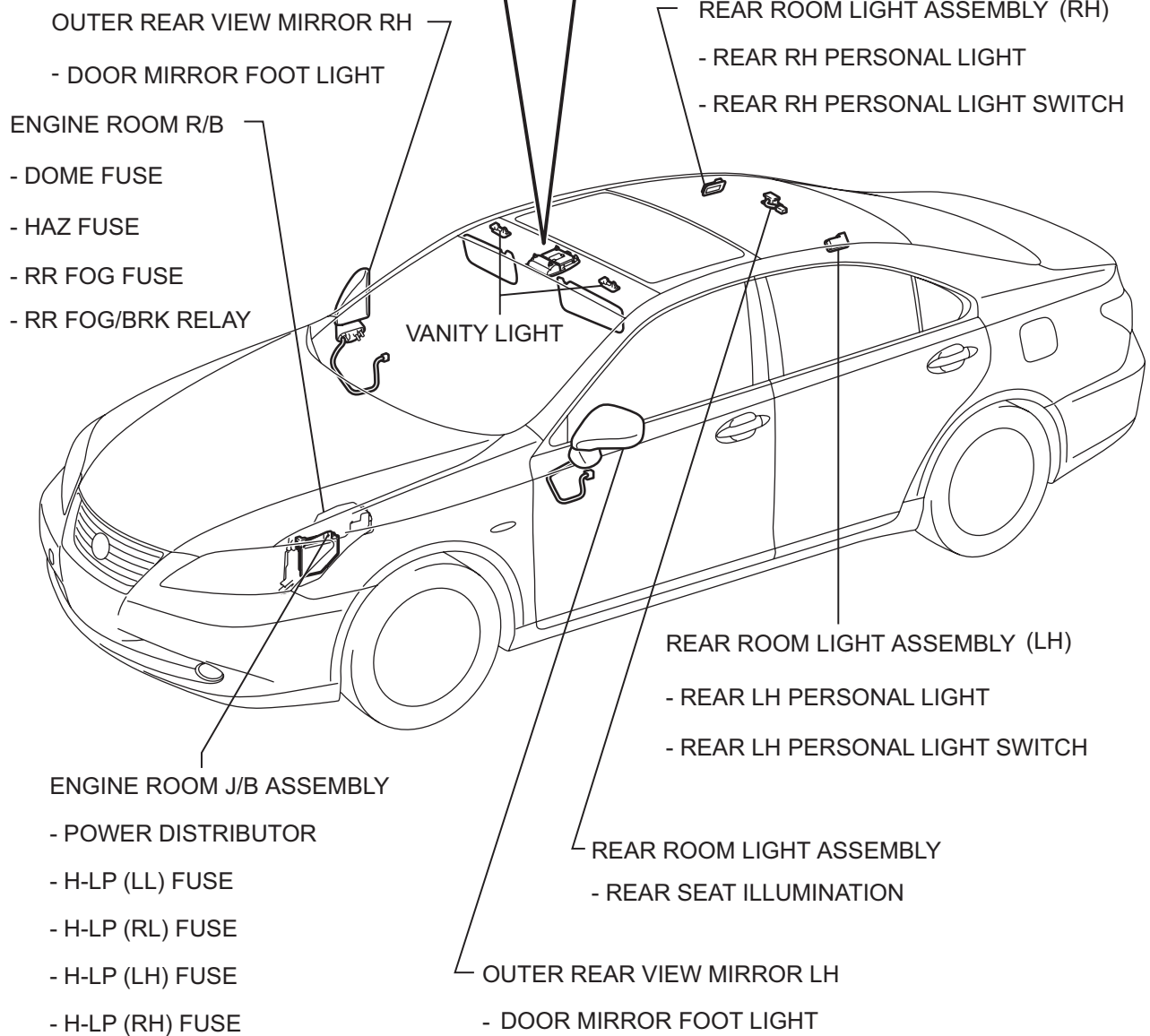
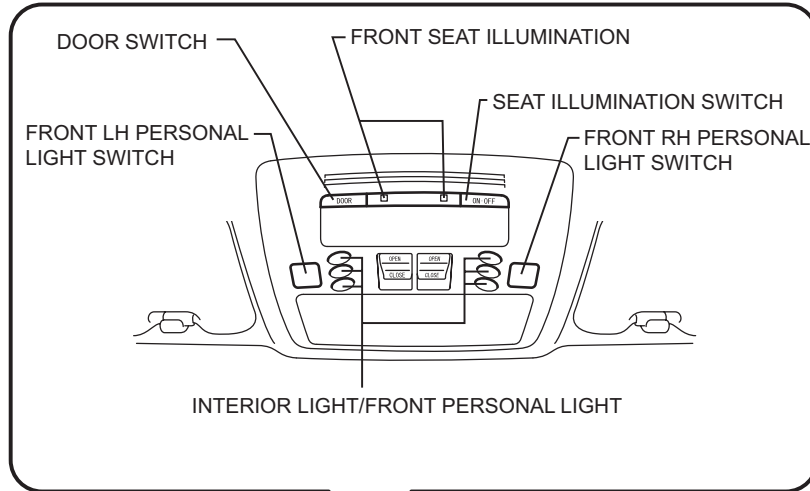
- (f) When servicing the discharge headlight, do not allow the discharge headlight to come into contact with water. Turn off the light control switch and disconnect the cable from the negative (-) battery terminal and the connector of the light control ECU in advance to avoid electric shocks.
- (g) When performing an operation related to the discharge headlight, operate it after assembling has been finished and never turn on the lights without a bulb installed.
- (h) Do not turn on the discharge headlight using a power source other than the vehicle battery.

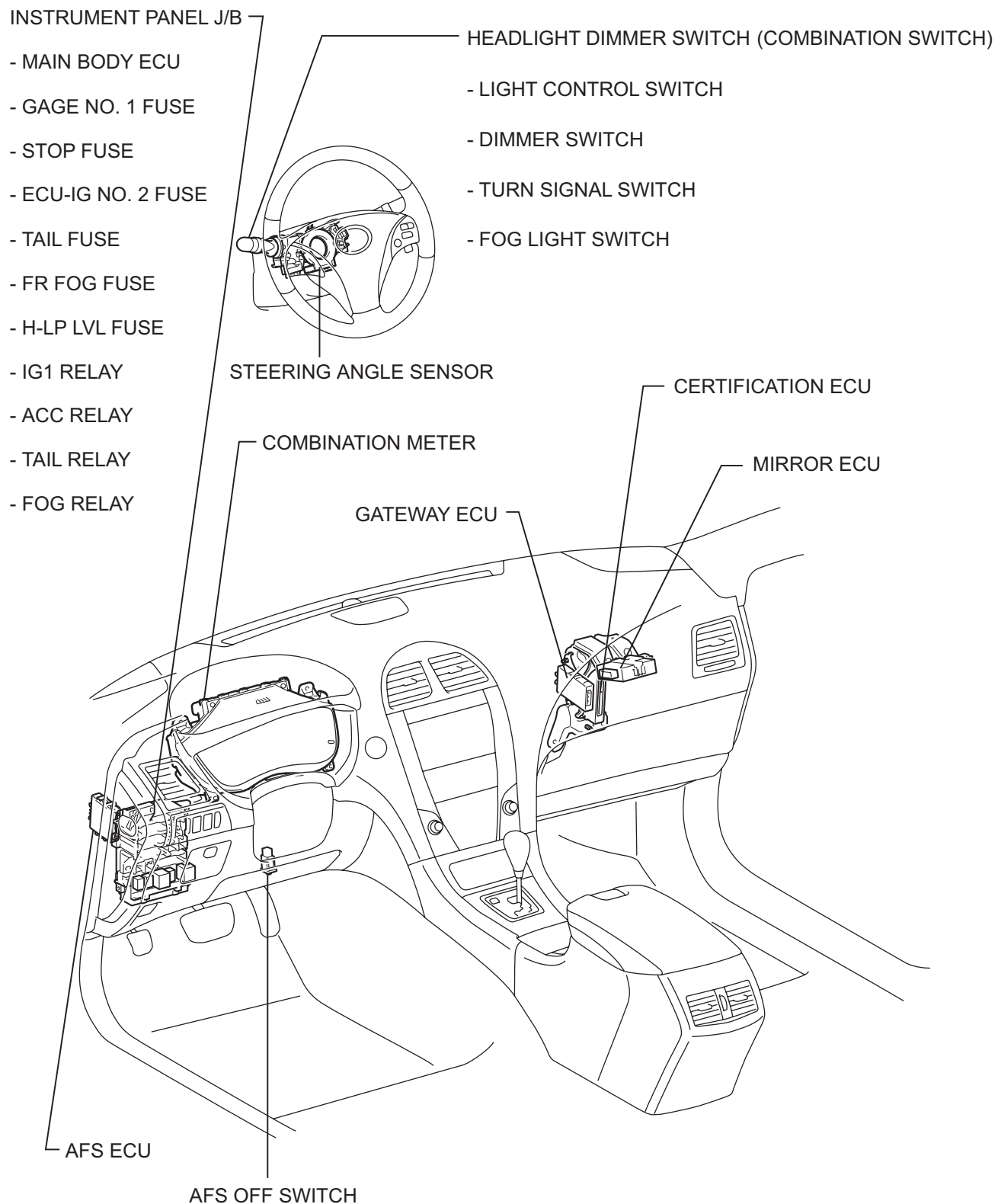
## PARTS LOCATION



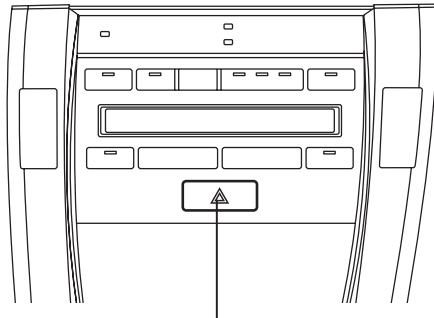


PERSONAL LIGHT ASSEMBLY

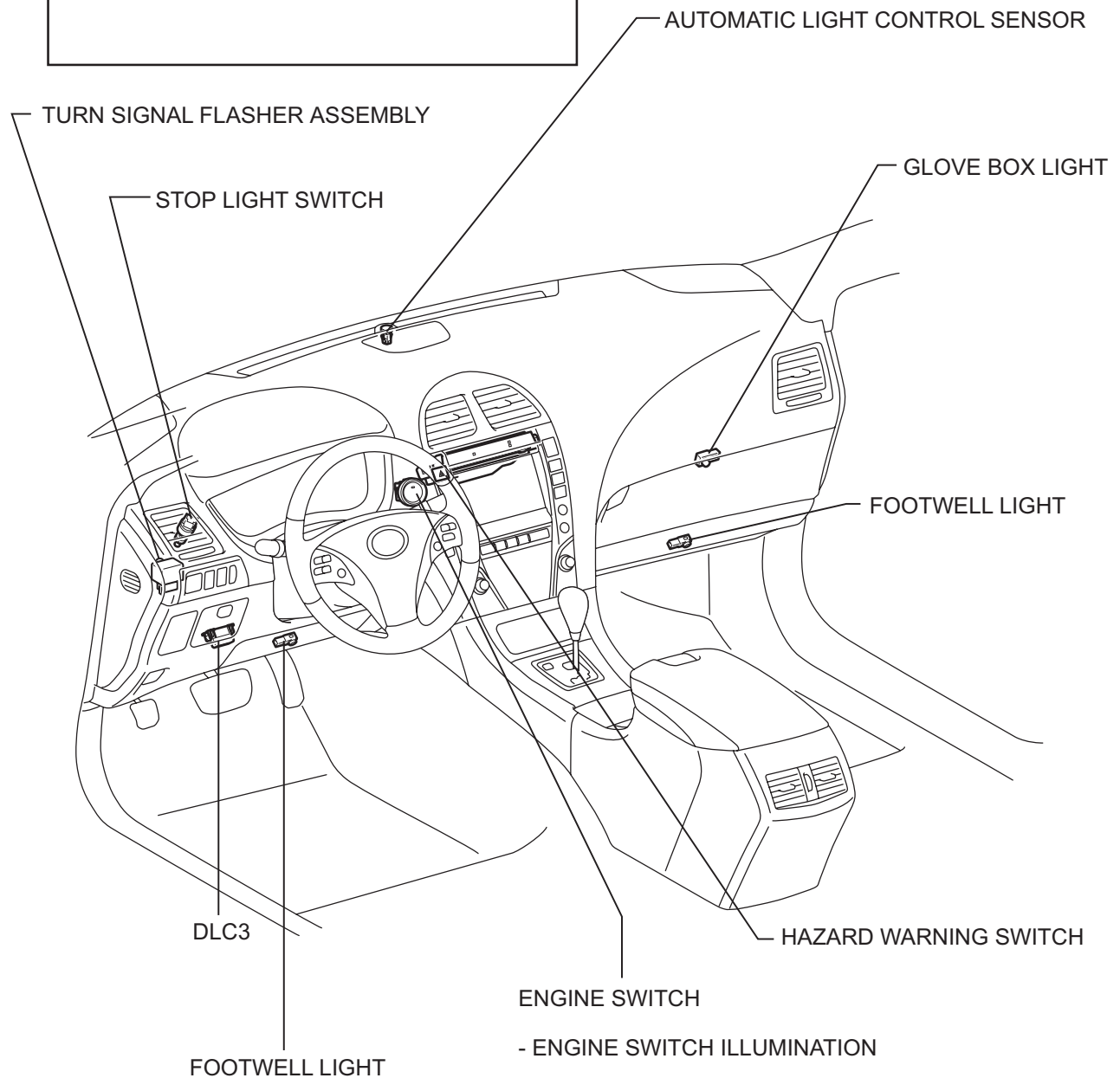


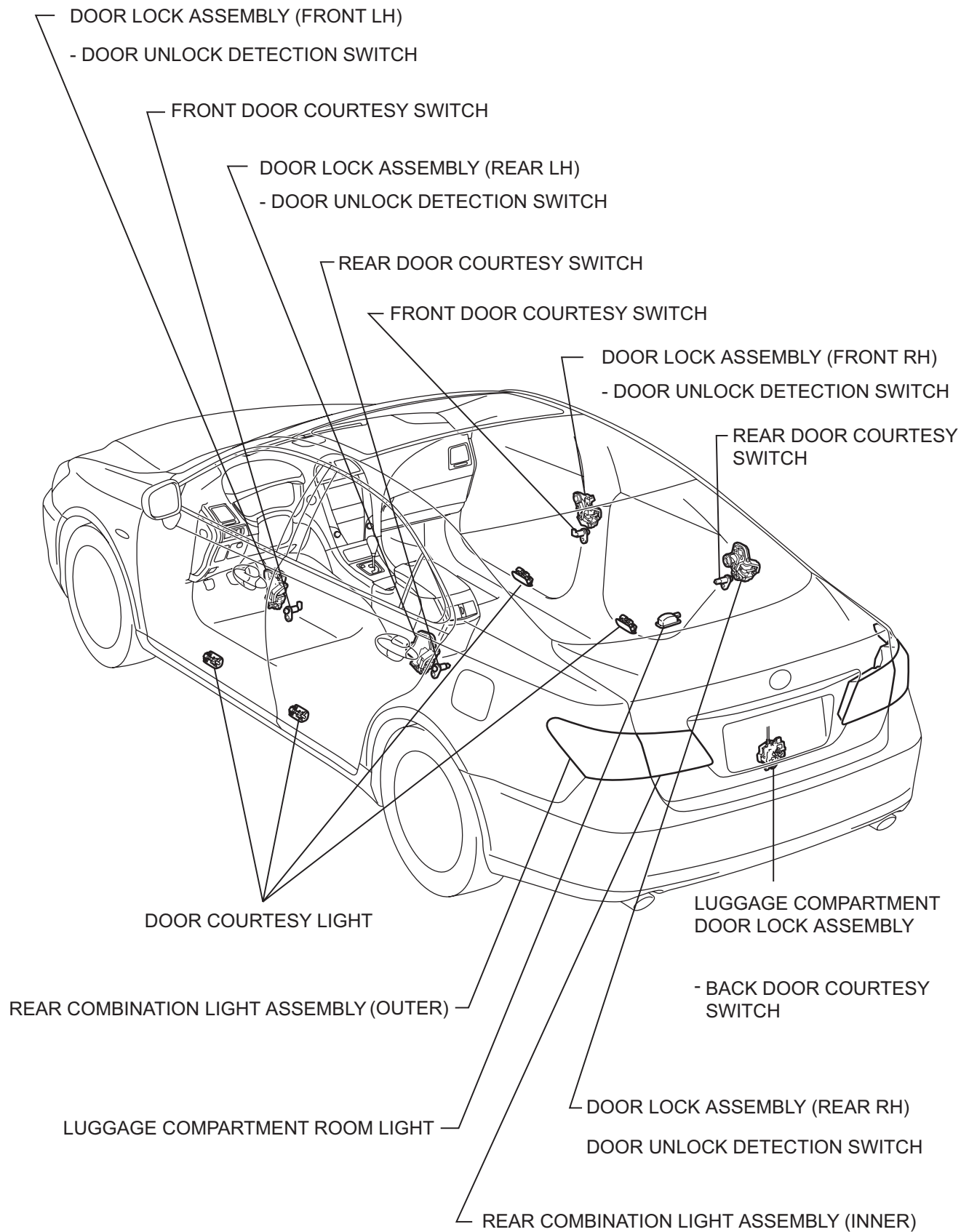


without Navigation System :

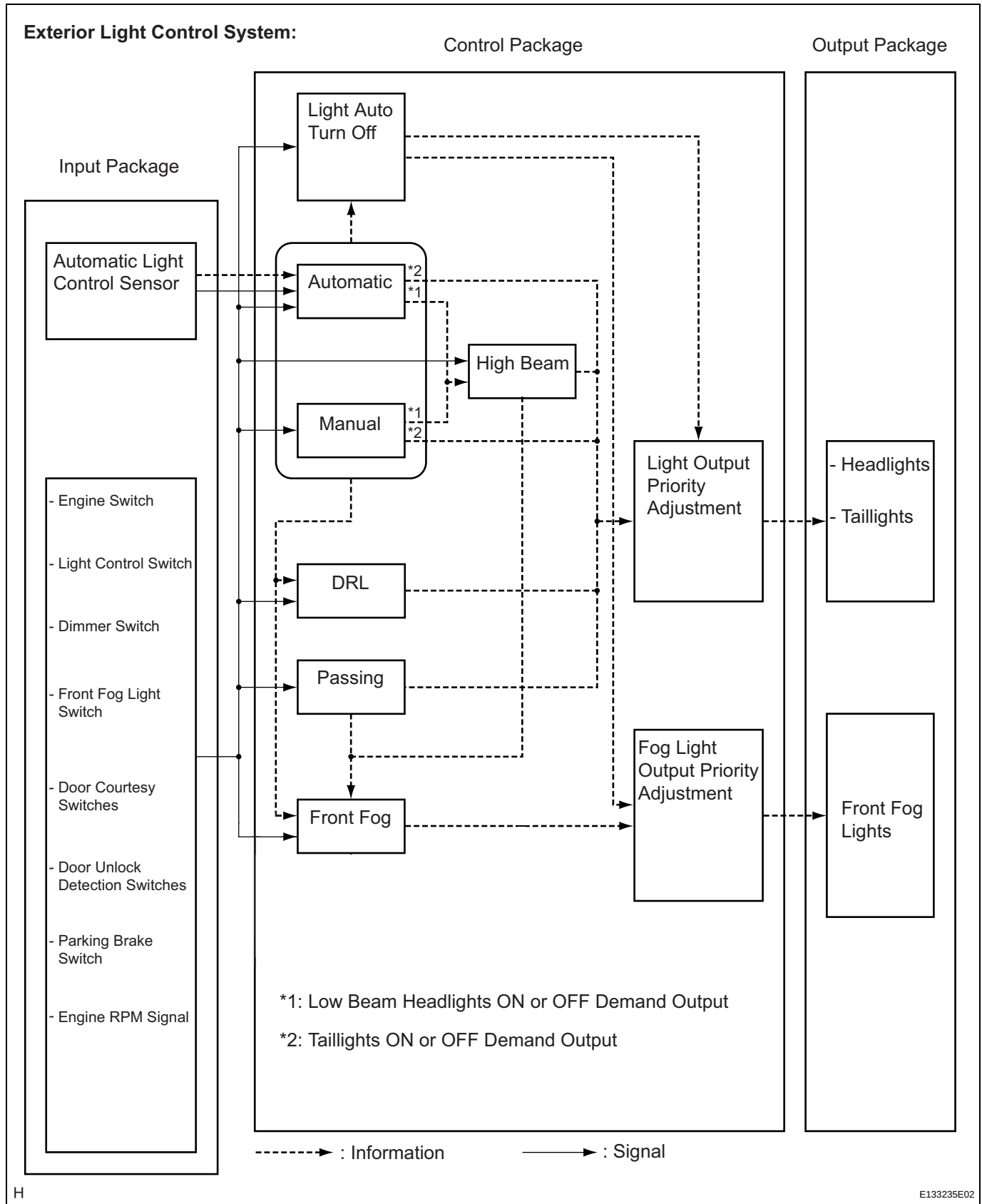


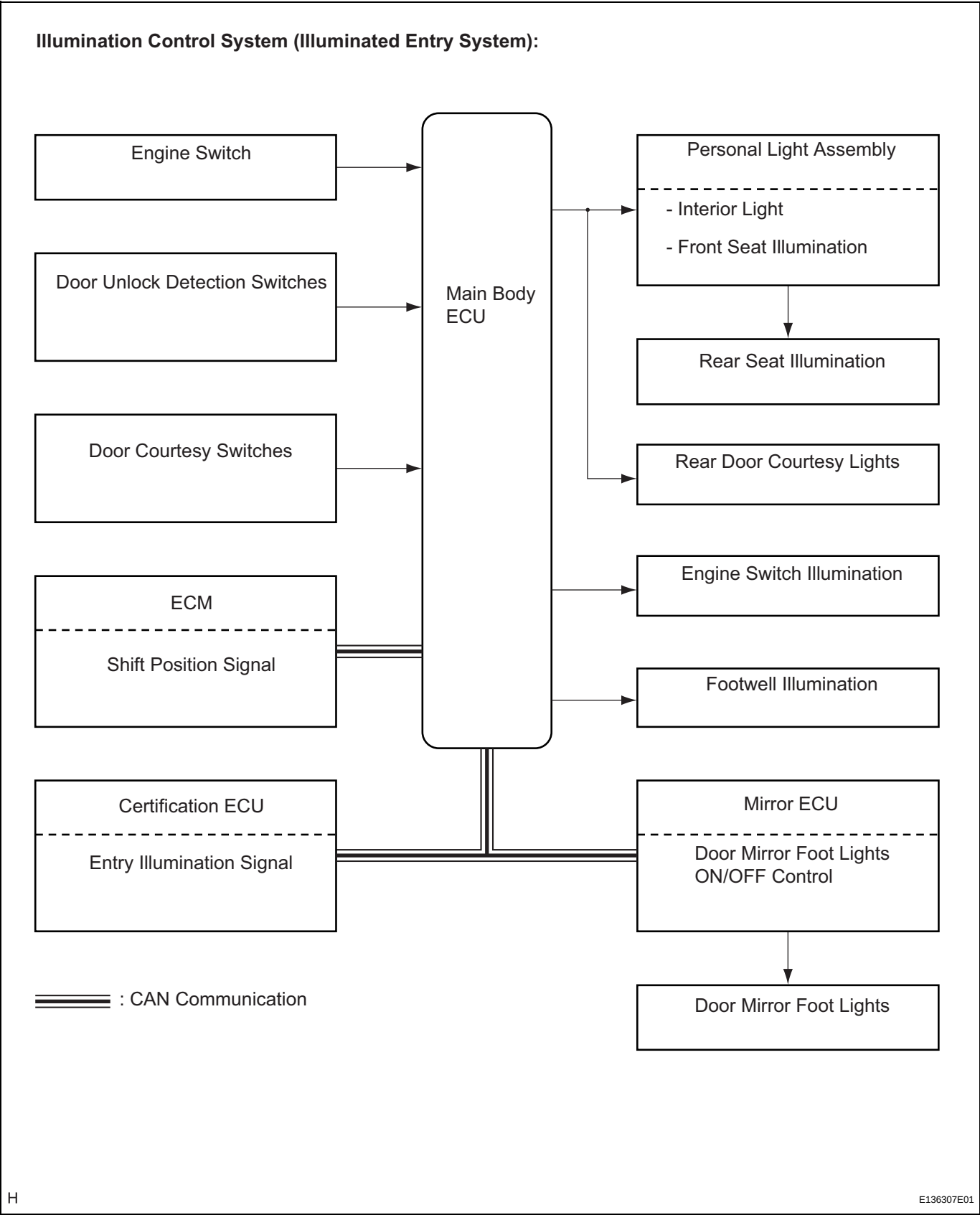
HAZARD WARNING SWITCH

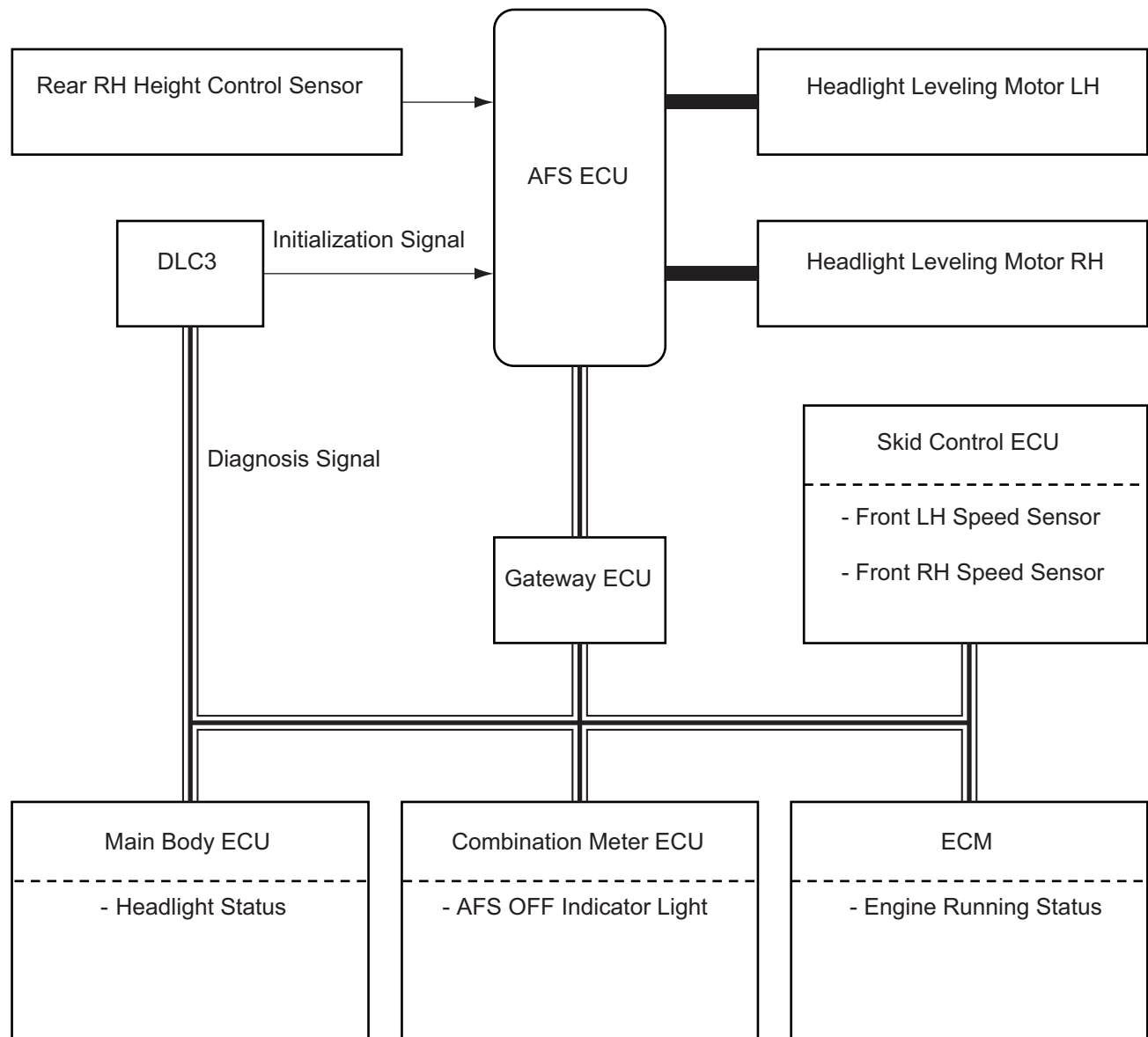




## SYSTEM DIAGRAM



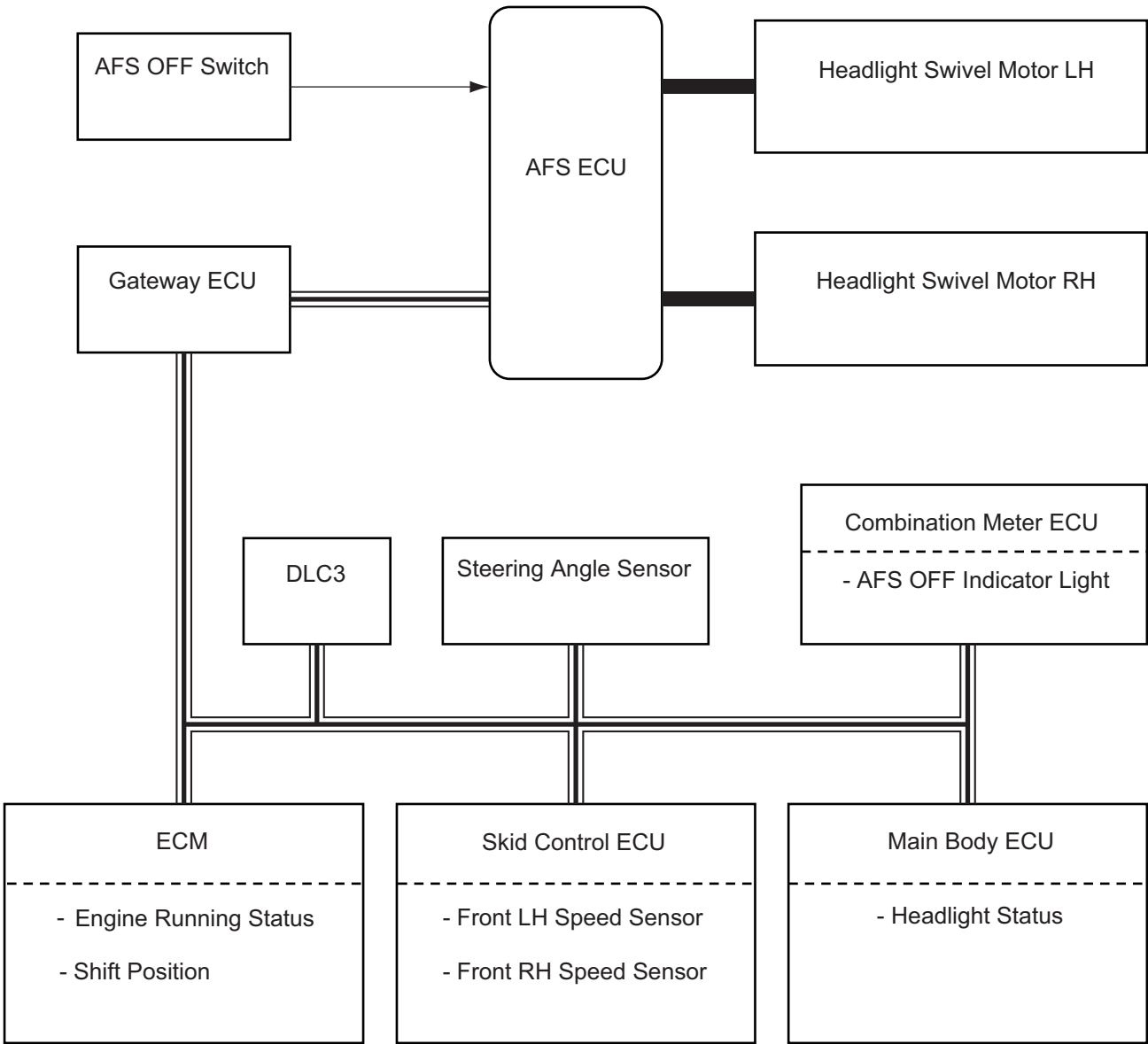


**Automatic Headlight Beam Level Control System:**

====: CAN Communication

====: LIN Communication

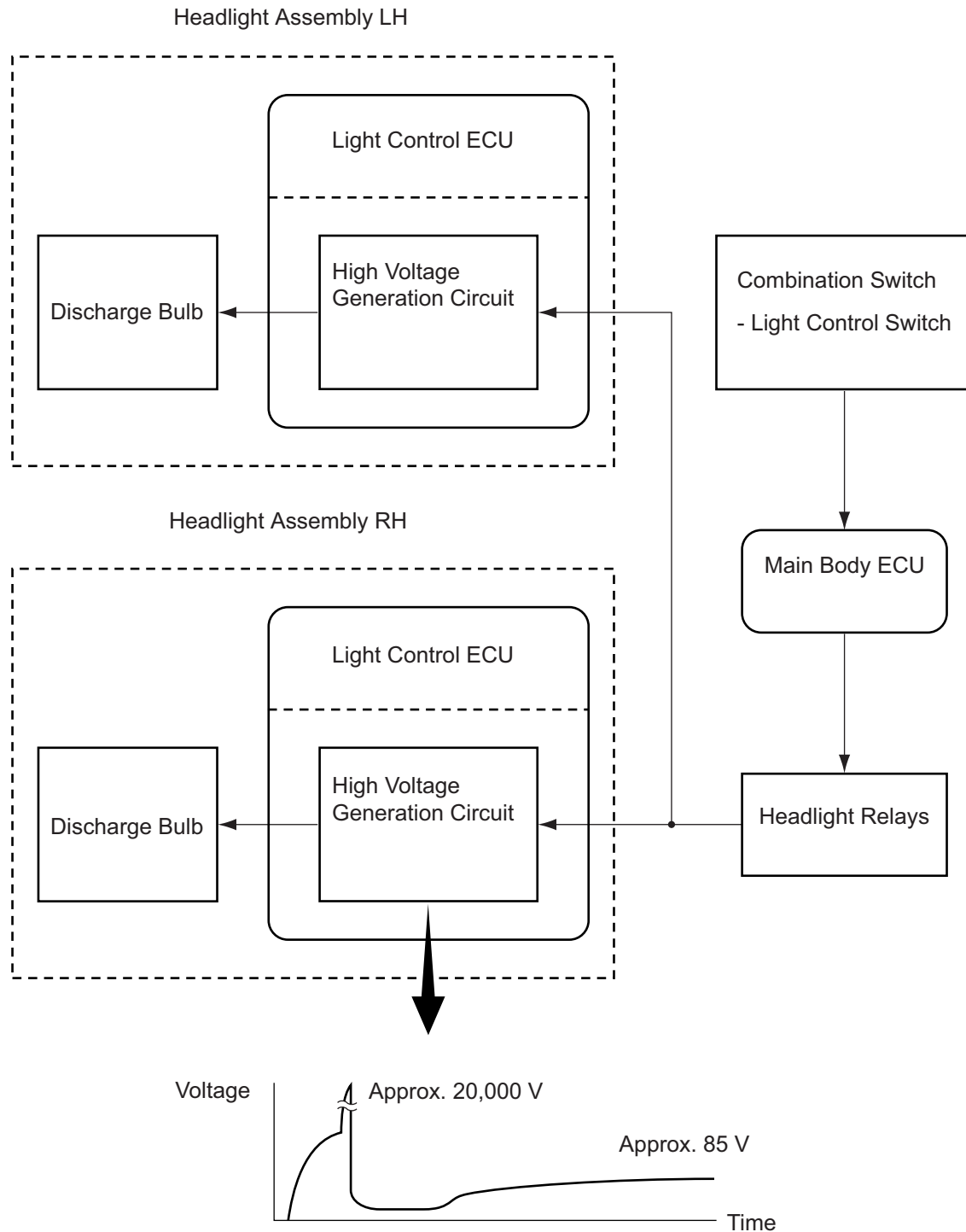
Intelligent AFS (Ataptive Front-Lighting System):



==== : CAN Communication

———— : LIN Communication

**HID Headlight System:**



## SYSTEM DESCRIPTION

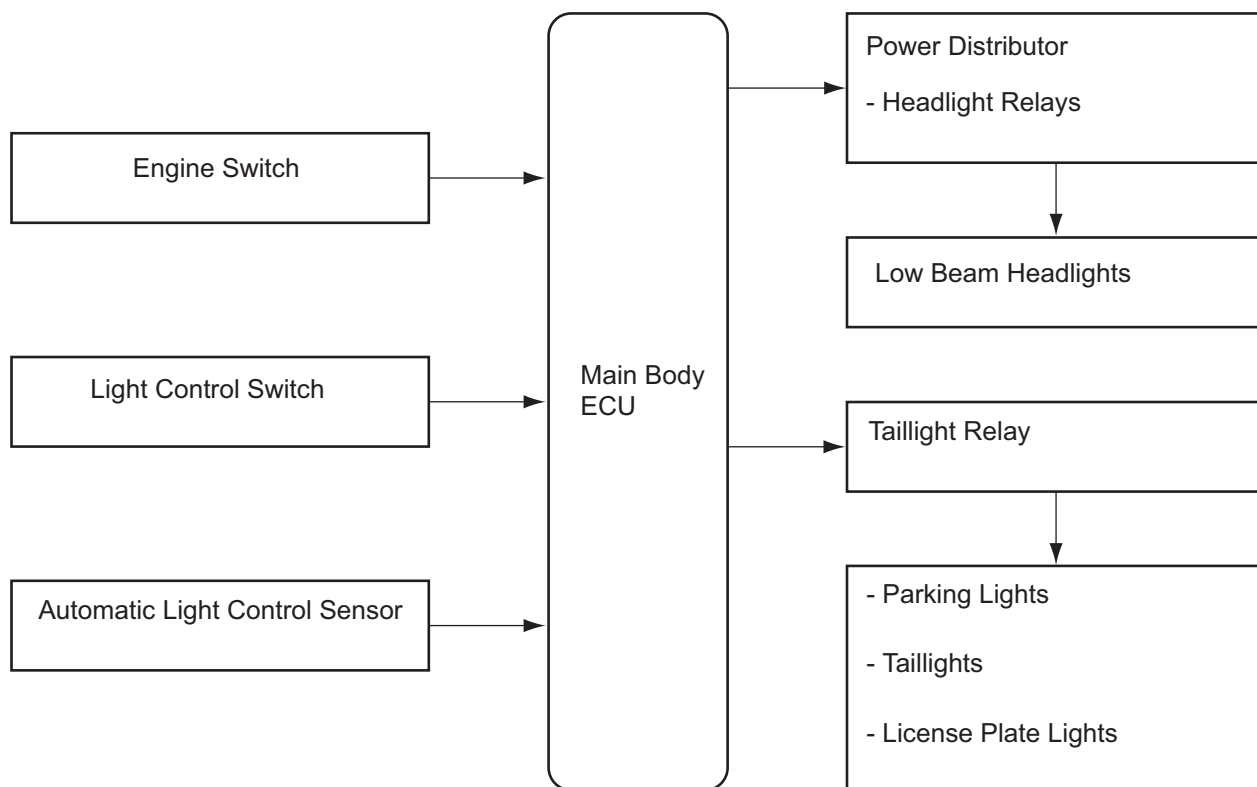
### 1. EXTERIOR LIGHT CONTROL SYSTEM

The exterior light control system has the following functions.

- Automatic Light Control
- Manual Light Control
- High Beam Control
- Passing Light Control
- Front Fog Light Control
- Daytime Running Light Control
- Light Auto Turn off Control

(a) Automatic Light Control

Diagram:



## (1) General

When the light control switch is in the AUTO position, the automatic light control sensor detects ambient light levels and outputs it to the main body ECU. The main body ECU controls the low beam headlights and taillights (parking lights, taillights and license plate lights) according to the signal. By this function, at night, when entering a tunnel etc, the taillights and low beam headlights come on automatically. If the timing of turning the lights ON/OFF does not meet the user's preferences, the sensitivity of the automatic light control system can be changed using the intelligent tester.

## HINT:

The main body ECU controls the low beam headlights and taillights concurrently, and turns the taillights and low beam headlights on or off at the same time according to the ambient light levels.

## (2) Fail-Safe

If the main body ECU detects a malfunction in the automatic light control sensor, the main body ECU effects fail-safe control to prohibit the automatic light control. If the headlights or taillights are on, the lights will remain on until the light control switch is turned off.

## (b) Manual Light Control

## (1) General

The function is similar to the automatic light control, except the function is controlled according to the driver's inputs.

- (2) When the light control switch is turned to the TAIL position, the main body ECU turns the taillights on. When the light control switch is turned to the HEAD position, the main body ECU turns the low beam headlights and taillights on.

## (c) High Beam Control

## (1) General

High beam control functions to illuminate farther ahead than normal.

- (2) When either of the following conditions is met, the high beam headlights come on.
- Dimmer switch in HIGH position and light control switch in HEAD position.
  - Dimmer switch in HIGH position, light control switch in AUTO position, and low beam headlights are on.

## (d) Passing Light Control

## (1) General

Passing light control functions to illuminate the high beam headlights in order to allow an oncoming vehicle to become aware of the vehicle's presence while driving with poor visibility.

- (2) When the dimmer switch is turned to the HIGH FLASH position, the high beam headlights come on.

## (e) Front Fog Light Control

## (1) General

The front fog light control functions to maintain visibility in the road ahead of the vehicle while driving with poor visibility, such as when driving in a dense fog.

- (2) When all of the following conditions are met, the front fog lights come on.

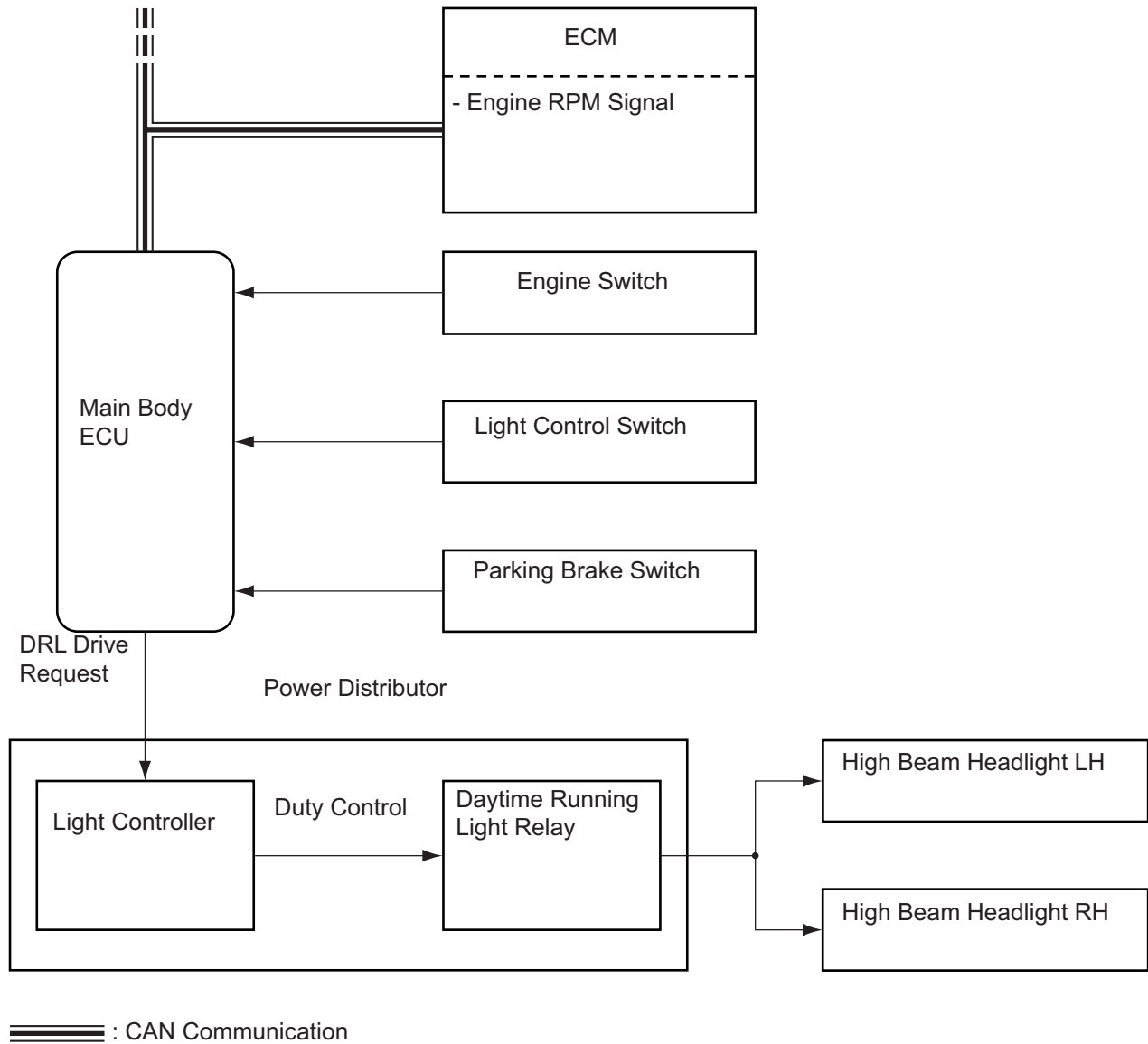
- Low beam headlights are ON.
- Front fog light switch is ON.
- High beam headlights are OFF.

- (3) When any of the following conditions is met, the front fog lights turn off.

- Front fog light switch is OFF.
- Low beam headlights are OFF.
- High beam headlights are ON.

## (f) Daytime Running Light Control

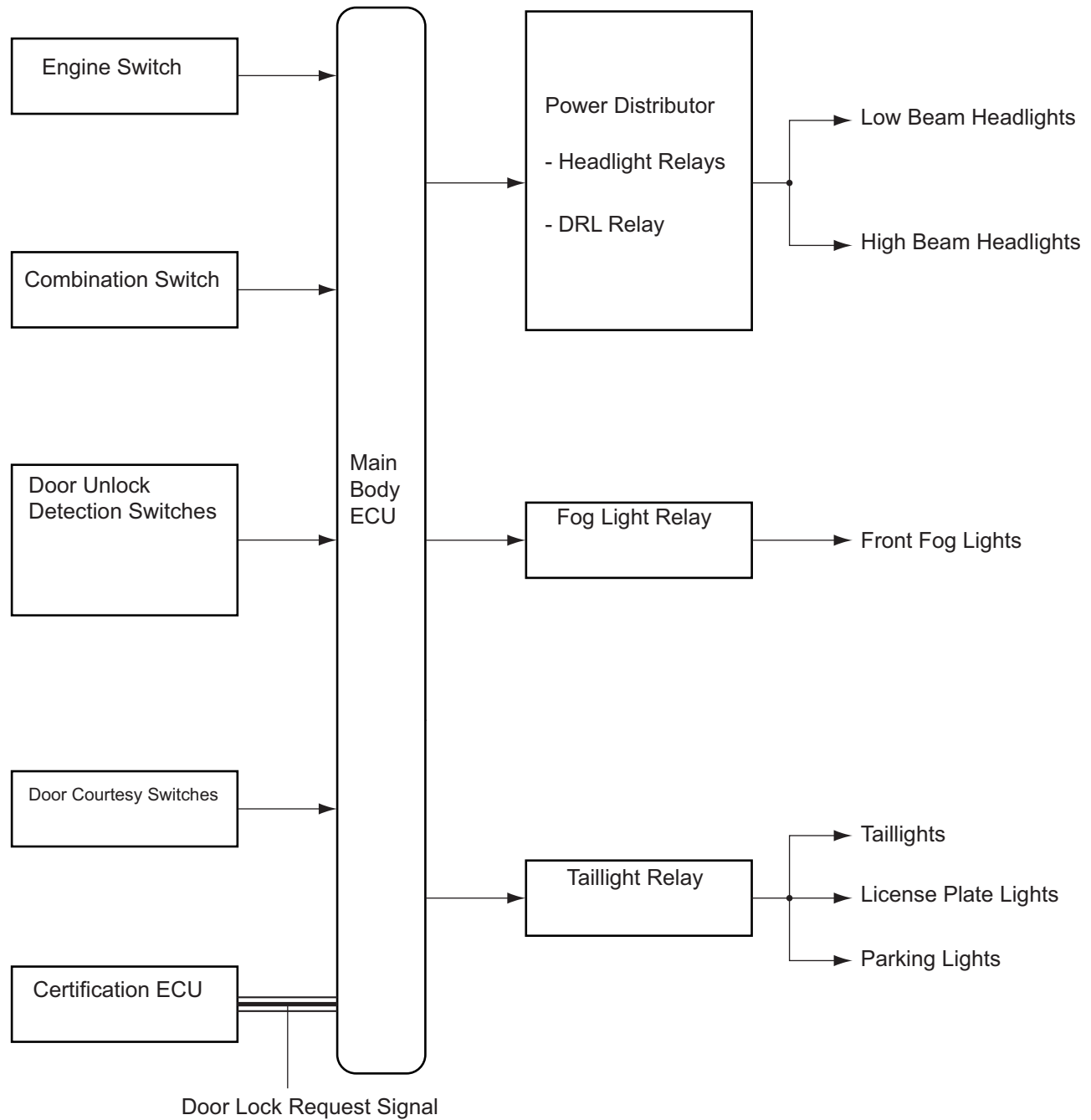
Diagram:



- (1) This function is designed to automatically illuminate the headlights (dimmed HI beams), during the daytime to make the car more visible to other vehicles.
- The main body ECU and power distributor control this system. The main body ECU transmits a turn ON signal to the power distributor and the power distributor illuminates the HI beams using a duty control.
  - This system is enabled when the conditions given below are met:
    - Engine switch is on (IG).
    - Engine is running.
    - Light control switch is in OFF, TAIL or AUTO position (if headlight-on control is not being performed by the automatic light control).
    - Parking brake switch is OFF.

## (g) Auto Turn off Control

Diagram:



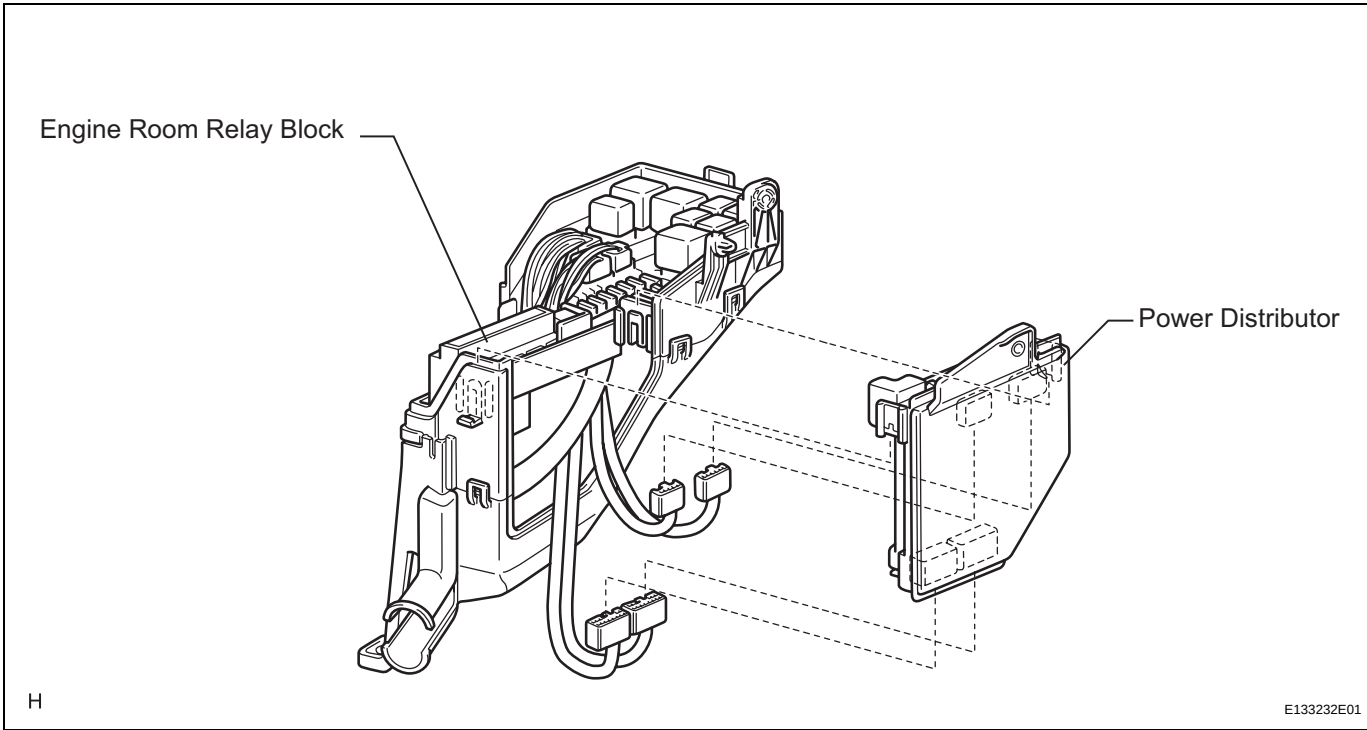
**(1) General**

- The light auto turn-off system is used to prevent the driver from leaving the vehicle with the exterior lights (headlights, fog lights, parking lights, taillights, or license plate lights) ON.
- If the engine switch is turned off and any door is opened and all doors (including the luggage compartment door) are closed with exterior lights are ON (low beam headlights are ON), this system turns them OFF approximately 30 seconds after door closure. However, with all the doors locked when the lock button on the wireless remote control is pushed, the exterior lights are turned OFF immediately.
- When the engine switch is turned off and the driver side door is opened with the exterior lights ON (low beam headlights are OFF), this system turns them OFF immediately.

**2. POWER DISTRIBUTOR****(a) General**

- The power distributor is built into the engine room relay block, and uses a small mechanical relay and semiconductor relay for a compact and lightweight design.
- The power distributor has a headlight control function. This function dims the high beam headlights in accordance with operation signals from the main body ECU while the daytime running light system is operating.
- The power distributor dims the high beam headlights using a duty control.

- When a short circuit occurs between the power distributor and high beam headlight bulb, a fail-safe function operates to stop the DRL relay operation.



(b) The components of the power distributor are shown below.

| Component           | Relay                                                                                                                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mechanical Relay    | <ul style="list-style-type: none"><li>• Horn Relay</li><li>• A/F Relay</li><li>• Security Horn Relay</li><li>• EFI Relay</li><li>• Circuit Opening Relay</li><li>• Headlight Relay RH (*1)</li><li>• Headlight Relay LH (*1)</li></ul> |
| Semiconductor Relay | <ul style="list-style-type: none"><li>• Daytime Running Light Relay</li><li>• Headlight Relay RH (*2)</li><li>• Headlight Relay LH (*2)</li></ul>                                                                                      |

\*1: for halogen headlight

\*2: for HID headlight

3. HID HEADLIGHT SYSTEM

(a) General

The HID (High Intensity Discharge) headlight system uses a discharge bulb as its light source for the Lo beam. Discharge bulbs are superior to halogen bulbs.

- Discharge bulbs have the following features.
  - The light emitted by the bulb is close in color to sunlight. The light shines ahead over a broader area and further forward, increasing the area visible to the driver.
  - Less power is consumed.
- This system consists of discharge bulbs and light control ECUs.

- The light control ECUs transform the voltage that is input from the battery to a high voltage of up to 20,000 V and applies it to the discharge bulbs in order to illuminate them.
- A fail-safe function is provided as a countermeasure against the high voltage that is generated in case that a problem occurs in the headlight system.

#### 4. ILLUMINATED ENTRY SYSTEM

##### (a) General

- The illuminated entry system controls 6 kinds of lights: seat illumination (front and rear), interior light, rear door courtesy lights, engine switch illumination, footwell illumination and door mirror foot lights.
- The illuminated entry system controls the interior light when the personal light switch is OFF and the DOOR switch is ON.
- The illuminated entry system controls the seat illumination when the seat illumination switch is OFF and the DOOR switch is ON.

##### (b) Interior Light Control

- The interior light control (interior light, seat illumination, rear door courtesy lights, and engine switch illumination) consists primarily of the fade-in/fade-out function and timer illumination function.
- This function provides convenience when getting in or out of the vehicle at night.
- This function is controlled by the main body ECU. The operation and condition of this control are described below.

| Operation                                                  | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in                                                    | When any of the following conditions is met, the interior light, front seat illumination, rear seat illumination, rear door courtesy lights, and engine switch illumination fade in. <ul style="list-style-type: none"> <li>• The key enters any actuation area around the doors when the engine switch is off and all doors are closed.</li> <li>• Any door is opened.</li> <li>• Any door is unlocked when the engine switch is off and all doors are closed.</li> <li>• The engine switch is turned from on (ACC) to off when all doors are closed.</li> </ul> |
| Fade out immediately                                       | When either of the following conditions is met, the interior light, front seat illumination, rear seat illumination, rear door courtesy lights, and engine switch illumination fade out. <ul style="list-style-type: none"> <li>• The engine switch is turned from off to on (ACC or IG) when all doors are closed.</li> <li>• All doors are locked when the engine switch is off.</li> </ul>                                                                                                                                                                     |
| Illuminate for approximately 15 seconds, and then fade out | All doors are closed when the engine switch is off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

##### (c) Footwell Illumination Control

- The footwell illumination control consists primarily of the fade-in/fade-out function, timer illumination function, and dimmer function.
- This function provides convenience when getting in or out of the vehicle as well as creates a comfortable mood in the cabin at night.
- This function is controlled by the main body ECU. The operation and condition of this control are described below.

| Operation                                                  | Condition                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in                                                    | When any of the following conditions is met, the footwell illumination fades in. <ul style="list-style-type: none"> <li>Any door is opened.</li> <li>Any door is unlocked when the engine switch is off and all doors are closed.</li> <li>The engine switch is turned from off to on (IG) when all doors are closed.</li> </ul>                                                                                 |
| Fade out immediately                                       | When either of the following conditions is met, the footwell illumination fades out immediately. <ul style="list-style-type: none"> <li>All doors are closed when the engine switch is off and all doors are locked.</li> <li>All doors are locked when the engine switch is off.</li> </ul>                                                                                                                     |
| Illuminate for approximately 15 seconds, and then fade out | When either of the following conditions is met, the footwell illumination illuminates for approximately 15 seconds and then fade out. <ul style="list-style-type: none"> <li>The engine switch is turned from on (IG) to off when all door are closed.</li> <li>All doors are closed when the engine switch is off.</li> </ul>                                                                                   |
| Dim                                                        | When either of the following conditions is met, the footwell illumination dims. <ul style="list-style-type: none"> <li>The shift lever is adjusted to any position other than P when the footwell light is on, the engine switch is on (IG), and the shift lever is in the P position.</li> <li>The engine switch is turned from off to on (IG) when the shift lever is in any position other than P.</li> </ul> |

## (d) Door Mirror Foot Light Control

- The foot light control consists primarily of the fade-in/fade-out function and timer illumination function.
- This control is controlled by the mirror ECU. The operation and condition of this control are described below.

| Operation                   | Condition                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in (During 15 seconds) | When any of the following conditions is met, the door mirror foot light fades in. <ul style="list-style-type: none"> <li>The key enters any actuation area around the doors.</li> <li>The driver or front passenger side door is opened when the footwell illumination is on.</li> <li>Any door is unlocked when the shift lever is in the P position.</li> </ul> |
| Fade out                    | When either of the following conditions is met, the door mirror foot light fades out. <ul style="list-style-type: none"> <li>The shift lever is put into any position other than P when the engine switch is on (IG) and the footwell illumination is on.</li> <li>All doors are locked when the footwell illumination is on.</li> </ul>                          |

## (e) Battery Saving Control

## (1) General

If the vehicle is left with the doors open for a long time, this function will operate to automatically turn off the lights illuminated by the illuminated entry function (interior light control and footwell illumination control).

## (2) Battery saving control is controlled by the main body ECU. When the following two conditions have been met, the main body ECU turns off the lights.

- The key is not in the actuation area.
- There is no change in the condition of the doors for 20 minutes.

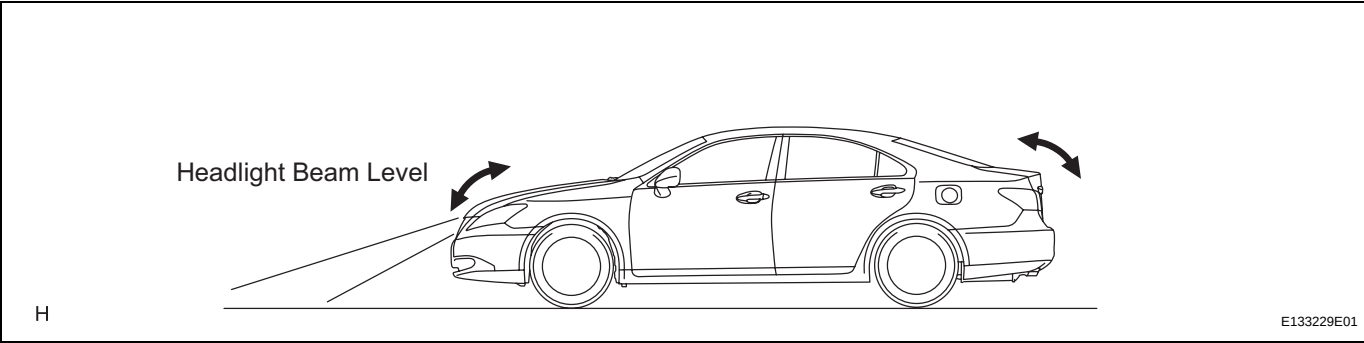
## HINT:

If the key is in the actuation area or any of the doors is opened, the count of the battery save times will be cleared.

5. AUTOMATIC HEADLIGHT BEAM LEVEL CONTROL SYSTEM

(a) General

- When the headlights are on, the automatic headlight beam level control system operates the headlight leveling motor in accordance with movement of the vehicle.
- The automatic headlight beam level control system mainly consists of the AFS ECU, rear height control sensor, and two headlight leveling motors. The AFS ECU controls the system.
- The AFS ECU calculates changes in the vehicle posture based on signals from the rear RH height control sensor and each ECU.
- The ECU then controls the headlight leveling motor based on this information, in order to change the headlight reflector angle.

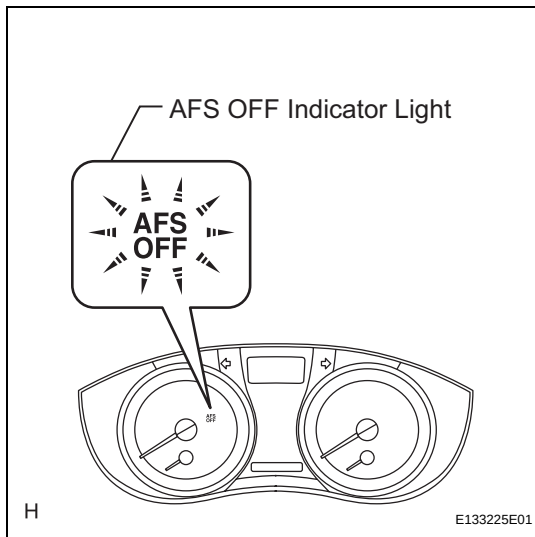


(b) Function of Main Components

| Component                     |                         | Outline                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AFS ECU                       |                         | <ul style="list-style-type: none"><li>• Calculates changes in the vehicle posture based on the signals from the height control sensor and each ECU.</li><li>• Outputs a control signal to the headlight leveling motor, based on the detected value.</li><li>• Provides initial set control, fail-safe function, and diagnosis function.</li></ul> |
| Headlight Leveling Motor      |                         | <ul style="list-style-type: none"><li>• Based on the signals received from the AFS ECU, the motors move the reflectors in the headlights to vary the Lo beam.</li><li>• Uses a step motor to precisely regulate the angle of the reflectors.</li></ul>                                                                                             |
| Rear RH Height Control Sensor |                         | Detects the height of the rear of the vehicle.                                                                                                                                                                                                                                                                                                     |
| Skid Control ECU              |                         | Transmits a speed sensor signal (Front LH and RH) to the AFS ECU.                                                                                                                                                                                                                                                                                  |
| ECM                           |                         | Transmits an engine running status signal to the AFS ECU.                                                                                                                                                                                                                                                                                          |
| Main Body ECU                 |                         | Transmits a headlight status signal.                                                                                                                                                                                                                                                                                                               |
| Combination Meter (Meter ECU) | AFS OFF Indicator Light | When the system malfunctions, the meter ECU alerts the driver by flashing the AFS OFF indicator light in accordance with the signal from the AFS ECU.                                                                                                                                                                                              |

(c) Initial Set Control

When the engine is started, the AFS ECU drives the headlight leveling motor and moves the headlight reflector to the lower limit position and returns it to the proper position. The AFS ECU thus assesses the position of the headlight for reference control.



(d) Fail-Safe

If the AFS ECU detects a malfunction in the automatic headlight beam level control system, the AFS ECU effects fail-safe control. At the same time, the meter ECU flashes the AFS OFF indicator light in order to inform the driver of the problem.

**NOTICE:**

**Initialize the AFS ECU after the vehicle height changes due to replacement of the suspension, or after performing such operation as removal and reinstallation or replacement of the rear height control sensor sub-assembly or AFS ECU.**

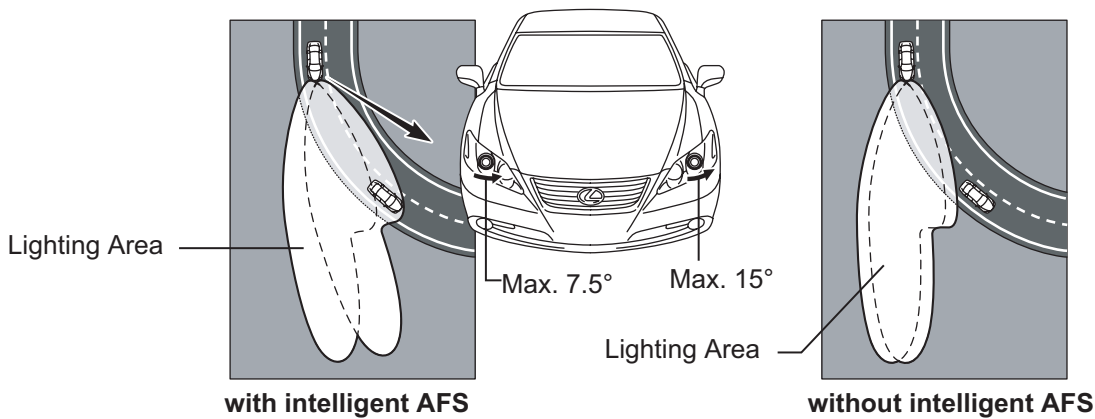
**6. INTELLIGENT AFS (Adaptive Front-lighting System)**

(a) General

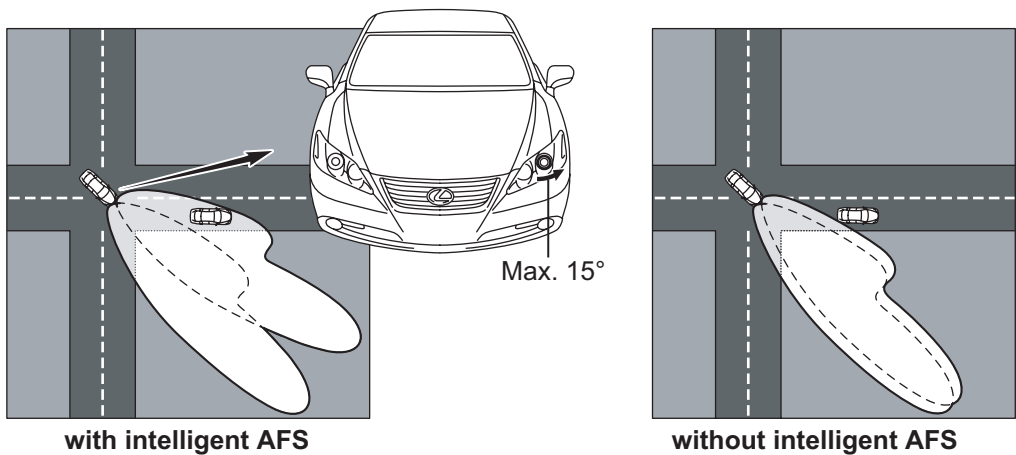
- An intelligent AFS (Adaptive Front-lighting System) is used in order to ensure a wide Lo beam lighting area and realize excellent visibility during turns by moving the Lo beam.

- The intelligent AFS uses medium-to-high speed control and low speed control. In the medium-to-high speed control, the system calculates the target lighting angle based on the steering angle and vehicle speed and changes the swivel angle of the low-beam headlights individually. During the low speed control, the system calculates the target lighting angle based on the steering angle and changes the swivel angle of the low-beam headlight on the side facing into the turn.

Medium-to-High Speed Control:



Low Speed Control:



H

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(b) Function of Main Components

| Component              | Outline                                                                                                                                                                                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AFS ECU                | Receives various signals, calculates the target lighting angle, and actuates the headlight swivel actuator.                                                                                                                                                                                                                   |
| Headlight Swivel Motor | <ul style="list-style-type: none"><li>• Driven by the AFS ECU, the motor moves the Lo beam left or right to the angle calculated by the AFS ECU.</li><li>• A step motor is used for the headlight swivel motor. The AFS ECU determines the Lo beam angle based on the number of steps (position) of the step motor.</li></ul> |
| Steering Angle Sensor  | Detects the steering angle and direction and outputs this signal to the AFS ECU.                                                                                                                                                                                                                                              |
| AFS OFF Switch         | Pressing this switch disables the operation of the intelligent AFS.                                                                                                                                                                                                                                                           |
| Skid Control ECU       | Transmits a speed sensor signal (Front LH and RH) to the AFS ECU.                                                                                                                                                                                                                                                             |

| Component                     |                         | Outline                                                                                                                                                                                                                                                               |
|-------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ECM                           |                         | <ul style="list-style-type: none"> <li>Transmits an engine running status signal to the AFS ECU.</li> <li>Transmits a shift position signal to the AFS ECU. The AFS ECU determines whether the vehicle is moving forward or backward based on this signal.</li> </ul> |
| Main Body ECU                 |                         | Transmits a headlight status signal.                                                                                                                                                                                                                                  |
| Combination Meter (Meter ECU) | AFS OFF Indicator Light | When the system malfunctions, the meter ECU flashes the AFS OFF indicator light based on the signal from the AFS ECU to alert the driver.                                                                                                                             |

## (c) Low Speed Control

- The AFS ECU performs the low speed control when all the following conditions are fulfilled.
  - Engine is running.
  - Vehicle is moving forward at a speed of 10 km/h (6 mph) or more.
  - Steering angle is 6° or more.
  - Low beam headlights are ON.
  - Daytime running light function is not operating.
  - AFS OFF switch is OFF.

## Swivel Angle Range:

| Driving Condition | Low Beam          |                    |
|-------------------|-------------------|--------------------|
|                   | Left              | Right              |
| Right Turn        | 0° Fixed          | 0° to 10° to Right |
| Left Turn         | 0° to 15° to Left | 0° Fixed           |

## (d) Medium-to-High Speed Control

- The AFS ECU performs the medium-to-high speed control when all the following conditions are fulfilled.
  - Engine is running.
  - Vehicle is moving forward at a speed of 30 km/h (19 mph) or more.
  - Steering angle is 7.5° or more.
  - Low beam headlights are ON.
  - Daytime running light function is not operating.
  - AFS OFF switch is OFF.

## Swivel Angle Range:

| Driving Condition | Low Beam          |                    |
|-------------------|-------------------|--------------------|
|                   | Left              | Right              |
| Right Turn        | 0° to 5° to Right | 0° to 10° to Right |
| Left Turn         | 0° to 15° to Left | 0° to 7.5° to Left |

## (e) Initial Set Control

When the engine is started, the AFS ECU drives the headlight swivel motor and moves the projector headlight to the operation limit in the direction toward the vehicle center and returns it to the proper position. The AFS ECU thus assesses the position of the headlight for reference control.

## (f) Fail-Safe

If the AFS ECU detects a malfunction in the intelligent AFS, the AFS ECU effects fail-safe control. At the same time, the meter ECU flashes the AFS OFF indicator light in order to inform the driver of the problem.

## 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 CAN communication system

A

### 5 CHECK FOR DTC\*

**Result**

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

B

Go to step 8

A

**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-45](#))  
 (b) Terminals of ECU (See page [LI-37](#))

**NEXT****8 ADJUST, REPAIR OR REPLACE****NEXT****9 CONFIRMATION TEST****NEXT****END****LI**

## CUSTOMIZE PARAMETERS

### 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 front seat illumination, rear seat illumination, interior light, rear door courtesy lights, and engine switch illumination after closing the door. It will quickly fade out when the engine switch is turned on (IG). (Front personal switches are OFF, DOOR switch is ON, and seat illumination switch is OFF) | 7.5 s / 15 s / 30 s |
| ILLUMI SYSTEM    | ON      | Lights up the footwell illumination when one of the following occurs: the engine switch is turned on (IG), or any door is unlocked or opened.                                                                                                                                                                                                    | ON / OFF            |
| LIGHT CONTROL    | ON      | Dims (ON setting) or turns off (OFF setting) the footwell illumination under the following conditions: Engine switch on (IG), shift lever not in P, and all doors closed.                                                                                                                                                                        | ON / OFF            |
| I/L ON / UNLOCK  | ON      | Lights up the front seat illumination, rear seat illumination, interior light, rear door courtesy lights, footwell illumination, and engine switch illumination when the doors are unlocked.                                                                                                                                                     | ON / OFF            |
| I/L ON / ACC OFF | ON      | Lights up the front seat illumination, rear seat illumination, interior light, rear door courtesy lights, and engine switch illumination when the engine switch is turned off.                                                                                                                                                                   | ON / OFF            |

### LIGHT CONTROL:

| Display           | Default | Contents                                                                                                                                                                 | Setting                                      |
|-------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| LIGHT OFF DELAY   | 30 s    | Keeps the exterior lights on for a certain period of time after turning the engine switch off and closing all the doors with the low beam headlights on.                 | OFF / 30 s / 60 s / 90 s                     |
| SENSITIVITY       | NORMAL  | Adjusts the sensitivity of the automatic light control system.                                                                                                           | LIGHT 2 / LIGHT 1 / NORMAL / DARK 1 / DARK 2 |
| DRL FUNCTION (*1) | ON      | ON / OFF of the DRL function                                                                                                                                             | ON / OFF                                     |
| DISP EX ON SEN    | NORMAL  | Changes the ambient brightness level required to dim the lights such as the indicator lights of the combination meter, A/C indicator light, and clock.                   | 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 lights such as the indicator lights of the combination meter, A/C indicator light, and clock. | LIGHT 2 / LIGHT 1 / NORMAL / DARK 1 / DARK 2 |

### HINT:

\*1: for U.S.A package models.

## INITIALIZATION

### 1. HEIGHT CONTROL SENSOR SIGNAL INITIALIZATION

#### NOTICE:

- Initialize the height control sensor signal after the vehicle height changes due to replacement of the suspension or after performing such operations as removal and reinstallation or replacement of the rear height control sensor sub-assembly.
- When the AFS ECU is replaced, the initialization is also necessary.
- Adjust the headlight aim after initializing the AFS ECU (See page [LI-129](#)).
- When a malfunction is detected in the headlight beam level control system, the height control sensor signal initialization is impossible. Perform troubleshooting before initialization.

### 1 PREPARE VEHICLE FOR INITIALIZATION

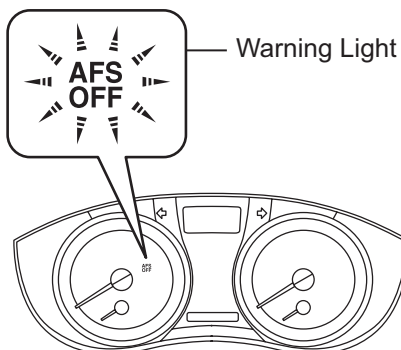
- Make sure that approximately 10 liters of fuel is in the tank.
- Unload the trunk and vehicle, ensuring that the spare tire, tools, and jack are in their original positions.
- Check that there are no passengers in the vehicle.
- Turn off the headlights.

NEXT

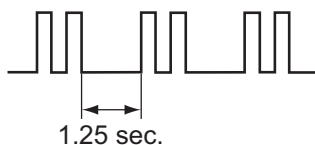
### 2 CHECK WARNING LIGHT

- Turn the engine switch on (IG), and check the AFS OFF indicator light.

OK



Blinking Pattern:



H

E133273E01

| Condition                                                                                                                                                                                                                           | Specified Condition                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| The AFS ECU is replaced with a new one.                                                                                                                                                                                             | Indicator light continuously blinks twice at 2 Hz as shown in the illustration.                |
| Removal and reinstallation of the AFS ECU, replacement of the rear height control sensor sub-assembly, removal and reinstallation of the rear height control sensor sub-assembly, replacement of the suspension, etc. is performed. | Indicator light comes on for approximately 3 seconds, and then goes off (bulb check function). |

#### HINT:

- If the indicator light does not come on when turning the engine switch on (IG), inspect and repair according to "PROBLEM SYMPTOMS TABLE" (See page [LI-32](#)).
- If there is a problem with initialized data memorized in the AFS ECU, the warning light blinks twice at 2 Hz as shown in the illustration when the engine switch is turned on (IG).

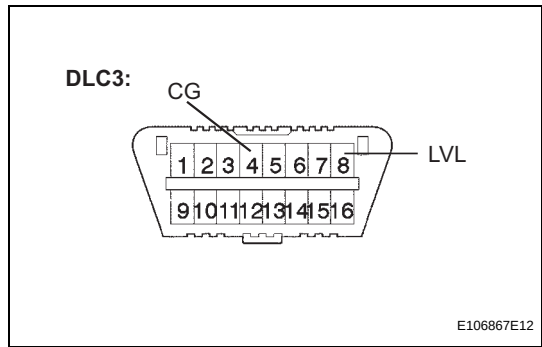
NG

GO TO PROBLEM SYMPTOMS TABLE

OK

3

INITIALIZATION



(a) Connect terminals 4 (CG) and 8 (LVL) of the DLC3 using SST.

**SST 09843-18040**

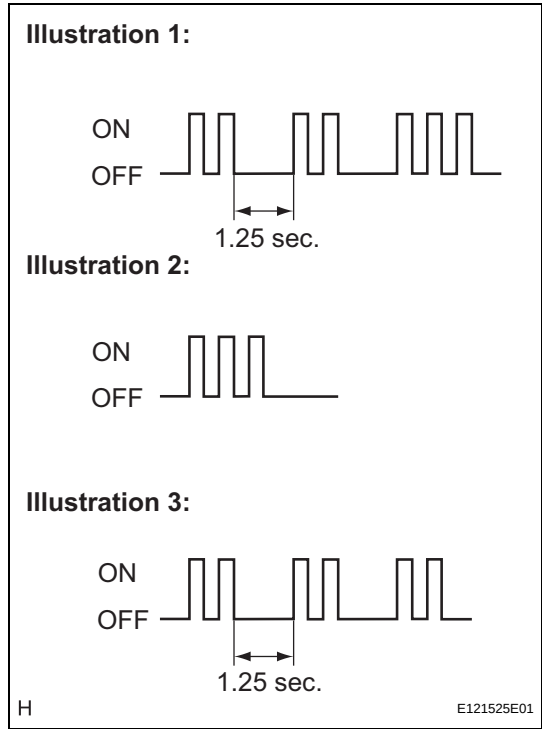
(b) Flash the low beam headlights 3 times by turning the light control switch within 20 seconds after connecting the terminals.

**NOTICE:**

- Turn the low beam headlights on or off at approximately 1-second intervals.
- Be sure to operate the light control switch from the outside of the vehicle.

(c) Check the warning light.

**OK**



| Condition                                                                                                                                                                                                                           | Specified Condition                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| AFS ECU is replaced with a new one.                                                                                                                                                                                                 | Blinks twice at 2 Hz → Blinks 3 times at 2 Hz, and then goes off (refer to illustration 1). |
| Removal and reinstallation of the AFS ECU, replacement of the rear height control sensor sub-assembly, removal and reinstallation of the rear height control sensor sub-assembly, replacement of the suspension, etc. is performed. | Off → Blinks 3 times at 2 Hz, and then goes off (refer to illustration 2).                  |

**HINT:**

- If calculated vehicle height is not between full-bound and full-rebound, the height control sensor initialization will end abnormally, and the indicator light will blink twice at 2 Hz continuously as shown in illustration 3. Disconnect the SST from the DLC3 and turn the engine switch off. Then, restart from procedure 2.
- If initialization cannot be finished normally, check the LVL terminal circuit (See page LI-120), or inspect and repair according to "PROBLEM SYMPTOMS TABLE" (See page LI-32).

NG

PERFORM TROUBLESHOOTING

OK

END

## 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. Light control switch circuit         | <a href="#">LI-90</a>  |
|                                                          | 2. Headlight relay circuit              | <a href="#">LI-74</a>  |
|                                                          | 3. 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. Light control switch circuit         | <a href="#">LI-90</a>  |
|                                                          | 2. Headlight (HI-BEAM) circuit          | <a href="#">LI-79</a>  |
|                                                          | 3. Main body ECU (Instrument panel J/B) | -                      |
| "HIGH FLASH" (Passing) does not illuminate               | 1. Light control switch circuit         | <a href="#">LI-90</a>  |
|                                                          | 2. Main body ECU (Instrument panel J/B) | -                      |
| LO-beam headlights or HI-beam headlights do not go off   | 1. Headlight dimmer switch assembly     | <a href="#">LI-189</a> |
|                                                          | 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               |
|-----------------------------------------------|-----------------------------------------|------------------------|
| Daytime running light system does not operate | 1. Light control switch circuit         | <a href="#">LI-90</a>  |
|                                               | 2. Parking brake switch circuit         | <a href="#">LI-110</a> |
|                                               | 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. Light failure sensor                 | <a href="#">LI-225</a> |
|                                                                                                                                        | 3. Harness or connector                 | -                      |
| License plate light does not illuminate                                                                                                | 1. License plate light assembly         | -                      |
|                                                                                                                                        | 2. Harness or connector                 | -                      |
| Rear side marker light does not illuminate                                                                                             | 1. Bulb                                 | -                      |
|                                                                                                                                        | 2. Harness or connector                 | -                      |
| Taillight system does not operate (Rear taillight, parking lights, rear side marker light, and license plate lights do not illuminate) | 1. TAIL fuse                            | -                      |
|                                                                                                                                        | 2. Taillight relay                      | <a href="#">LI-232</a> |
|                                                                                                                                        | 3. Light control switch circuit         | <a href="#">LI-90</a>  |
|                                                                                                                                        | 4. Taillight relay circuit              | <a href="#">LI-112</a> |
|                                                                                                                                        | 5. Main body ECU (Instrument panel J/B) | -                      |

**4. Stop light system:**

| Symptom                                           | Suspected Area                                                  | See page               |
|---------------------------------------------------|-----------------------------------------------------------------|------------------------|
| Stop light system does not operate                | 1. Stop fuse                                                    | -                      |
|                                                   | 2. Stop light switch                                            | <a href="#">LI-200</a> |
|                                                   | 3. Stop light control relay (with dynamic radar cruise control) | <a href="#">BC-205</a> |
|                                                   | 4. Harness or connector                                         | -                      |
| One side stop light does not illuminate           | 1. Bulb                                                         | -                      |
|                                                   | 2. Harness or connector                                         | -                      |
| Both left and right stop lights do not illuminate | 1. Bulb                                                         | -                      |
|                                                   | 2. Light failure sensor                                         | <a href="#">LI-225</a> |
|                                                   | 3. Harness or connector                                         | -                      |
| Hi-mounted stop light does not illuminate         | 1. High mounted stop light assembly                             | -                      |
|                                                   | 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. FOG relay                            | <a href="#">LI-233</a> |
|                                                                               | 3. Light control switch circuit         | <a href="#">LI-90</a>  |
|                                                                               | 4. Front fog light circuit              | <a href="#">LI-85</a>  |
|                                                                               | 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                          | <a href="#">LI-194</a> |
|                                                                      | 3. Turn signal flasher assembly                          | <a href="#">LI-229</a> |
|                                                                      | 4. 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) | <a href="#">LI-189</a> |
|                                                                      | 3. Turn signal flasher assembly                          | <a href="#">LI-229</a> |
|                                                                      | 4. Harness or connector                                  | -                      |
| "Hazard" and "Turn" do not operate                                   | 1. Turn signal flasher assembly                          | <a href="#">LI-229</a> |
|                                                                      | 2. Hazard warning signal switch                          | <a href="#">LI-194</a> |
|                                                                      | 3. Headlight dimmer switch assembly (Turn signal switch) | <a href="#">LI-189</a> |
|                                                                      | 4. Harness or connector                                  | -                      |
| Turn signal lights do not operate in one direction                   | 1. Headlight dimmer switch assembly (Turn signal switch) | <a href="#">LI-189</a> |
|                                                                      | 2. Turn signal flasher assembly                          | <a href="#">LI-229</a> |
|                                                                      | 3. Harness or connector                                  | -                      |
| Only one bulb does not operate                                       | 1. Bulb                                                  | -                      |
|                                                                      | 2. Harness or connector                                  | -                      |

**7. Back-up light system:**

| Symptom                                              | Suspected Area                  | See page               |
|------------------------------------------------------|---------------------------------|------------------------|
| One side back-up light does not illuminate           | 1. Bulb                         | -                      |
|                                                      | 2. Harness or connector         | -                      |
| Both left and right back-up lights do not illuminate | 1. GAUGE No. 1 fuse             | -                      |
|                                                      | 2. Park/Neutral position switch | <a href="#">AX-185</a> |
|                                                      | 3. Harness or connector         | -                      |

**8. Illuminated entry system (Interior light control):**

| Symptom                                                                                                             | Suspected Area                          | See page               |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------|
| Only interior light does not illuminate                                                                             | 1. Personal light assembly              | <a href="#">LI-160</a> |
| Only rear seat illumination does not come on                                                                        | 1. Rear room light assembly             | <a href="#">LI-162</a> |
|                                                                                                                     | 2. Harness or connector                 | -                      |
| Only front seat illumination does not come on                                                                       | 1. Personal light assembly              | <a href="#">LI-160</a> |
| Only rear door courtesy light does not illuminate                                                                   | 1. Bulb                                 | -                      |
|                                                                                                                     | 2. Rear door courtesy light assembly    | <a href="#">LI-166</a> |
|                                                                                                                     | 3. Harness or connector                 | -                      |
| Engine switch illumination does not illuminate                                                                      | 1. Engine switch illumination circuit   | <a href="#">LI-105</a> |
|                                                                                                                     | 2. Main body ECU (Instrument panel J/B) | -                      |
| Interior light and seat illumination do not illuminate                                                              | 1. Interior light circuit               | <a href="#">LI-100</a> |
|                                                                                                                     | 2. Main body ECU (Instrument panel J/B) | -                      |
| Interior light control (Interior light, seat illumination and engine switch illumination) does not operate normally | 1. Door courtesy switch circuit         | <a href="#">LI-94</a>  |
|                                                                                                                     | 2. Door lock position switch circuit    | <a href="#">LI-98</a>  |
|                                                                                                                     | 3. Interior light circuit               | <a href="#">LI-100</a> |
|                                                                                                                     | 4. Engine switch illumination           | <a href="#">LI-105</a> |
|                                                                                                                     | 5. Engine switch                        | <a href="#">ST-158</a> |
|                                                                                                                     | 6. Harness or connector                 | -                      |
|                                                                                                                     | 7. Main body ECU (Instrument panel J/B) | -                      |

**9. Illuminated entry system (Footwell illumination control):**

| Symptom                                                                                    | Suspected Area            | See page               |
|--------------------------------------------------------------------------------------------|---------------------------|------------------------|
| One side footwell illumination does not come on                                            | 1. Footwell light         | <a href="#">LI-181</a> |
|                                                                                            | 2. Harness or connector   | -                      |
| Footwell illumination control does not operate normally (Interior light control is normal) | 1. Footwell light circuit | <a href="#">LI-103</a> |
|                                                                                            | 2. Main body ECU          | -                      |

**10. Illuminated entry system (Door mirror foot light control):**

| Symptom                                                                                            | Suspected Area                     | See page               |
|----------------------------------------------------------------------------------------------------|------------------------------------|------------------------|
| One side door mirror foot light does not come on                                                   | 1. Door mirror foot light          | <a href="#">LI-185</a> |
|                                                                                                    | 2. Harness or connector            | -                      |
| Door mirror foot light control does not operate normally (Footwell illumination control is normal) | 1. Door mirror foot light circuit  | <a href="#">LI-108</a> |
|                                                                                                    | 2. Mirror ECU power source circuit | <a href="#">MI-32</a>  |
|                                                                                                    | 3. Mirror ECU                      | -                      |
|                                                                                                    | 4. Main body ECU                   | -                      |

**11. Vanity light system:**

| Symptom                          | Suspected Area                          | See page               |
|----------------------------------|-----------------------------------------|------------------------|
| Vanity light does not illuminate | 1. Bulb                                 | -                      |
|                                  | 2. Vanity light assembly                | <a href="#">LI-173</a> |
|                                  | 3. Visor assembly (Vanity light switch) | -                      |
|                                  | 4. Harness or connector                 | -                      |

**12. Luggage compartment light system:**

| Symptom                                       | Suspected Area                                                   | See page               |
|-----------------------------------------------|------------------------------------------------------------------|------------------------|
| Luggage compartment light does not illuminate | 1. Luggage compartment light                                     | <a href="#">LI-169</a> |
|                                               | 2. Luggage compartment door lock assembly (Door courtesy switch) | <a href="#">LI-207</a> |
|                                               | 3. Harness or connector                                          | -                      |

**13. Glove box light system:**

| Symptom                             | Suspected Area              | See page               |
|-------------------------------------|-----------------------------|------------------------|
| Glove box light does not illuminate | 1. Glove box light assembly | <a href="#">LI-171</a> |
|                                     | 2. Harness or connector     | -                      |

**14. Door courtesy light system:**

| Symptom                                                      | Suspected Area                                       | See page               |
|--------------------------------------------------------------|------------------------------------------------------|------------------------|
| Driver side door courtesy light does not illuminate          | 1. Bulb                                              | -                      |
|                                                              | 2. Driver side door courtesy light assembly          | <a href="#">LI-166</a> |
|                                                              | 3. Driver side door courtesy switch                  | <a href="#">LI-166</a> |
|                                                              | 4. Harness or connector                              | -                      |
| Front passenger side door courtesy light does not illuminate | 1. Bulb                                              | -                      |
|                                                              | 2. Front passenger side door courtesy light assembly | <a href="#">LI-166</a> |
|                                                              | 3. Front passenger side door courtesy switch         | <a href="#">LI-203</a> |
|                                                              | 4. Harness or connector                              | -                      |
| Rear LH door courtesy light does not illuminate              | 1. Bulb                                              | -                      |
|                                                              | 2. Rear LH door courtesy light assembly              | <a href="#">LI-166</a> |
|                                                              | 3. Rear LH door courtesy switch                      | <a href="#">LI-207</a> |
|                                                              | 4. Harness or connector                              | -                      |
| Rear RH door courtesy light does not illuminate              | 1. Bulb                                              | -                      |
|                                                              | 2. Rear RH door courtesy light assembly              | <a href="#">LI-166</a> |
|                                                              | 3. Rear RH door courtesy switch                      | <a href="#">LI-207</a> |
|                                                              | 4. Harness or connector                              | -                      |

**15. Personal light system:**

| Symptom                                   | Suspected Area                 | See page               |
|-------------------------------------------|--------------------------------|------------------------|
| Front personal lights do not illuminate   | 1. Personal light assembly     | <a href="#">LI-160</a> |
|                                           | 2. Harness or connector        | -                      |
| Rear LH personal lights do not illuminate | 1. Rear LH room light assembly | <a href="#">LI-162</a> |
|                                           | 2. Harness or connector        | -                      |
| Rear RH personal lights do not illuminate | 1. Rear RH room light assembly | <a href="#">LI-162</a> |
|                                           | 2. Harness or connector        | -                      |

**16. Automatic light control system:**

| Symptom                                                  | Suspected Area                            | See page               |
|----------------------------------------------------------|-------------------------------------------|------------------------|
| Automatic light control system does not operate normally | 1. Light control switch circuit           | <a href="#">LI-90</a>  |
|                                                          | 2. Automatic light control sensor circuit | <a href="#">LI-49</a>  |
|                                                          | 3. Engine switch                          | <a href="#">ST-158</a> |
|                                                          | 4. Main body ECU (Instrument panel J/B)   | -                      |

**17. Light auto turn off system:**

| Symptom                                              | Suspected Area                          | See page              |
|------------------------------------------------------|-----------------------------------------|-----------------------|
| Light auto turn off system does not operate normally | 1. Light control switch circuit         | <a href="#">LI-90</a> |
|                                                      | 2. Door courtesy switch circuit         | <a href="#">LI-94</a> |
|                                                      | 3. Door lock position switch circuit    | <a href="#">LI-98</a> |
|                                                      | 4. Main body ECU (Instrument panel J/B) | -                     |

**18. Battery saving system:**

| Symptom                                  | Suspected Area                          | See page               |
|------------------------------------------|-----------------------------------------|------------------------|
| Battery saving function does not operate | 1. Door courtesy switch circuit         | <a href="#">LI-94</a>  |
|                                          | 2. Engine switch                        | <a href="#">ST-158</a> |
|                                          | 3. Main body ECU (Instrument panel J/B) | -                      |

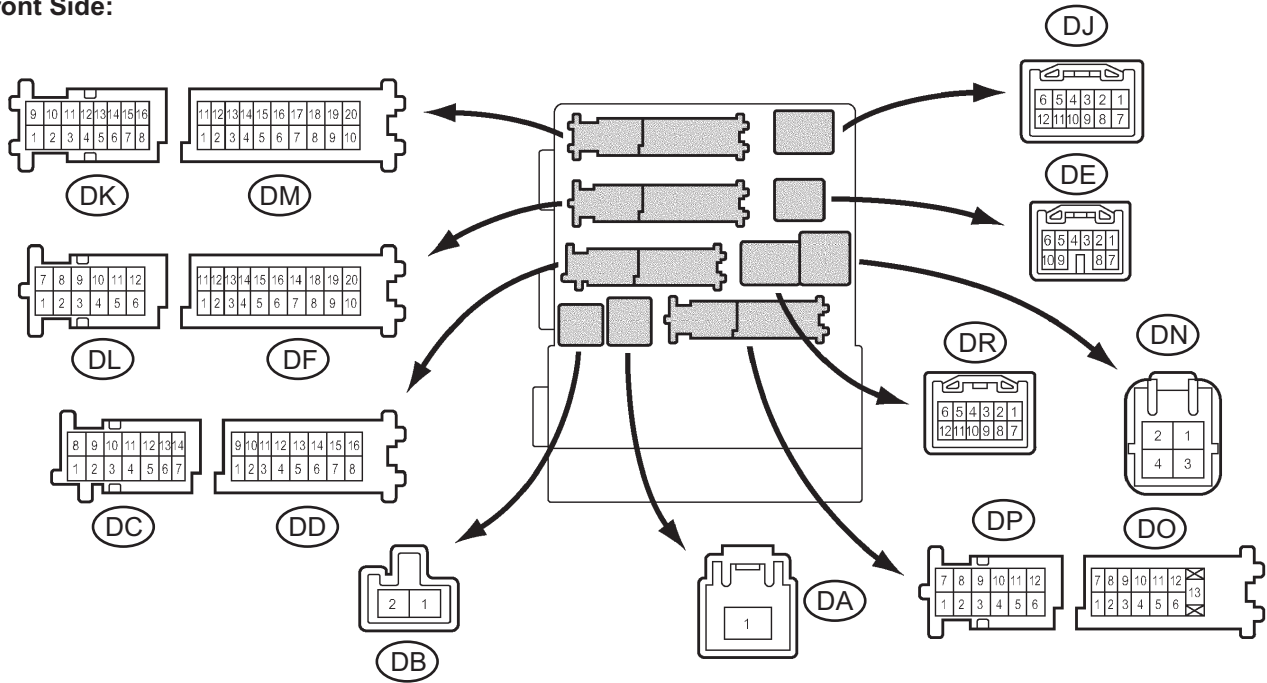
**19. AFS**

| Symptom                                                                         | Suspected Area            | See page               |
|---------------------------------------------------------------------------------|---------------------------|------------------------|
| AFS does not operate.                                                           | 1. Check DTC              | -                      |
|                                                                                 | 1. Power source circuit   | <a href="#">LI-116</a> |
|                                                                                 | 2. AFS OFF switch circuit | <a href="#">LI-118</a> |
|                                                                                 | 3. AFS ECU                | -                      |
| AFS OFF indicator light does not come on when turning the engine switch on (IG) | 1. AFS ECU                | -                      |
|                                                                                 | 2. Combination meter      | -                      |

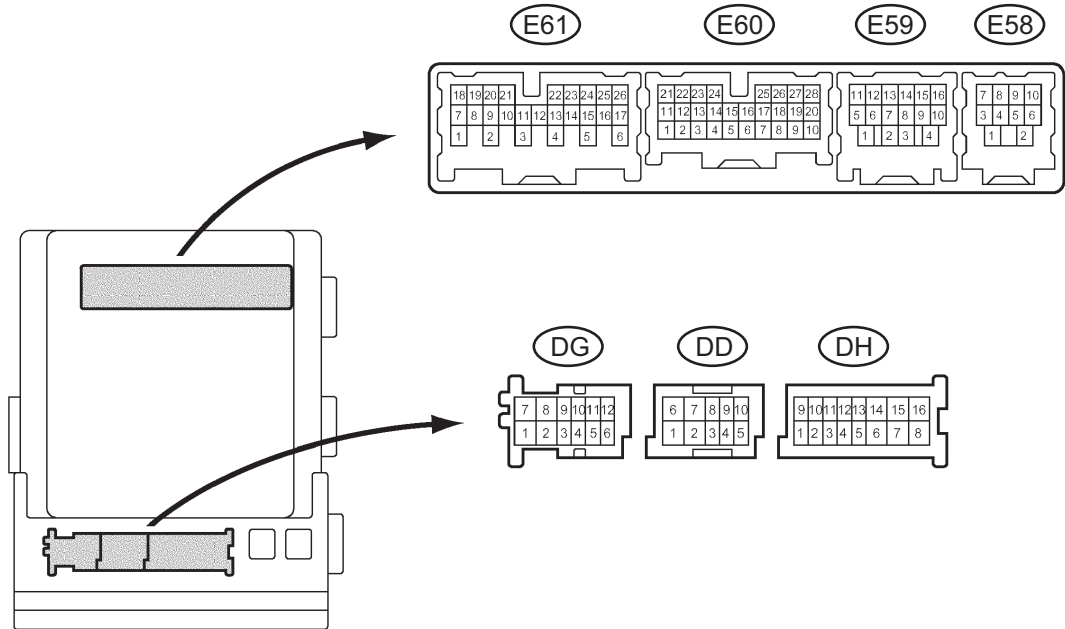
TERMINALS OF ECU

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

Front Side:



Back Side:



E111961E06

(a) Disconnect the DA, DD, DF and E59 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 |
|----------------------------|-----------------|------------------------|-----------|---------------------|
| BATB (DA-1) - Body ground  | W - Body ground | Battery power supply   | Always    | 10 to 14 V          |
| ALTB (DD-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 (DF-10) - Body ground | W-B - Body ground | Ground               | Always    | Below 1 $\Omega$    |
| GND3 (E59-1) - Body ground | W-B - Body ground | Ground               | Always    | Below 1 $\Omega$    |

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

- (c) Reconnect the DA, DD, DF, and E59 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 (E60-18) - Body ground | W - Body ground | Automatic light control sensor ground | Always    | Below 1 $\Omega$    |

### Standard voltage

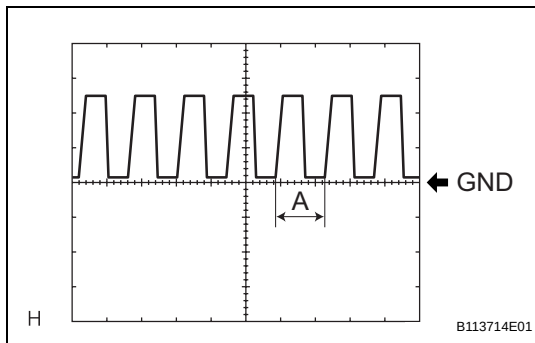
| Symbols                    | Wiring Color     | Terminal Description                              | Condition                                | Specified Condition |
|----------------------------|------------------|---------------------------------------------------|------------------------------------------|---------------------|
| PKB (DC-14) - Body ground  | L - Body ground  | Parking brake switch input                        | Parking brake switch ON                  | Below 1 V           |
|                            |                  |                                                   | Parking brake switch OFF                 | 10 to 14 V          |
| HRLY (DD-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 (DD-9) - Body ground   | V - Body ground  | High beam headlights drive output                 | High beam headlights ON                  | Below 1 V           |
|                            |                  |                                                   | High beam headlights OFF                 | 10 to 14 V          |
| HU (DG-5) - Body ground    | W - Body ground  | Dimmer switch HIGH input                          | Dimmer switch in HIGH or HIGH FLASH      | 10 to 14 V          |
|                            |                  |                                                   | Dimmer switch in LOW                     | Below 1 V           |
| LCTY (DO-7) - Body ground  | B - Body ground  | Rear left door courtesy switch input              | Rear left door open                      | Below 1 V           |
|                            |                  |                                                   | Rear left door closed                    | 10 to 14 V          |
| LSWL (DP-5) - Body ground  | 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           |
| ILE (DR-5) - Body ground   | BR - Body ground | Interior light and seat illumination drive output | Interior light and seat illumination OFF | 10 to 14 V          |
|                            |                  |                                                   | Interior light and seat illumination ON  | Below 1 V           |
| CANH (E59-5) - Body ground | BR - Body ground | Control system CAN communication                  | Engine switch on (IG)                    | Pulse generation    |
|                            |                  |                                                   | Engine switch off                        | Below 1 V           |

| Symbols                     | Wiring Color     | Terminal Description                               | Condition                                              | Specified Condition               |
|-----------------------------|------------------|----------------------------------------------------|--------------------------------------------------------|-----------------------------------|
| CANL (E59-6) - Body ground  | GR - Body ground | Control system CAN communication                   | Engine switch on (IG)                                  | Pulse generation                  |
|                             |                  |                                                    | Engine switch off                                      | Below 1 V                         |
| CANN (E59-15) - Body ground | W - Body ground  | Body system CAN communication                      | Engine switch on (IG)                                  | Pulse generation                  |
|                             |                  |                                                    | Engine switch off                                      | Below 1 V                         |
| CANP (E59-16) - Body ground | B - Body ground  | Body system CAN communication                      | Engine switch on (IG)                                  | Pulse generation                  |
|                             |                  |                                                    | Engine switch off                                      | Below 1 V                         |
| FSPT (E59-11) - Body ground | BR - Body ground | Footwell illumination drive output                 | Footwell illumination OFF                              | 10 to 14 V                        |
|                             |                  |                                                    | Footwell illumination ON                               | Below 1 V                         |
| HEAD (E60-17) - Body ground | L - 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                        |
| CLTS (E60-19) - Body ground | LG - Body ground | Automatic light control sensor signal input        | Engine switch off                                      | Below 1 V                         |
|                             |                  |                                                    | Automatic light control system operates                | Pulse generation (See waveform 1) |
| CLTB (E60-20) - Body ground | BR - Body ground | Automatic light control sensor power supply output | Engine switch off                                      | Below 1 V                         |
|                             |                  |                                                    | Engine switch on (IG) and light control switch in AUTO | 10 to 14 V                        |
| PCTY (E60-21) - Body ground | G - Body ground  | Passenger side door courtesy switch input          | Passenger side door open                               | Below 1 V                         |
|                             |                  |                                                    | Passenger side door closed                             | 10 to 14 V                        |
| LGCY (E60-25) - 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 (E60-27) - 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 (E60-28) - Body ground | GR - 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 (E60-5) - Body ground  | Y - 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 (E60-7) - Body ground  | 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 (E61-13) - 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 (E61-16) - Body ground | V - Body ground  | Engine switch input                                | Engine switch pushed                                   | Below 1 V                         |
|                             |                  |                                                    | Engine switch not pushed                               | 10 to 14 V                        |
| SSW1 (E61-17) - Body ground | L - Body ground  | Engine switch input                                | Engine switch on (IG)                                  | 10 to 14 V                        |
|                             |                  |                                                    | Engine switch off                                      | Below 1 V                         |
| A (E61-21) - Body ground    | Y - 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                        |

| Symbols                     | Wiring Color     | Terminal Description                        | Condition                                                  | Specified Condition |
|-----------------------------|------------------|---------------------------------------------|------------------------------------------------------------|---------------------|
| ACCD (E61-22) - Body ground | R - Body ground  | Accessory relay drive output                | Engine switch on (ACC)                                     | Below 1 V           |
|                             |                  |                                             | Engine switch off                                          | 10 to 14 V          |
| TAIL (E61-23) - 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 (E61-24) - Body ground | GR - Body ground | Driver side door courtesy switch input      | Driver side door open                                      | Below 1 V           |
|                             |                  |                                             | Driver side door closed                                    | 10 to 14 V          |
| IG1D (E61-3) - Body ground  | LG - Body ground | Ignition 1 relay drive output               | Engine switch on (IG)                                      | Below 1 V           |
|                             |                  |                                             | Engine switch off                                          | 10 to 14 V          |
| FFGO (E61-4) - Body ground  | G - 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 (E61-9) - 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           |
| SWIL (E61-25) - Body ground | R - Body ground  | Engine switch illumination drive output     | Engine switch illumination ON                              | 10 to 14 V          |
|                             |                  |                                             | Engine switch illumination OFF                             | Below 1 V           |

If the result is not as specified, the main body ECU (instrument panel J/B) may have a malfunction.

#### (1) Waveform 1



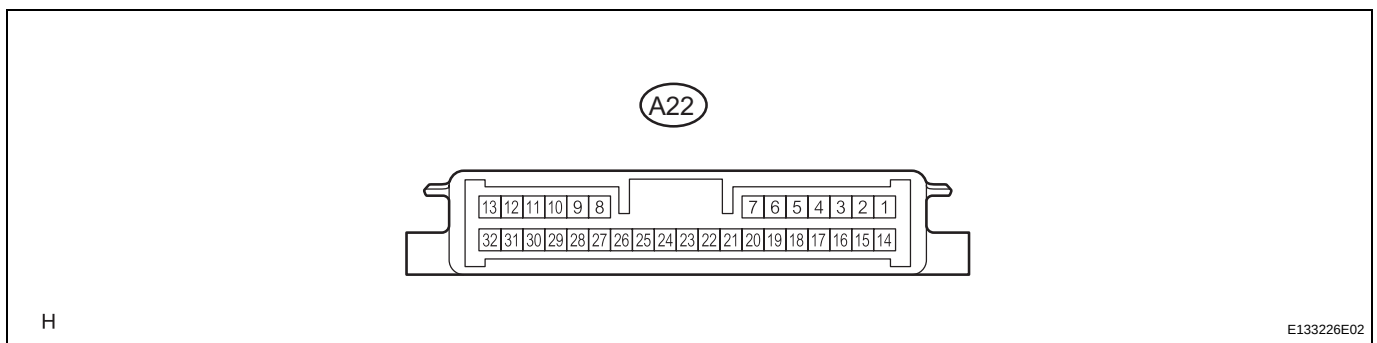
| Item         | Contents             |
|--------------|----------------------|
| Tool setting | 5 V/DIV., 5 ms./DIV. |

#### HINT:

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

#### 2. CHECK AFS ECU

- (a) Disconnect the A22 ECU connector.



- (b) Measure the voltage and resistance between the specified terminals of the wire harness side connectors and body ground.

#### Standard voltage

| Symbols (Terminal No.)     | Wiring Color    | Terminal Description      | Condition             | Specified Condition |
|----------------------------|-----------------|---------------------------|-----------------------|---------------------|
| IGS (A22-14) - Body ground | Y - Body ground | Swivel motor power supply | Engine switch off     | Below 1 V           |
|                            |                 |                           | Engine switch on (IG) | 10 to 14 V          |

| Symbols (Terminal No.)    | Wiring Color     | Terminal Description | Condition             | Specified Condition |
|---------------------------|------------------|----------------------|-----------------------|---------------------|
| IG (A22-15) - Body ground | GR - Body ground | AFS ECU power supply | Engine switch off     | Below 1 V           |
|                           |                  |                      | Engine switch on (IG) | 10 to 14 V          |

### Standard resistance

| Symbols (Terminal No.)    | Wiring Color    | Terminal Description | Condition | Specified Condition |
|---------------------------|-----------------|----------------------|-----------|---------------------|
| E1 (A22-22) - Body ground | W - Body ground | AFS ECU ground       | Always    | Below 1 $\Omega$    |

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

- (c) Reconnect the A22 ECU connector.
- (d) Measure the resistance and voltage according to the value(s) in the table below.

### Standard resistance

| Symbols (Terminal No.)      | Wiring Color | Terminal Description              | Condition | Specified Condition |
|-----------------------------|--------------|-----------------------------------|-----------|---------------------|
| SGR (A22-21) - E1 (A22-22)  | O - W        | Rear height control sensor ground | Always    | Below 1 $\Omega$    |
| SMGL (A22-23) - E1 (A22-22) | G - W        | Swivel motor LH ground            | Always    | Below 1 $\Omega$    |
| SMGR (A22-24) - E1 (A22-22) | P - W        | Swivel motor RH ground            | Always    | Below 1 $\Omega$    |
| LH- (A22-27) - E1 (A22-22)  | GR - W       | Leveling motor LH ground          | Always    | Below 1 $\Omega$    |
| RH- (A22-28) - E1 (A22-22)  | V - W        | Leveling motor RH ground          | Always    | Below 1 $\Omega$    |

### Standard voltage

| Symbols (Terminal No.)       | Wiring Color | Terminal Description                | Condition                                           | Specified Condition |
|------------------------------|--------------|-------------------------------------|-----------------------------------------------------|---------------------|
| SMBL (A22-1) - E1 (A22-22)   | L - W        | Swivel motor LH power supply        | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | 10 to 14 V          |
| SMBR (A22-2) - E1 (A22-22)   | G - W        | Swivel motor RH power supply        | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | 10 to 14 V          |
| LHT (A22-3) - E1 (A22-22)    | Y - W        | Leveling motor LH power supply      | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | 10 to 16 V          |
| RHT (A22-4) - E1 (A22-22)    | R - W        | Leveling motor RH power supply      | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | 10 to 14 V          |
| INIT (A22-7) - E1 (A22-22)   | L - W        | Initialization signal               | Terminal LVL and terminal GND of DLC3 connected     | Below 1 V           |
|                              |              |                                     | Terminal LVL and terminal GND of DLC3 not connected | 10 to 14 V          |
| SMR (A22-10) - E1 (A22-22)   | L - W        | Swivel motor RH LIN communication   | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | Pulse generation    |
| RH+ (A22-11) - E1 (A22-22)   | LG - W       | Leveling motor RH LIN communication | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | Pulse generation    |
| MPX1 (A22-12) - E1 (A22-22)  | L - W        | CAN communication                   | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | Pulse generation    |
| MPX2 (A22-13) - E1 (A22-22)  | Y - W        | CAN communication                   | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | Pulse generation    |
| SHRL (A22-19) - SGR (A22-21) | P - O        | Rear height control sensor signal   | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | 0 V to 4.5 V        |
| SML (A22-29) - E1 (A22-22)   | R - W        | Swivel motor LH LIN communication   | Engine switch off                                   | Below 1 V           |
|                              |              |                                     | Engine switch on (IG)                               | Pulse generation    |

| Symbols (Terminal No.)     | Wiring Color | Terminal Description                | Condition                                                    | Specified Condition |
|----------------------------|--------------|-------------------------------------|--------------------------------------------------------------|---------------------|
| LH+ (A22-30) - E1 (A22-22) | W - W        | Leveling motor LH LIN communication | Engine switch off                                            | Below 1 V           |
|                            |              |                                     | Engine switch on (IG)                                        | Pulse generation    |
| MSW (A22-32) - E1 (A22-22) | BR - W       | AFS OFF switch signal               | Engine switch on (IG),<br>AFS OFF switch OFF<br>(not pushed) | 10 to 14 V          |
|                            |              |                                     | Engine switch on (IG),<br>AFS OFF switch ON<br>(pushed)      | Below 1 V           |

If the result is not as specified, the ECU may have a malfunction.

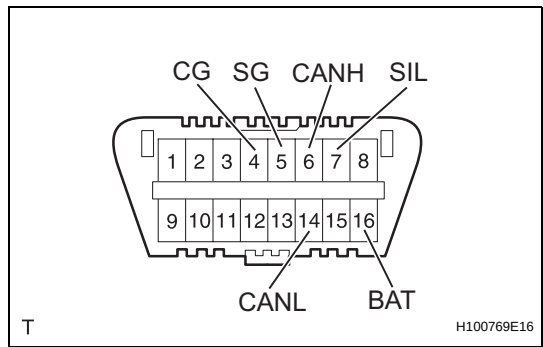
DIAGNOSIS SYSTEM

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.

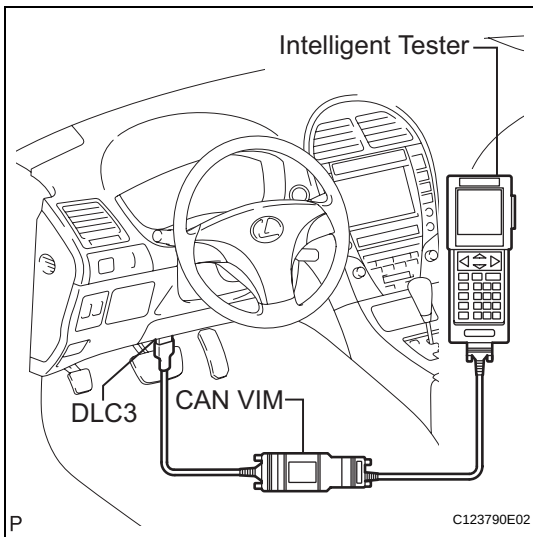


| Symbols (Terminal No.) | Terminal Description    | Condition           | Specified Condition |
|------------------------|-------------------------|---------------------|---------------------|
| SIL (7) - SG (5)       | Bus "+" line            | During transmission | Pulse generation    |
| CG (4) - 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            | Engine switch off*  | 54 to 69 Ω          |
| CANH (6) - CG (4)      | HIGH-level CAN bus line | Engine switch off*  | 200 Ω or higher     |
| CANL (14) - CG (4)     | LOW-level CAN bus line  | Engine switch off*  | 200 Ω or higher     |
| CANH (6) - BAT (16)    | HIGH-level CAN bus line | Engine switch off*  | 6 kΩ or higher      |
| CANL (14) - BAT (16)   | LOW-level CAN bus line  | Engine 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 engine 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 engine 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

- Connect the intelligent tester to the DLC3.
- Turn the engine switch on (IG).
- Read the DTCs by following the directions on the tester screen.

HINT:

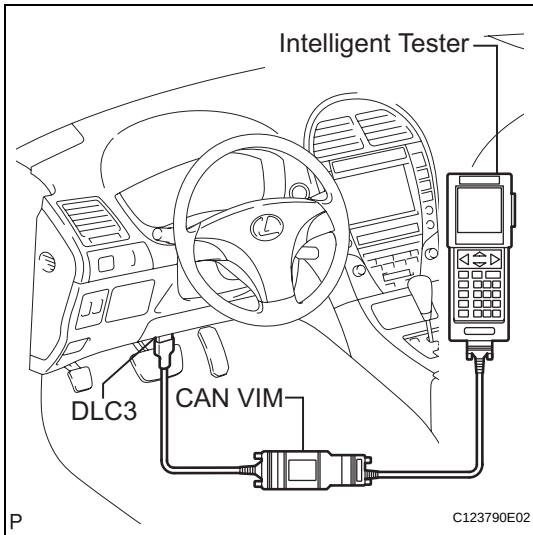
Refer to the intelligent tester operator's manual for further details.

### 2. CLEAR DTC

- Connect the intelligent tester to the DLC3.
- Turn the engine switch on (IG).
- Erase the DTCs by following the directions on the tester screen.

HINT:

Refer to the intelligent tester operator's manual for further details.



## FAIL-SAFE CHART

### 1. HID headlight system

The light control ECU operates in the fail-safe mode if an abnormal condition such as those listed below has been detected.

| Item                                                                                                                                                                                                      | Outline                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Detection of abnormal input voltage (High input voltage)                                                                                                                                                  | If voltage that is input to the light control ECU is approximately 20 V or more, the ECU stops illuminating the headlights, and resumes when the voltage drops to 16 V or less.                                                                                                                                                    |
| Detection of abnormal input voltage (Low input voltage)                                                                                                                                                   | If voltage that is input to the light control ECU is 6 V or less, the ECU stops illuminating the low beam headlights, and resumes when the voltage is 10 V or more.                                                                                                                                                                |
| Detection of abnormal output <ul style="list-style-type: none"> <li>Open in output side circuit</li> <li>Short between output terminals</li> <li>Short between output terminal and body ground</li> </ul> | If an abnormal condition occurs in the voltage that is output by the light control ECU, the ECU stops illuminating the low beam headlights and will maintain this state until the power is reinstated (by turning the light control switch from OFF to HEAD)                                                                       |
| Detection of bulb flashing                                                                                                                                                                                | If the bulb flashing repeats within approximately 5 seconds and continues for approximately 60 seconds, the light control ECU stops illuminating low beam headlights and will maintain this state until the power is reinstated (by turning the light control switch from OFF to HEAD)                                             |
| Detection of abnormal light voltage (Low light voltage)                                                                                                                                                   | After approximately 80 seconds since input voltage is supplied, if the light voltage is below approximately 31 V for approximately 0.5 seconds, the light control ECU stops illuminating the low beam headlights and will maintain this state until the power is reinstated (by turning the light control switch from OFF to HEAD) |
| Detection of abnormal light voltage (High light voltage)                                                                                                                                                  | If the light voltage is above approximately 69 V for approximately 0.5 seconds, the light control ECU stops illuminating the low beam headlights and will maintain this state until the power is reinstated (by turning the light control switch from OFF to HEAD)                                                                 |

### 2. Automatic headlight beam level control system

If the AFS ECU detects a malfunction in the automatic headlight beam level control system or intelligent AFS, it will take the actions indicated in the table below.

| Trouble Area                             | Condition<br>(Fail-Safe Control for Automatic Headlight Beam Level Control)                                                                                                                                                                                                      | AFS OFF<br>Indicator Light |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Headlight Swivel Motor Malfunction       | Continues control until a position that is 0.65° less than the current position is reached.                                                                                                                                                                                      | Flash                      |
| Steering Angle Sensor Signal Malfunction | Continues control.                                                                                                                                                                                                                                                               | Flash                      |
| Speed Sensor Signal Malfunction          | <ul style="list-style-type: none"> <li>Continues to control using the normal speed sensor signal if one signal fails.</li> <li>Judges that the vehicle speed is 0 km/h and continues to control if both speed sensor signals fail.</li> </ul>                                    | Flash                      |
| Height Control Sensor Signal Malfunction | <ul style="list-style-type: none"> <li>Stops the operation after returning to the initial position (Fail at higher than the initial position).</li> <li>Stops the operation at the current position (Fail at lower than the initial position).</li> </ul>                        | Flash                      |
| Headlight Leveling Motor Malfunction     | Normal Side Headlight Leveling Motor <ul style="list-style-type: none"> <li>Stops the operation after returning to the initial position (Fail at higher than the initial position).</li> <li>Stops at the current position (Fail at lower than the initial position).</li> </ul> | Flash                      |
|                                          | Abnormal Side Headlight Leveling Motor <ul style="list-style-type: none"> <li>Stops at the current position.</li> </ul>                                                                                                                                                          |                            |
| Communication Signal Malfunction         | Skid Control ECU: <ul style="list-style-type: none"> <li>Judges that the vehicle speed is 0 km/h (0 mph) and continues control.</li> </ul>                                                                                                                                       | Flash                      |
|                                          | Steering Angle Sensor: <ul style="list-style-type: none"> <li>Normally controls the system.</li> </ul>                                                                                                                                                                           |                            |

### 3. Intelligent AFS

If the AFS ECU detects a malfunction in the intelligent AFS or automatic headlight beam level control system, it will take the actions indicated in the table below.

| Trouble Area                             | Condition<br>(Fail-Safe Control for Intelligent AFS Control)                                      | AFS OFF Indicator Light |
|------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------|
| Headlight Swivel Motor                   | Normal Side Headlight Swivel Motor:<br>• Stops operating after returning to the initial position. | Flash                   |
|                                          | Abnormal Side Headlight Swivel Motor:<br>• Stops at the current position.                         |                         |
| Steering Angle Sensor Signal Malfunction | Stops operating after returning to the initial position.                                          | Flash                   |
| Speed Sensor Signal Malfunction          | Stops operating after returning to the initial position.                                          | Flash                   |
| Height Control Sensor Signal Malfunction | Stops operating after returning to the initial position.                                          | Flash                   |
| Headlight Leveling Motor                 | Stops operating after returning to the initial position.                                          | Flash                   |
| Communication Signal Malfunction         | Main Body ECU:<br>• Stops operating after returning to the initial position.                      | Flash                   |
|                                          | ECM:<br>• Stops operating after returning to the initial position.                                |                         |
|                                          | Skid Control ECU:<br>• Stops operating after returning to the initial position.                   |                         |
|                                          | Steering Angle Sensor:<br>• Stops operating after returning to the initial position.              |                         |

#### 4. Automatic light control system

If the main body ECU detects a malfunction in the automatic light control sensor, the main body ECU effects fail-safe control to prohibit the automatic light control. If the low beam headlights and taillights are on, the lights will remain on until the light control switch is turned off.

## Headlight (HI-BEAM) Circuit

### DESCRIPTION

When either of the following conditions is met, the high beam headlights come on.

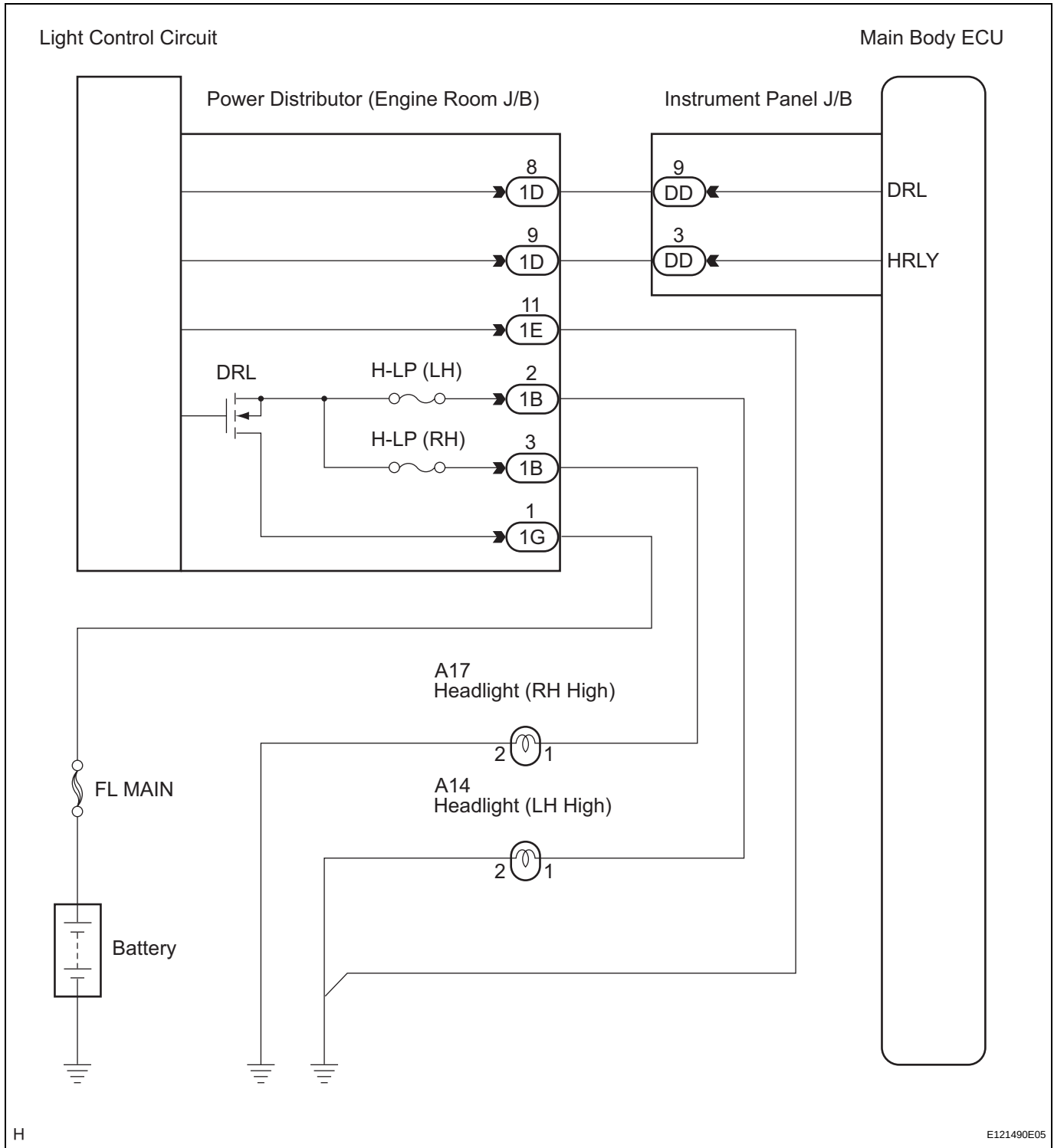
- Dimmer switch in HIGH position and light control switch in HEAD position.
- Dimmer switch in HIGH position, light control switch in AUTO position, and low beam headlights are on.

#### HINT:

- The power distributor has a fail-safe function control. If a short circuit occurs between the power distributor and high beam headlight bulb, the power distributor stops the DRL relay operation.
- The DRL relay is built into the power distributor, so unlike conventional relays, it cannot be removed for inspection.
- If only a high beam headlight on one side does not illuminate, inspect the fuse, bulb, or wire harness that is related to the bulb.
- If both right and left high beam headlights do not illuminate, read the dimmer switch HIGH signal value in the data list, and perform the DRL relay active test to determine if the malfunction exists on either the switch side or the relay side.



## WIRING DIAGRAM



## INSPECTION PROCEDURE

### 1 PERFORM ACTIVE TEST USING INTELLIGENT TESTER

- Connect the intelligent tester to the DLC3.
- Turn the engine 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):**

| Tester Display  | Test Part | Control Range | Diagnostic Note |
|-----------------|-----------|---------------|-----------------|
| HEAD LIGHT (HI) | DRL relay | ON / OFF      | -               |

**OK:**

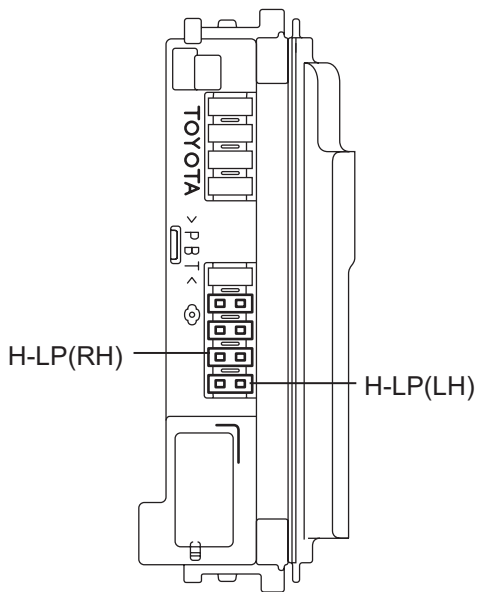
Relay operates. (High beam headlights illuminate.)

**OK**

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

**NG****2****CHECK HARNESS AND CONNECTOR (SHORT IN RELAY-DRIVEN CIRCUIT)**

Power Distributor (Engine Room J/B)



H

E121471E01

- Remove the H-LP (RH) fuse from the engine room junction block assembly.
- Turn the light control switch to the HEAD position and turn the dimmer switch to the HIGH position.
- Check if the high beam headlight LH illuminates.
- Turn the dimmer switch to the LOW position.
- Install the H-LP (RH) fuse and remove the H-LP (LH) fuse.
- Turn the dimmer switch to the HIGH position.
- Check if the high beam headlight RH illuminates.

**OK:**

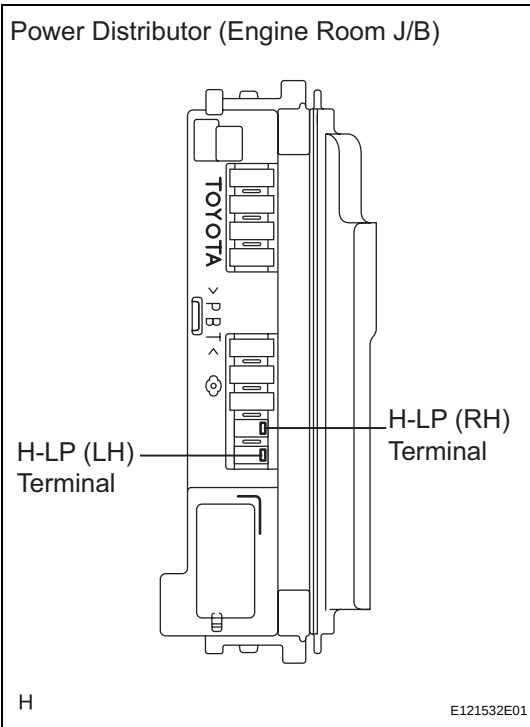
Either high beam headlight LH or RH illuminates.

**OK**

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

**NG**

### 3 INSPECT ENGINE ROOM JUNCTION BLOCK ASSEMBLY



- Remove the H-LP (RH) fuse and H-LP (LH) fuse from the engine room junction block assembly.
- Measure the voltage between the loading slot of each fuse and body ground.

#### Standard voltage

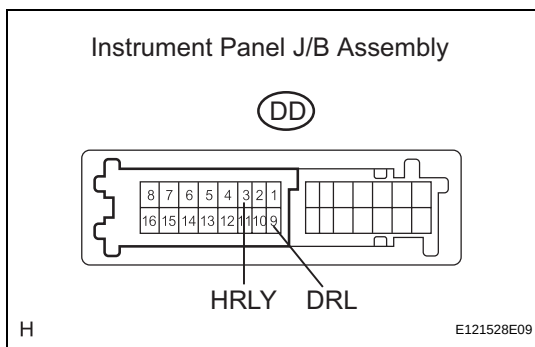
| Tester Connection                | Condition                                              | Specified Condition |
|----------------------------------|--------------------------------------------------------|---------------------|
| H-LP (RH) terminal - Body ground | Light control switch in HEAD and 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          |

OK

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

NG

### 4 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



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

#### Standard voltage

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

OK

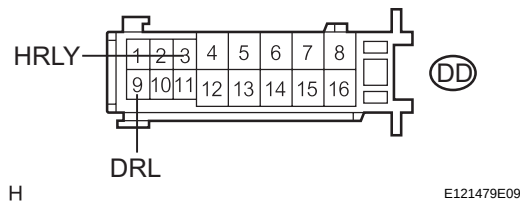
**REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY**

NG

## 5 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

### Wire Harness Side:

Instrument Panel J/B Assembly



- Disconnect the DD instrument panel junction block connector.
- Measure the voltage according to the value(s) in the table below.

### Standard voltage

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

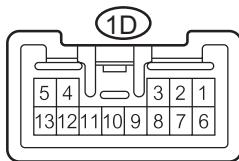
OK

**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

NG

## 6 INSPECT ENGINE ROOM JUNCTION BLOCK ASSEMBLY

Engine Room J/B Assembly



- Disconnect the 1D engine room junction block assembly connector.
- 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          |

OK

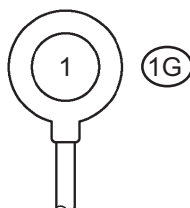
**REPAIR OR REPLACE HARNESS OR CONNECTOR (ENGINE ROOM J/B ASSEMBLY - INSTRUMENT PANEL J/B ASSEMBLY)**

NG

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

### Wire Harness Side:

Engine Room J/B Assembly



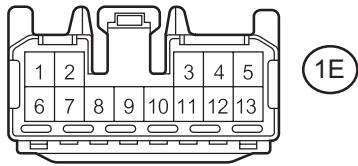
- Disconnect the 1G engine room junction block assembly connector.
- Measure the voltage according to the value(s) in the table below.

### Standard voltage

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

Wire Harness Side:

Engine Room J/B Assembly



H

E121481E01

- (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           |

OK

REPLACE ENGINE ROOM JUNCTION  
BLOCK ASSEMBLY

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

## Front Fog Light Circuit

### DESCRIPTION

When all of the following conditions are met, the front fog lights come on.

- Low beam headlights are ON.
- Front fog light switch is ON.
- High beam headlights are OFF.

When any of the following conditions is met, the front fog lights turn off.

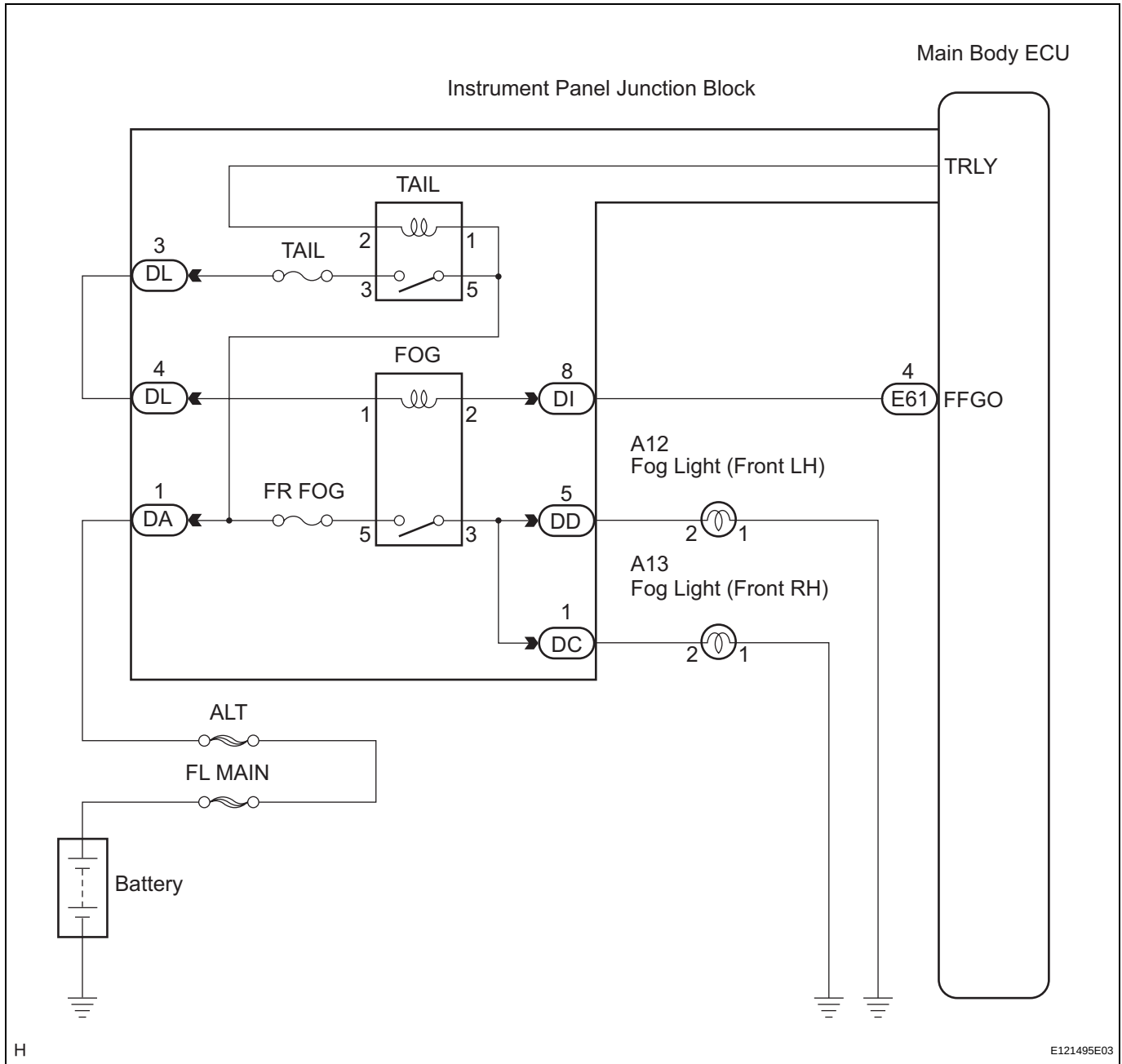
- Front fog light switch is OFF.
- Low beam headlights are OFF.
- High beam headlights are ON.

HINT:

- Before performing troubleshooting of the front fog light system, check that the taillight system and headlight system are normal.
- If only a front fog light on one side does not illuminate, inspect the bulb or wire harness that is related to the bulb.
- If both right and left front fog lights do not illuminate, read the front fog light switch value in the data list and perform the front fog light relay active test to determine if the malfunction exists on either the switch side or the relay side.



## WIRING DIAGRAM



## INSPECTION PROCEDURE

1

## PERFORM ACTIVE TEST USING INTELLIGENT TESTER

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

## MAIN BODY (MAIN BODY ECU):

| Tester Display  | Test Part                                 | Control Range | Diagnostic Note |
|-----------------|-------------------------------------------|---------------|-----------------|
| F FOG LIGHT RLY | Front fog light relay (Taillights are ON) | 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:**

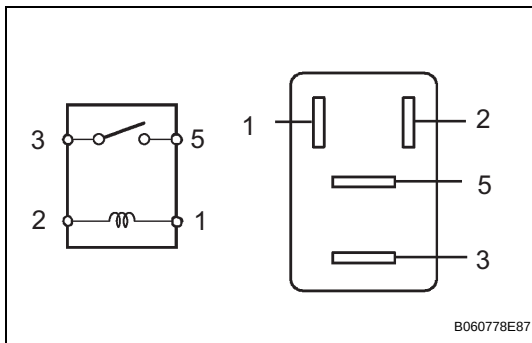
**Below 1  $\Omega$**

NG

**REPLACE FUSE**

OK

3

**INSPECT FOG LIGHT RELAY**

- (a) Remove the front fog light relay from the instrument panel junction block assembly.

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

**Standard resistance**

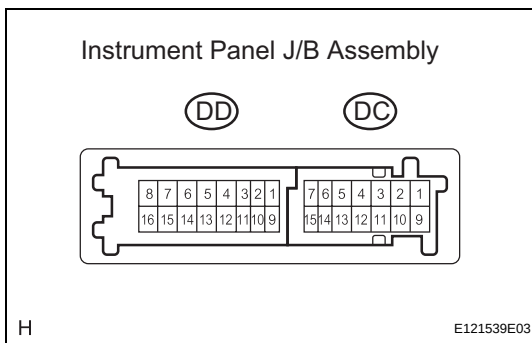
| Tester Connection | Specified Condition                                                     |
|-------------------|-------------------------------------------------------------------------|
| 3 - 5             | 10 k $\Omega$ or higher                                                 |
|                   | Below 1 $\Omega$ (When battery voltage is applied to terminals 1 and 2) |

NG

**REPLACE FOG LIGHT RELAY**

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    |
|--------------------|---------------------------------------------------------------|------------------------|
| DC-1 - Body ground | Light control switch in HEAD, front fog light switch OFF → ON | Below 1 V → 10 to 14 V |
| DD-5 - Body ground | Light control switch in HEAD, front fog light switch OFF → ON | Below 1 V → 10 to 14 V |

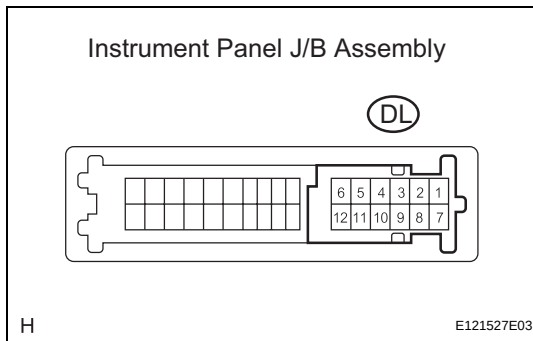
OK

**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    |
|--------------------|------------------------------------|------------------------|
| DL-3 - Body ground | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |

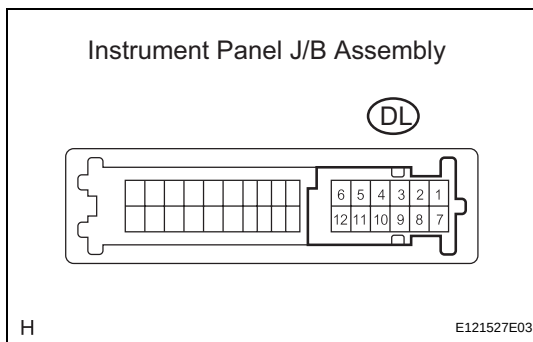
NG

**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

OK

6

## CHECK HARNESS AND CONNECTOR (BETWEEN CONNECTOR DL-3 AND CONNECTOR DL-4)



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

**Standard voltage**

| Tester Connection  | Condition                          | Specified Condition    |
|--------------------|------------------------------------|------------------------|
| DL-4 - Body ground | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |

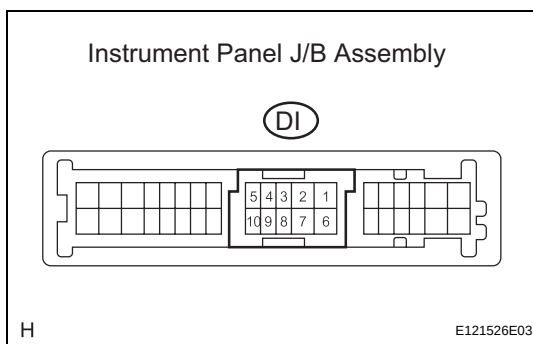
NG

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

7

## INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



- (a) Disconnect the DI instrument panel assembly connector.  
(b) Measure the voltage according to the value(s) in the table below.

**Standard voltage**

| Tester Connection  | Condition                          | Specified Condition    |
|--------------------|------------------------------------|------------------------|
| DI-8 - Body ground | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |

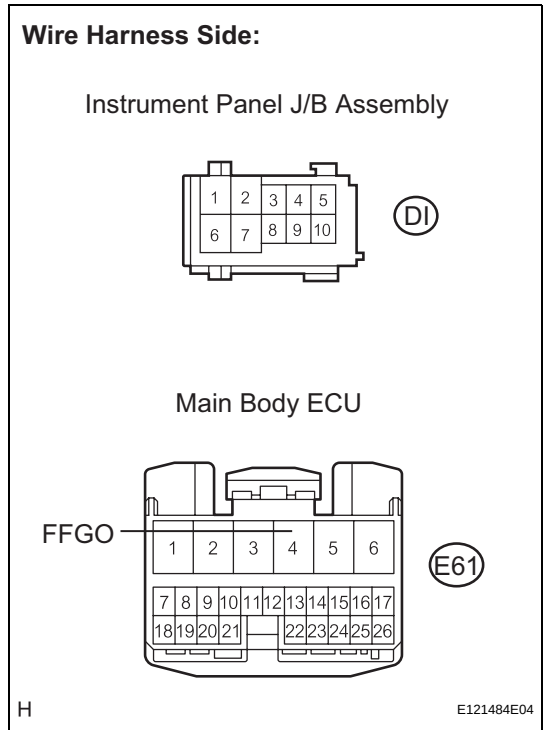
NG

**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

OK

8

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



- (a) Disconnect the E61 main body ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

| Tester Connection | Condition | Specified Condition |
|-------------------|-----------|---------------------|
| E61-4 - DI-8      | Always    | Below 1 Ω           |

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

## Light Control Switch Circuit

### DESCRIPTION

The main body ECU receives the following signals:

- Light control switch TAIL, HEAD, or AUTO signal.
- Dimmer switch HIGH or HIGH FLASH (PASS) signal.
- Front fog light switch signal.
- Rear fog light switch signal.

HINT:

- When performing troubleshooting, inspect the switch that is related to the malfunction. For example, if both right and left low beam headlights do not illuminate, read the light control switch HEAD signal value only in the data list. If the value is normal, perform the headlight relay active test.

## LI



## INSPECTION PROCEDURE

**1 READ VALUE OF INTELLIGENT TESTER**

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine 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):**

| Tester Display  | Measurement Item/Range                       | Normal Condition                                                                               | Diagnostic Note |
|-----------------|----------------------------------------------|------------------------------------------------------------------------------------------------|-----------------|
| DIMMER SW       | Dimmer switch HIGH signal / ON or OFF        | ON: Dimmer switch in HIGH or HIGH FLASH<br>OFF: Dimmer switch in LOW                           | -               |
| HIGH FLASHER SW | Dimmer switch HIGH FLASH signal / ON or OFF  | ON: Dimmer switch in HIGH FLASH<br>OFF: Dimmer switch not in HIGH FLASH                        | -               |
| F FOG LIGHT SW  | Fog light switch signal / ON or OFF          | ON: Fog light switch ON<br>OFF: Fog light switch OFF                                           | -               |
| AUTO LIGHT SW   | Light control switch AUTO signal / ON or OFF | ON: Light control switch in AUTO<br>OFF: Light control switch not in AUTO                      | -               |
| HEAD LIGHT SW   | Light control switch HEAD signal / ON or OFF | ON: Light control switch in HEAD<br>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<br>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**

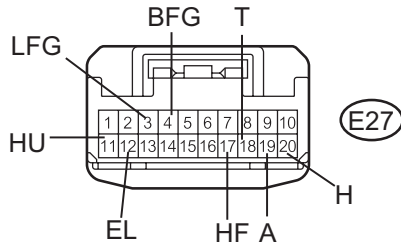
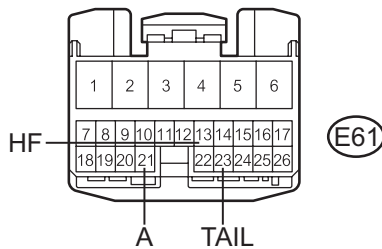
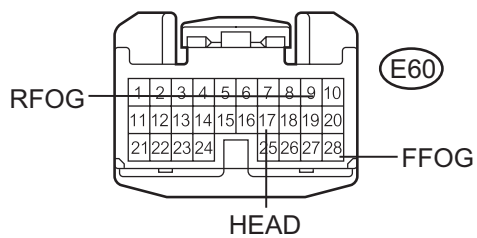
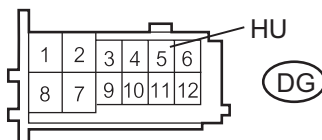
HINT:  
(See page [LI-189](#))

**OK:**

Headlight dimmer switch assembly is normal.

**NG****REPLACE HEADLIGHT DIMMER SWITCH  
ASSEMBLY****OK**

## 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

E121507E06

- Disconnect the E27 headlight dimmer switch assembly connector.
- Disconnect the E60 and E61 main body ECU connectors.
- Disconnect the DG instrument panel J/B connector.
- Measure the resistance according to the value(s) in the table below.

**Standard resistance**

| Tester Connection           | Condition | Specified Condition     |
|-----------------------------|-----------|-------------------------|
| E27-4 (BFG) - E60-28 (FFOG) | Always    | Below 1 $\Omega$        |
| E27-11 (HU) - DG-5 (HU)     | Always    | Below 1 $\Omega$        |
| E27-17 (HF) - E61-13 (HF)   | Always    | Below 1 $\Omega$        |
| E27-18 (T) - E61-23 (TAIL)  | Always    | Below 1 $\Omega$        |
| E27-19 (A) - E61-21 (A)     | Always    | Below 1 $\Omega$        |
| E27-20 (H) - E60-17 (HEAD)  | Always    | Below 1 $\Omega$        |
| E27-3 (LFG) - Body ground   | Always    | 10 k $\Omega$ or higher |
| E27-4 (BFG) - Body ground   | Always    | 10 k $\Omega$ or higher |
| E27-11 (HU) - Body ground   | Always    | 10 k $\Omega$ or higher |
| E27-17 (HF) - Body ground   | Always    | 10 k $\Omega$ or higher |
| E27-18 (T) - Body ground    | Always    | 10 k $\Omega$ or higher |
| E27-19 (A) - Body ground    | Always    | 10 k $\Omega$ or higher |
| E27-20 (H) - Body ground    | Always    | 10 k $\Omega$ or higher |
| E27-12 (EL) - Body ground   | Always    | Below 1 $\Omega$        |

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

## Door Courtesy Switch Circuit

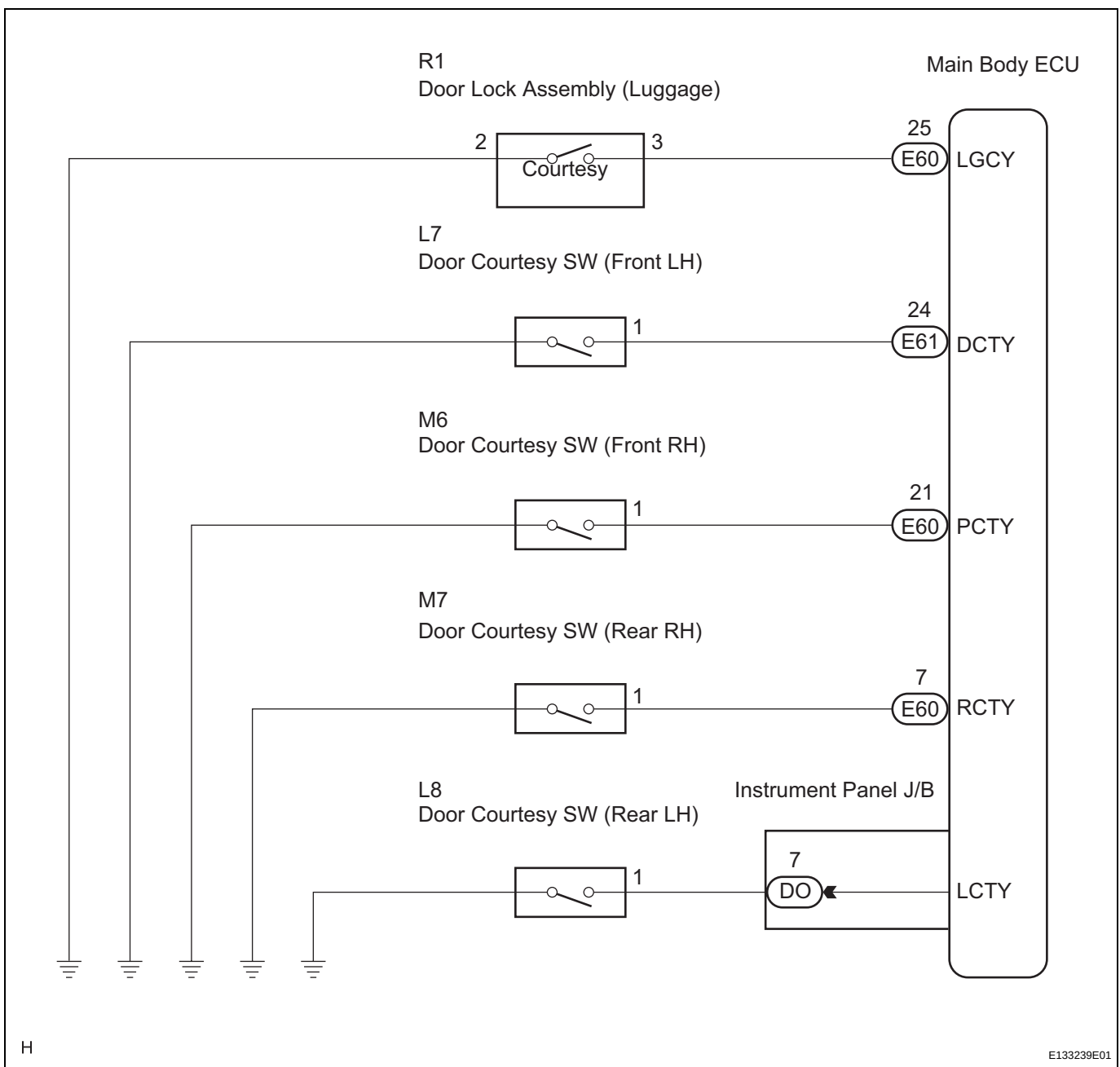
### DESCRIPTION

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

HINT:

- The main body ECU receives driver side, passenger side, rear LH, and rear RH door courtesy switch signals to control the illuminated entry system.
- The main body ECU receives driver side, passenger side, rear LH, rear RH, and luggage compartment door courtesy switch signals to control the light auto turn off system.
- When performing troubleshooting, inspect the switch that is related to the malfunction only. For example, if the illuminated entry system does not operate when opening the passenger side door with the engine switch off, inspect the passenger side door courtesy switch circuit only.

### WIRING DIAGRAM



## INSPECTION PROCEDURE

**1 READ VALUE OF INTELLIGENT TESTER**

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine 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):**

| Tester Display  | Measurement Item/Range                                      | Normal Condition                                                                | Diagnostic Note |
|-----------------|-------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------|
| D DOR CTY SW    | Driver side door courtesy switch signal / ON or OFF         | ON: Driver side door is open<br>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<br>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<br>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<br>OFF: Rear left door is closed                     | -               |
| LUGG COURTSY SW | Luggage compartment door courtesy switch signal / ON or OFF | ON: Luggage compartment door is open<br>OFF: Luggage compartment door is closed | -               |

**OK:**

Normal conditions listed above are displayed.

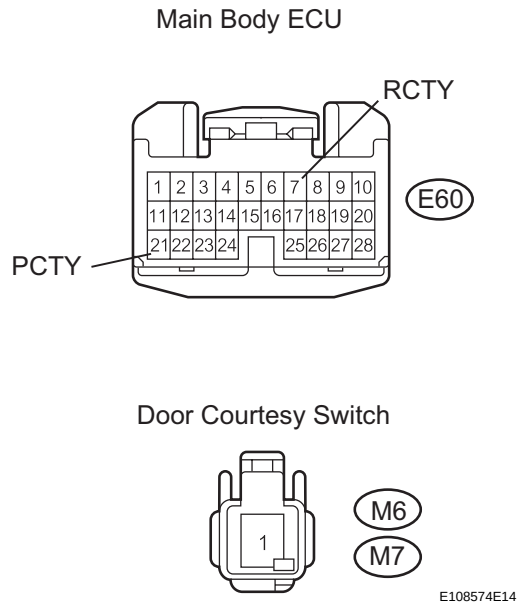
**OK****PROCEED TO NEXT CIRCUIT INSPECTION  
SHOWN IN PROBLEM SYMPTOMS TABLE****NG****2 INSPECT DOOR COURTESY SWITCH**

- (a) Inspect the front door courtesy switch (See page [LI-203](#)).
- (b) Inspect the rear door courtesy switch (See page [LI-205](#)).
- (c) Inspect the luggage compartment door courtesy switch (See page [LI-207](#)).

**OK:**

Door courtesy switches are normal.

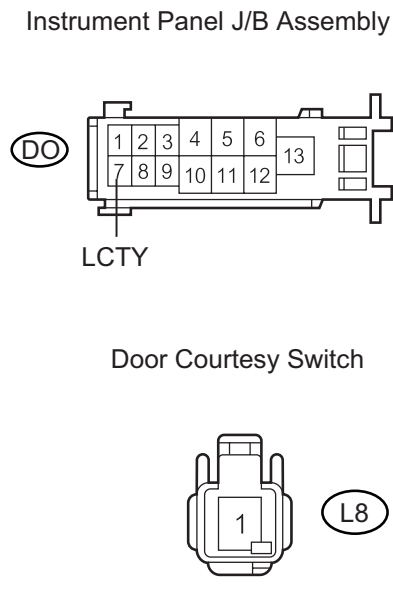
**NG****REPLACE DOOR COURTESY SWITCH****OK**

**3****CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - DOOR COURTESY SWITCH)****Wire Harness Side:**

- (a) Check the harness and connector between the main body ECU and door courtesy switches (passenger side and rear RH).
- (1) Disconnect the E60 main body ECU connector.
  - (2) Disconnect the M6 and M7 switch connectors.
  - (3) Measure the resistance according to the value(s) in the table below.

**Standard resistance**

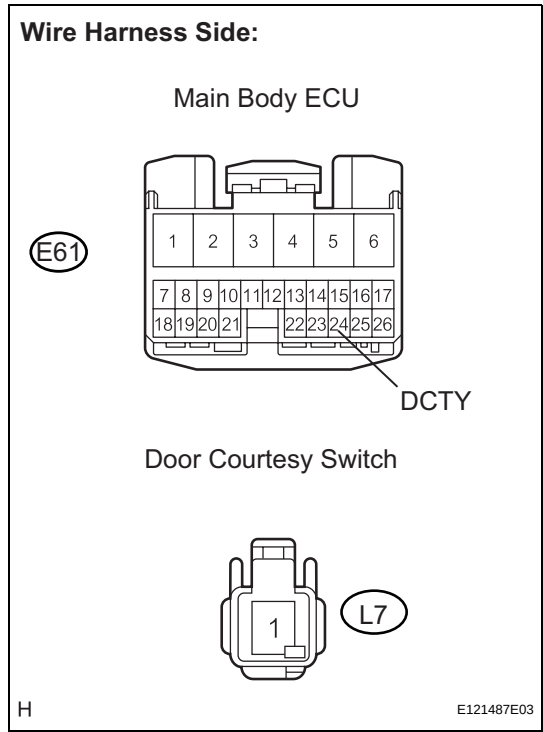
| Tester Connection                           | Condition | Specified Condition     |
|---------------------------------------------|-----------|-------------------------|
| E60-7 (RCTY) - M7-1 (Rear RH)               | Always    | Below 1 $\Omega$        |
| E60-21 (PCTY) - M6-1 (Front passenger side) | Always    | Below 1 $\Omega$        |
| E60-7 (RCTY) - Body ground                  | Always    | 10 k $\Omega$ or higher |
| E60-21 (PCTY) - Body ground                 | Always    | 10 k $\Omega$ or higher |

**Wire Harness Side:**

- (b) Check the harness and connector between the instrument panel junction block assembly and rear LH door courtesy switch.
- (1) Disconnect the DO instrument panel J/B assembly connector.
  - (2) Disconnect the L8 switch connector.
  - (3) Measure the resistance according to the value(s) in the table below.

**Standard resistance**

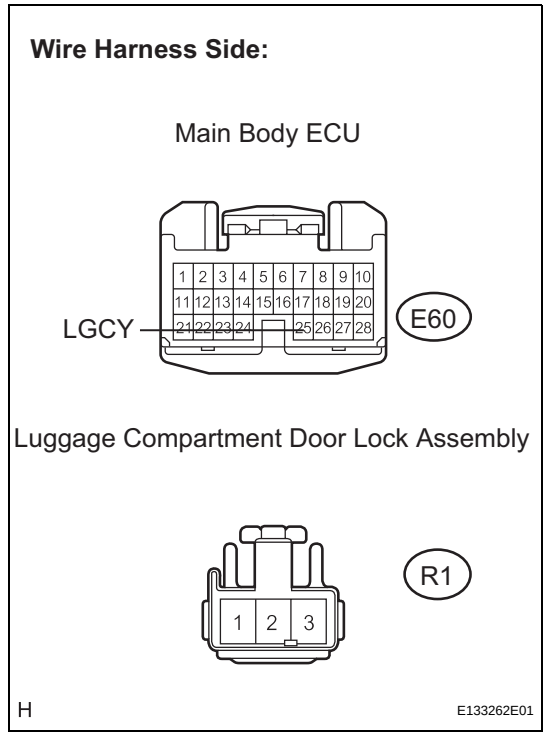
| Tester Connection            | Condition | Specified Condition     |
|------------------------------|-----------|-------------------------|
| DO-7 (LCTY) - L8-1 (Rear LH) | Always    | Below 1 $\Omega$        |
| DO-7 (LCTY) - Body ground    | Always    | 10 k $\Omega$ or higher |



- (c) Check the harness and connector between the main body ECU and driver side door courtesy switch.
- (1) Disconnect the E61 main body ECU connector.
  - (2) Disconnect the L7 switch connector.
  - (3) Measure the resistance according to the value(s) in the table below.

**Standard resistance**

| Tester Connection                  | Condition | Specified Condition     |
|------------------------------------|-----------|-------------------------|
| E61-24 (DCTY) - L7-1 (Driver side) | Always    | Below 1 $\Omega$        |
| E61-24 (DCTY) - Body ground        | Always    | 10 k $\Omega$ or higher |



- (d) Check the harness and connector between the main body ECU and luggage compartment door courtesy switch.
- (1) Disconnect the E60 main body ECU connector.
  - (2) Disconnect the R1 switch connector.
  - (3) Measure the resistance according to the value(s) in the table below.

**Standard resistance**

| Tester Connection                   | Condition | Specified Condition     |
|-------------------------------------|-----------|-------------------------|
| E60-25 (LGCY) - R1-3 (Luggage door) | Always    | Below 1 $\Omega$        |
| E60-25 (LGCY) - Body ground         | Always    | 10 k $\Omega$ or higher |

NG

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

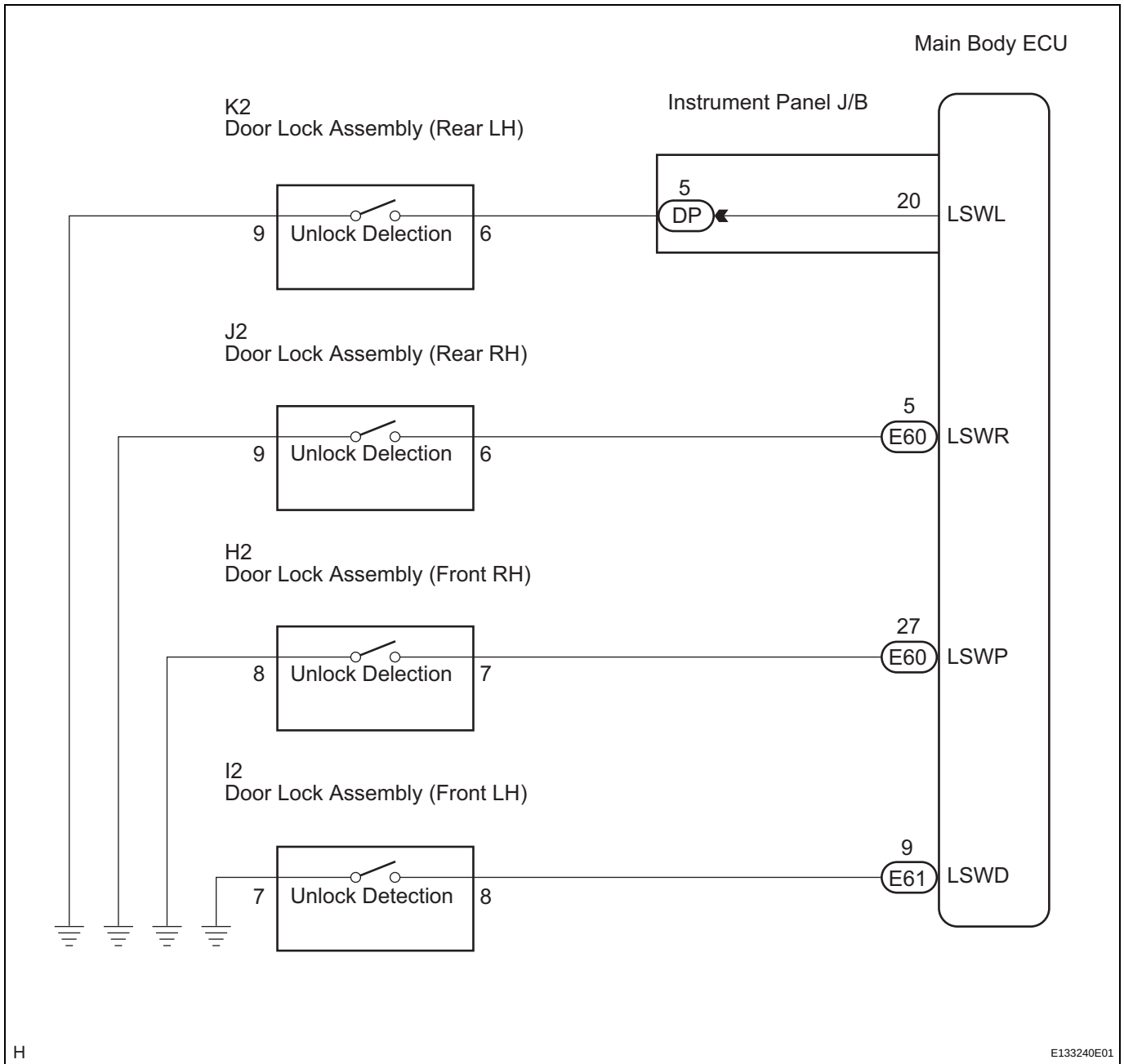
**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

## Door LOCK Position Circuit

### DESCRIPTION

The main body ECU receives driver side, passenger side, rear LH side, and rear RH side door lock position switch signals to control the illuminated entry system and light auto turn off system.

### WIRING DIAGRAM



### INSPECTION PROCEDURE

#### 1 READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.

- (b) Turn the engine 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):**

| Tester Display | Measurement Item/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<br>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<br>OFF: Passenger side door is locked | -               |
| RR LOCK POS SW | Rear right door lock position switch signal / ON or OFF     | ON: Rear right door is unlocked<br>OFF: Rear right door is locked         | -               |
| RL LOCK POS SW | Rear left door lock position switch signal / ON or OFF      | ON: Rear left door is unlocked<br>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

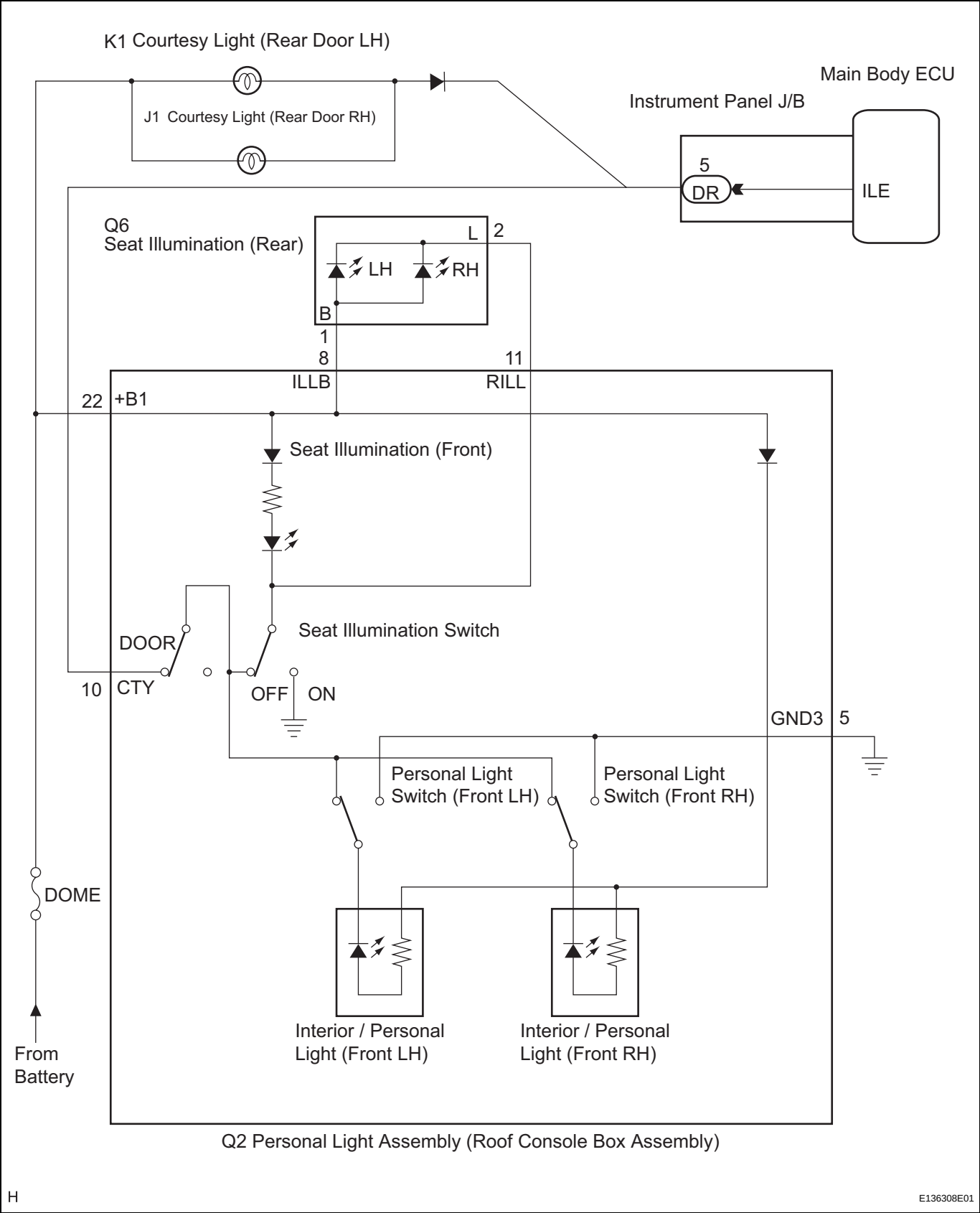
The interior light control of the illuminated entry system is controlled by the main body ECU. The operation and condition of this control are described below.

| Operation                                                  | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in                                                    | When any of the following conditions is met, the interior light, front seat illumination, rear seat illumination and rear door courtesy lights fade in. <ul style="list-style-type: none"> <li>• The key enters any actuation area around the doors when the engine switch is off and all doors are closed.</li> <li>• Any door is opened.</li> <li>• Any door is unlocked when the engine switch is off and all doors are closed.</li> <li>• The engine switch is turned from on (ACC) to off when all doors are closed.</li> </ul> |
| Fade out immediately                                       | When either of the following conditions is met, the interior light, front seat illumination, rear seat illumination and rear door courtesy lights fade out. <ul style="list-style-type: none"> <li>• The engine switch is turned from off to on (ACC or IG) when all doors are closed.</li> <li>• All doors are locked when the engine switch is off.</li> </ul>                                                                                                                                                                     |
| Illuminate for approximately 15 seconds, and then fade out | All doors are closed when the engine switch is off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### HINT:

When any of the lights do not illuminate, perform the inspection according to the PROBLEM SYMPTOMS TABLE. When all of the lights (interior light, front seat illumination, rear seat illumination, and rear door courtesy lights) do not illuminate, perform the ACTIVE TEST of the illuminated entry system. If it is normal, there may be a malfunction in the door courtesy switch circuit, door lock position switch circuit, or engine switch circuit.

WIRING DIAGRAM



## INSPECTION PROCEDURE

**1 PERFORM ACTIVE TEST USING INTELLIGENT TESTER**

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine switch on (IG) and turn the intelligent tester main switch on.
- (c) Select the item(s) below in the ACTIVE TEST, and check the operation.

**MAIN BODY (MAIN BODY ECU):**

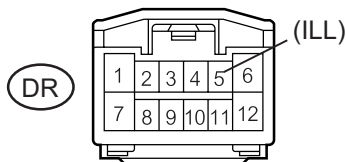
| Tester Display | Test Part                                                                                                                                                                                                        | Control Range | Diagnostic Note |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|
| ILLUMI OUTPUT  | Interior light, front seat illumination, rear seat illumination and rear door courtesy lights<br>(Front personal switches are OFF, DOOR switch is ON, seat illumination switch is OFF, and all doors are closed) | ON / OFF      | -               |

**OK:**

Each light illuminates.

**OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****NG****2 CHECK HARNESS AND CONNECTOR (BATTERY - INSTRUMENT PANEL J/B AND BATTERY)****Wire Harness Side:**

Instrument Panel J/B



H

E136309E01

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

**Standard voltage**

| Tester Connection        | Condition | Specified Condition |
|--------------------------|-----------|---------------------|
| DR-5 (ILL) - Body ground | Always    | 10 to 14 V          |

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

Footwell Light Circuit

DESCRIPTION

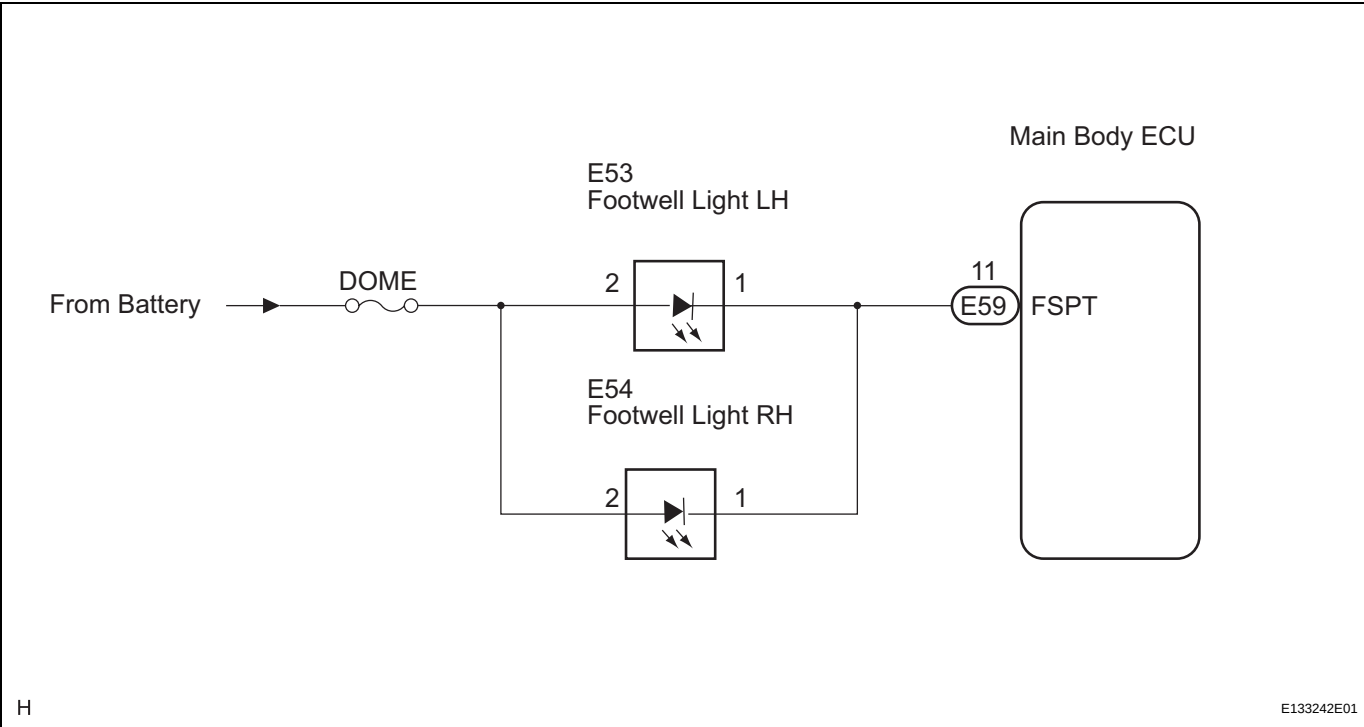
The footwell illumination control is controlled by the main body ECU. The operation and condition of this control are described below.

| Operation                                                  | Condition                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in                                                    | When any of the following conditions is met, the footwell illumination fades in. <ul style="list-style-type: none"><li>Any door is opened.</li><li>Any door is unlocked when the engine switch is off and all doors are closed.</li><li>The engine switch is turned from off to on (IG) when all doors are closed.</li></ul>                                                                                  |
| Fade out immediately                                       | When either of the following conditions is met, the footwell illumination fades out immediately. <ul style="list-style-type: none"><li>All doors are closed when the engine switch is off and all doors are locked.</li><li>All doors are locked when the engine switch is off.</li></ul>                                                                                                                     |
| Illuminate for approximately 15 seconds, and then fade out | When either of the following conditions is met, the footwell illumination illuminates for approximately 15 seconds and then fade out. <ul style="list-style-type: none"><li>The engine switch is turned from on (IG) to off when all door are closed.</li><li>All doors are closed when the engine switch is off.</li></ul>                                                                                   |
| Dim                                                        | When either of the following conditions is met, the footwell illumination dims. <ul style="list-style-type: none"><li>The shift lever is adjusted to any position other than P when the footwell light is on, the engine switch is on (IG), and the shift lever is in the P position.</li><li>The engine switch is turned from off to on (IG) when the shift lever is in any position other than P.</li></ul> |

HINT:

- Before performing troubleshooting of the footwell illumination control, check that the interior light control of the illuminated entry system is normal.
- When one side footwell illumination does not come on, check the light or wire harness that is related to the light. When both right and left footwell lights do not come on, perform the ACTIVE TEST of the footwell illumination.

WIRING DIAGRAM



## INSPECTION PROCEDURE

**1 PERFORM ACTIVE TEST USING INTELLIGENT TESTER**

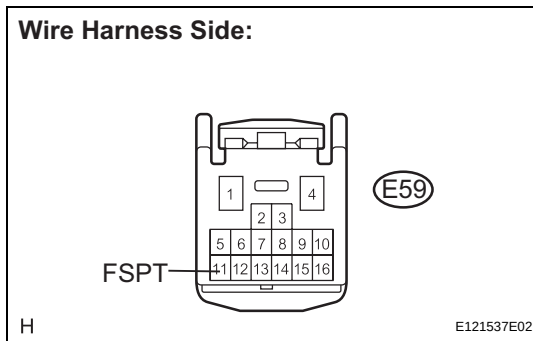
- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine switch on (IG).
- (c) Turn the intelligent tester main switch on.
- (d) Select the item(s) below in the ACTIVE TEST, and check the operation.

**MAIN BODY (MAIN BODY ECU):**

| Tester Display | Test Part       | Control Range | Diagnostic Note |
|----------------|-----------------|---------------|-----------------|
| STEP LIGHT     | Footwell lights | ON / OFF      | -               |

**OK:**

Footwell lights come on.

**OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****NG****2 CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - BATTERY)****Wire Harness Side:**

- (a) Disconnect the E59 main body ECU connector.
- (b) Measure the voltage according to the value(s) in the table.

**Standard voltage**

| Tester Connection           | Condition | Specified Condition |
|-----------------------------|-----------|---------------------|
| E59-11 (FSPT) - Body ground | Always    | 10 to 14 V          |

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

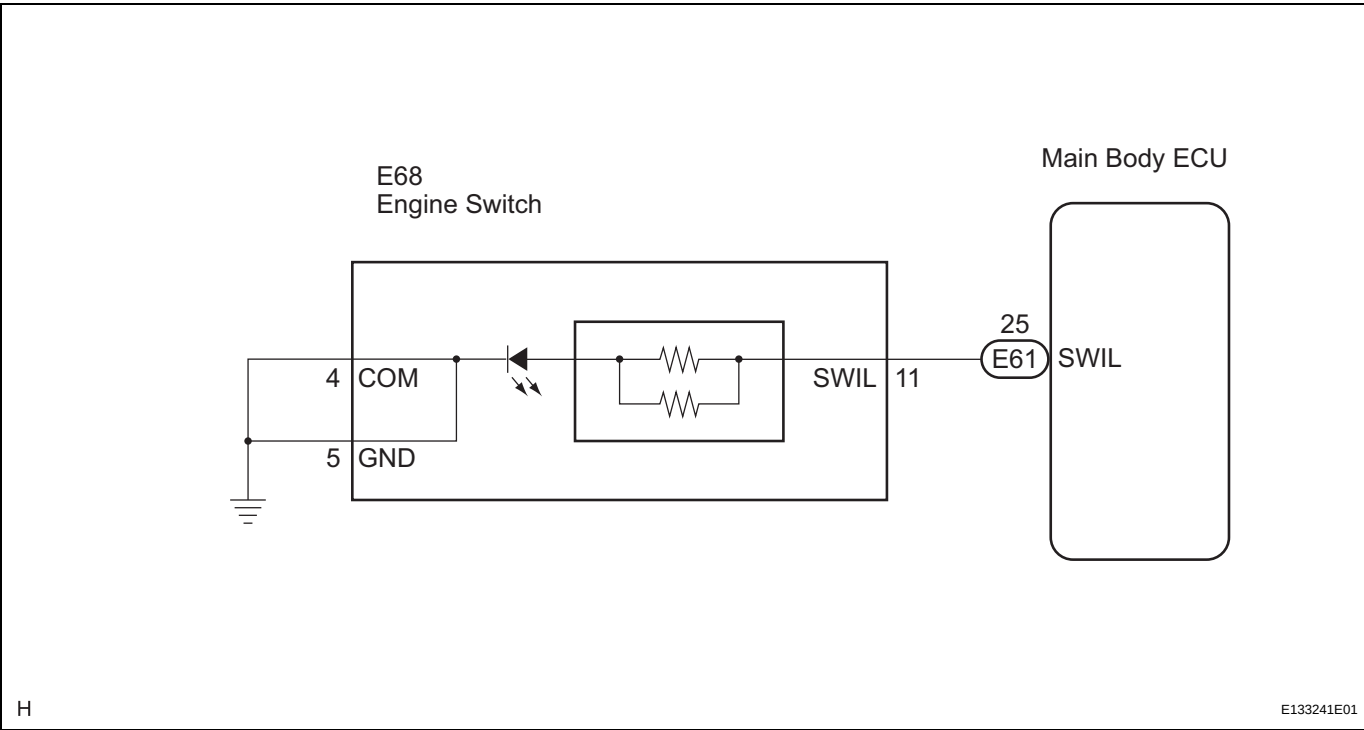
Engine Switch Illumination Circuit

DESCRIPTION

The engine switch illumination is controlled by the main body ECU. The operation and condition of this control are described below (Light control switch is OFF).

| Operation                                                  | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in                                                    | When any of the following conditions is met, the engine switch illumination fades in. <ul style="list-style-type: none"><li>• The key enters any actuation area around the doors when the engine switch is off and all doors are closed.</li><li>• Any door is opened.</li><li>• Any door is unlocked when the engine switch is off and all doors are closed.</li><li>• The engine switch is turned from on (ACC) to off when all doors are closed.</li></ul> |
| Fade out immediately                                       | When either of the following conditions is met, the engine switch illumination fades out. <ul style="list-style-type: none"><li>• The engine switch is turned from off to on (ACC or IG) when all doors are closed.</li><li>• All doors are locked when the engine switch is off.</li></ul>                                                                                                                                                                   |
| Illuminate for approximately 15 seconds, and then fade out | All doors are closed when the engine switch is off.                                                                                                                                                                                                                                                                                                                                                                                                           |

WIRING DIAGRAM



INSPECTION PROCEDURE

1 PERFORM ACTIVE TEST USING INTELLIGENT TESTER

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine switch on (IG).
- (c) Turn the intelligent tester main switch on.

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

**MAIN BODY (MAIN BODY ECU):**

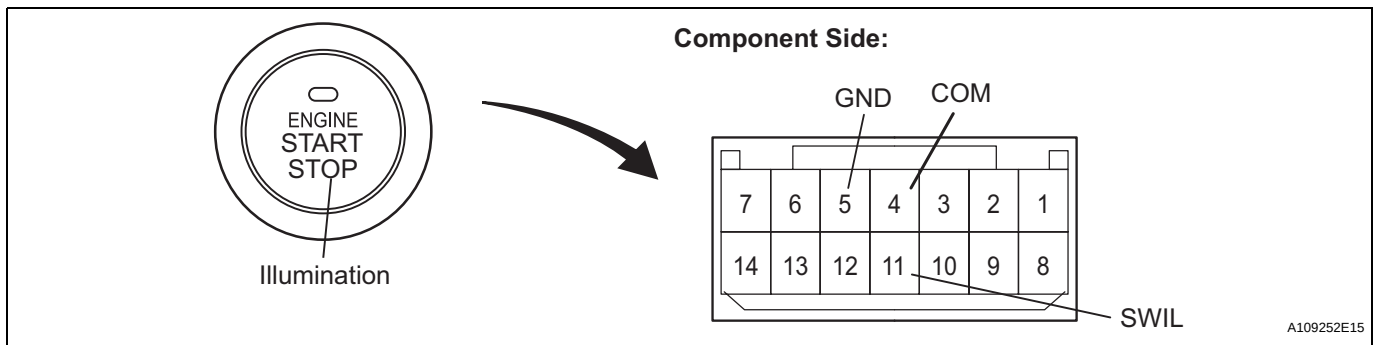
| Tester Display | Test Part                  | Control Range | Diagnostic Note |
|----------------|----------------------------|---------------|-----------------|
| LIGHTING IND   | Engine switch illumination | ON / OFF      | -               |

**OK:**

Engine switch illumination comes on.

**OK****PROCEED TO NEXT CIRCUIT INSPECTION  
SHOWN IN PROBLEM SYMPTOMS TABLE****NG****2****INSPECT ENGINE SWITCH**

- (a) Remove the engine switch.



- (b) Apply battery voltage to the engine switch.  
(c) Check that the illumination comes on.

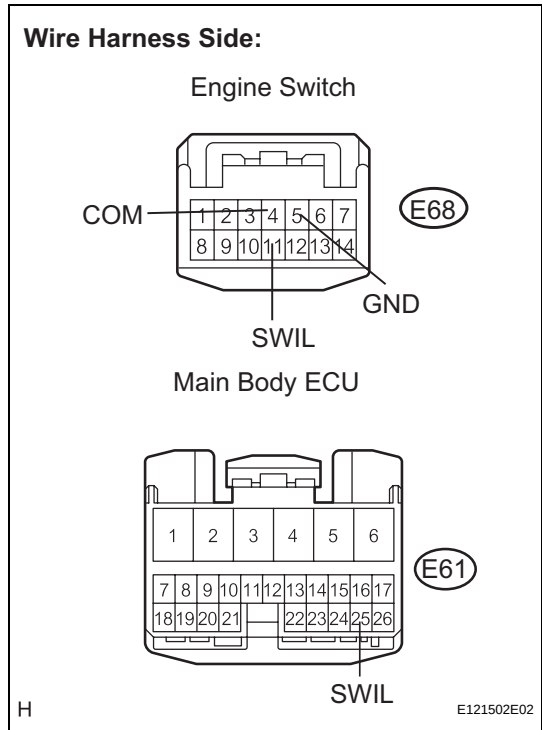
**OK**

| Measurement Condition                                                                           | Specified Condition                 |
|-------------------------------------------------------------------------------------------------|-------------------------------------|
| Battery positive (+) → Terminal 11 (SWIL)<br>Battery negative (-) → Terminal 5 (GND) or 4 (COM) | Engine switch illumination comes on |

**NG****REPLACE ENGINE SWITCH****OK**

3

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



- (a) Disconnect the E61 main body ECU connector.
- (b) Disconnect the E68 engine switch connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard resistance

| Tester Connection                        | Condition | Specified Condition |
|------------------------------------------|-----------|---------------------|
| E68-11 (SWIL) - E61-25 (SWIL)            | Always    | Below 1 Ω           |
| E68-4 (COM) or E68-5 (GND) - Body ground | Always    | Below 1 Ω           |
| E68-11 (SWIL) - Body ground              | Always    | 10 kΩ or higher     |

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

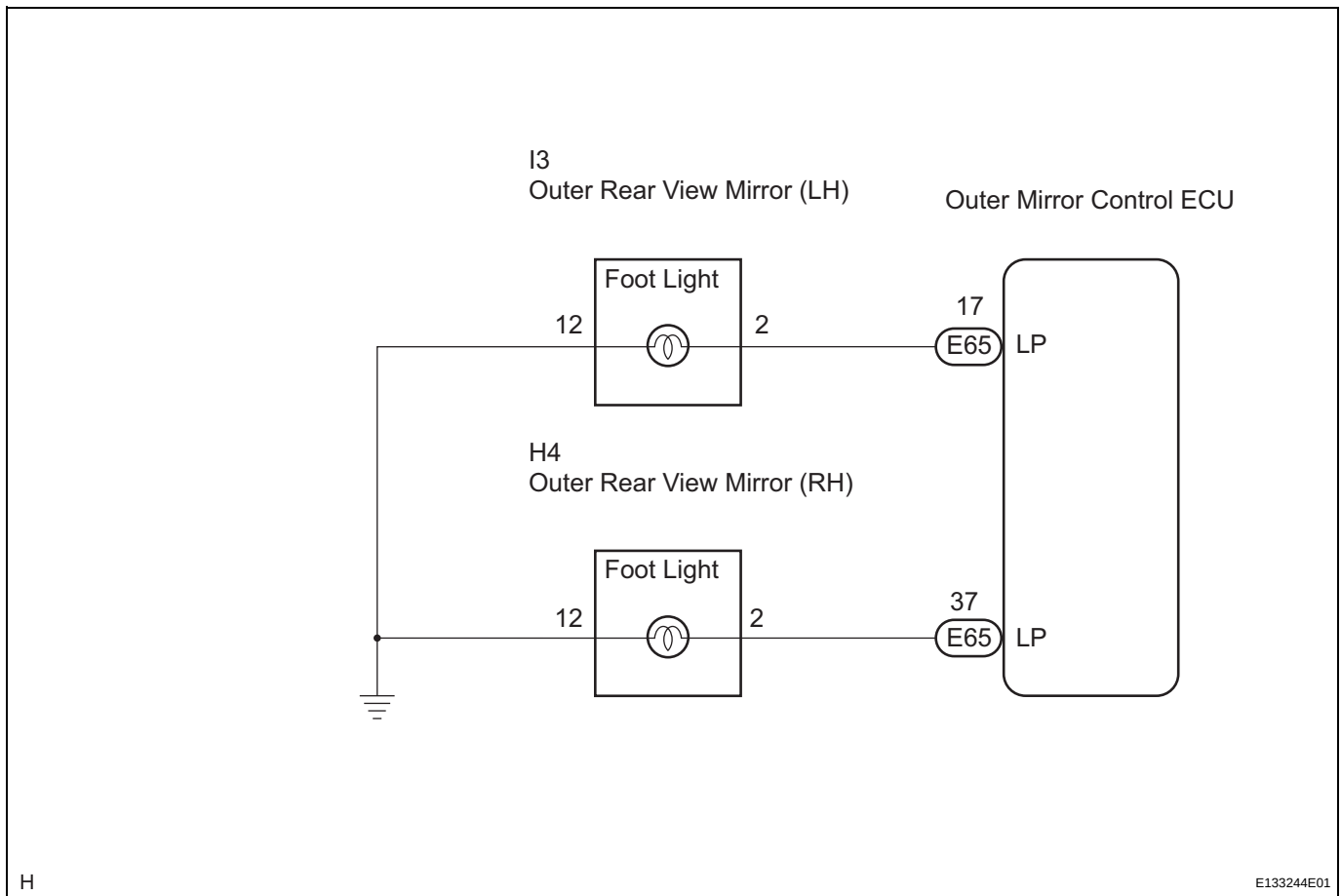
## Door Mirror Foot Light Circuit

### DESCRIPTION

The door mirror foot light is controlled by the mirror ECU. The operation and condition of this control are described below.

| Operation                   | Condition                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fade in (During 15 seconds) | When any of the following conditions is met, the door mirror foot light fades in. <ul style="list-style-type: none"> <li>The key enters any actuation area around the doors.</li> <li>The driver or front passenger side door is opened when the footwell illumination is on.</li> <li>Any door is unlocked when the shift lever is in the P position.</li> </ul> |
| Fade out                    | When either of the following conditions is met, the door mirror foot light fades out. <ul style="list-style-type: none"> <li>The shift lever is put into any position other than P when the engine switch is on (IG) and the foot well illumination is on.</li> <li>All doors are locked when the footwell illumination is on.</li> </ul>                         |

### WIRING DIAGRAM



### INSPECTION PROCEDURE

#### 1 INSPECT OUTER REAR VIEW MIRROR ASSEMBLY (DOOR MIRROR FOOT LIGHT)

HINT:  
(See page [LI-185](#)).

NG

REPLACE OUTER REAR VIEW MIRROR ASSEMBLY

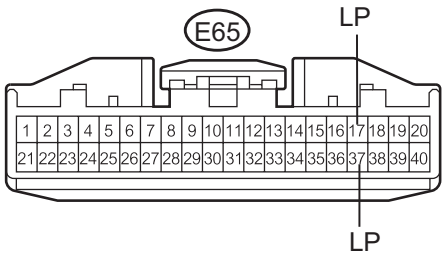
OK

2

CHECK HARNESS AND CONNECTOR (OUTER REAR VIEW MIRROR - ECU AND BODY GROUND)

Wire Harness Side:

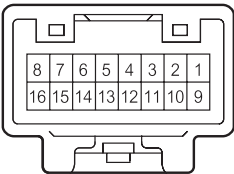
Outer Mirror Control ECU



Outer Rear View Mirror

LH: I3

RH: H4



E133270E01

- (a) Disconnect the E65 outer mirror control ECU connector.
- (b) Disconnect the I3 or H4 outer rear view mirror connector.
- (c) Measure the resistance according to the value(s) in the table.

Standard resistance:

LH Side

| Tester Connection         | Condition | Specified Condition |
|---------------------------|-----------|---------------------|
| E65-17 (LP) - I3-2        | Always    | Below 1 Ω           |
| I3-12 - Body ground       | Always    | Below 1 Ω           |
| E65-17 (LP) - Body ground | Always    | 10 kΩ or higher     |

RH Side

| Tester Connection         | Condition | Specified Condition |
|---------------------------|-----------|---------------------|
| E65-37 (LP) - H4-2        | Always    | Below 1 Ω           |
| H4-12 - Body ground       | Always    | Below 1 Ω           |
| E65-37 (LP) - Body ground | Always    | 10 kΩ or higher     |

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

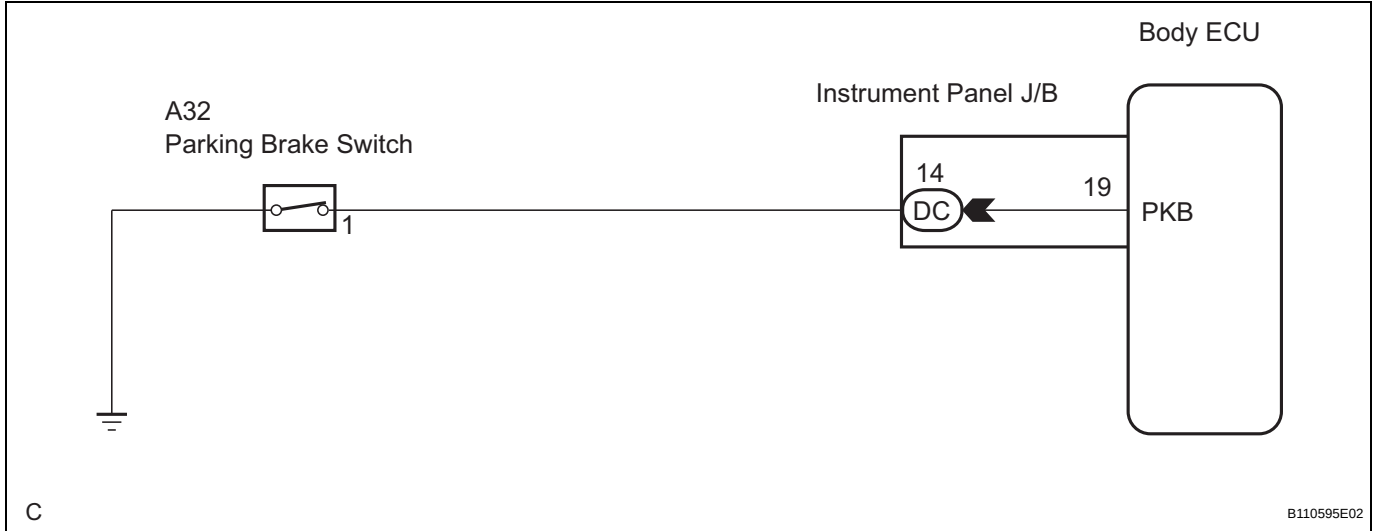
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

## 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

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

#### MAIN BODY (MAIN BODY ECU):

| Tester Display   | Measurement Item/Range              | Normal Condition                                                   | Diagnostic Note |
|------------------|-------------------------------------|--------------------------------------------------------------------|-----------------|
| PARKING BRAKE SW | Parking brake SW signal / ON or OFF | ON: Parking brake switch is ON<br>OFF: Parking brake switch is OFF | -               |

**OK:**

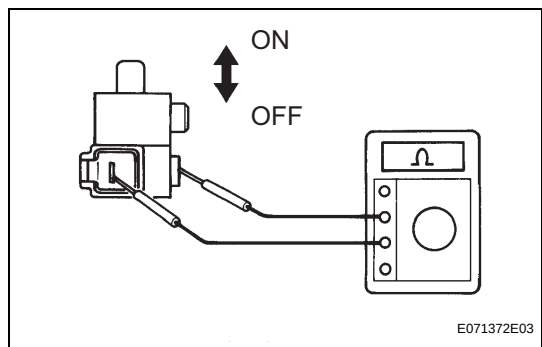
Normal conditions listed above are displayed.

**OK**

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

**NG**

2INSPECT PARKING BRAKE SWITCH ASSEMBLY



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

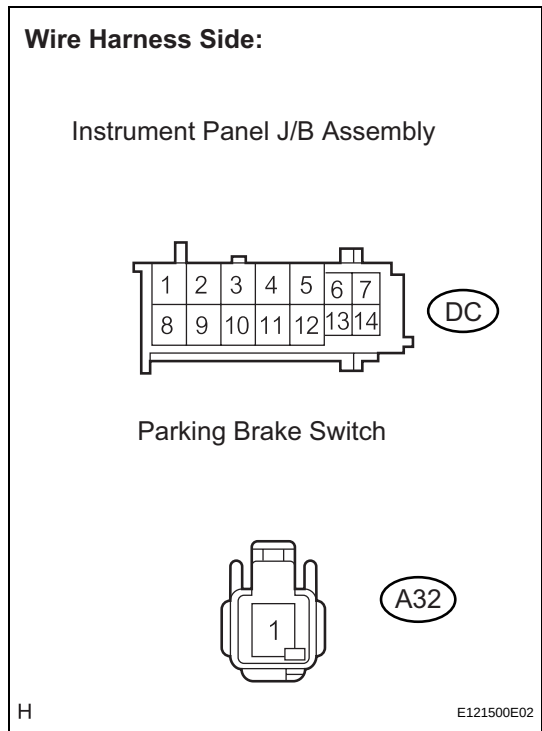
Standard resistance

| Tester Connection | Condition                   | Specified Condition |
|-------------------|-----------------------------|---------------------|
| 1 - Switch body   | Shaft is pushed in (OFF)    | 10 kΩ or higher     |
| 1 - Switch body   | Shaft is not pushed in (ON) | Below 1 Ω           |

NGREPLACE PARKING BRAKE SWITCH ASSEMBLY

OK

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



- (a) Disconnect the DC instrument panel junction block assembly connector.  
(b) Disconnect the A32 switch connector.  
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

| Tester Connection   | Condition | Specified Condition |
|---------------------|-----------|---------------------|
| DC-14 - A32-1       | Always    | Below 1 Ω           |
| DC-14 - Body ground | Always    | 10 kΩ or higher     |

NGREPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

## Taillight Relay Circuit

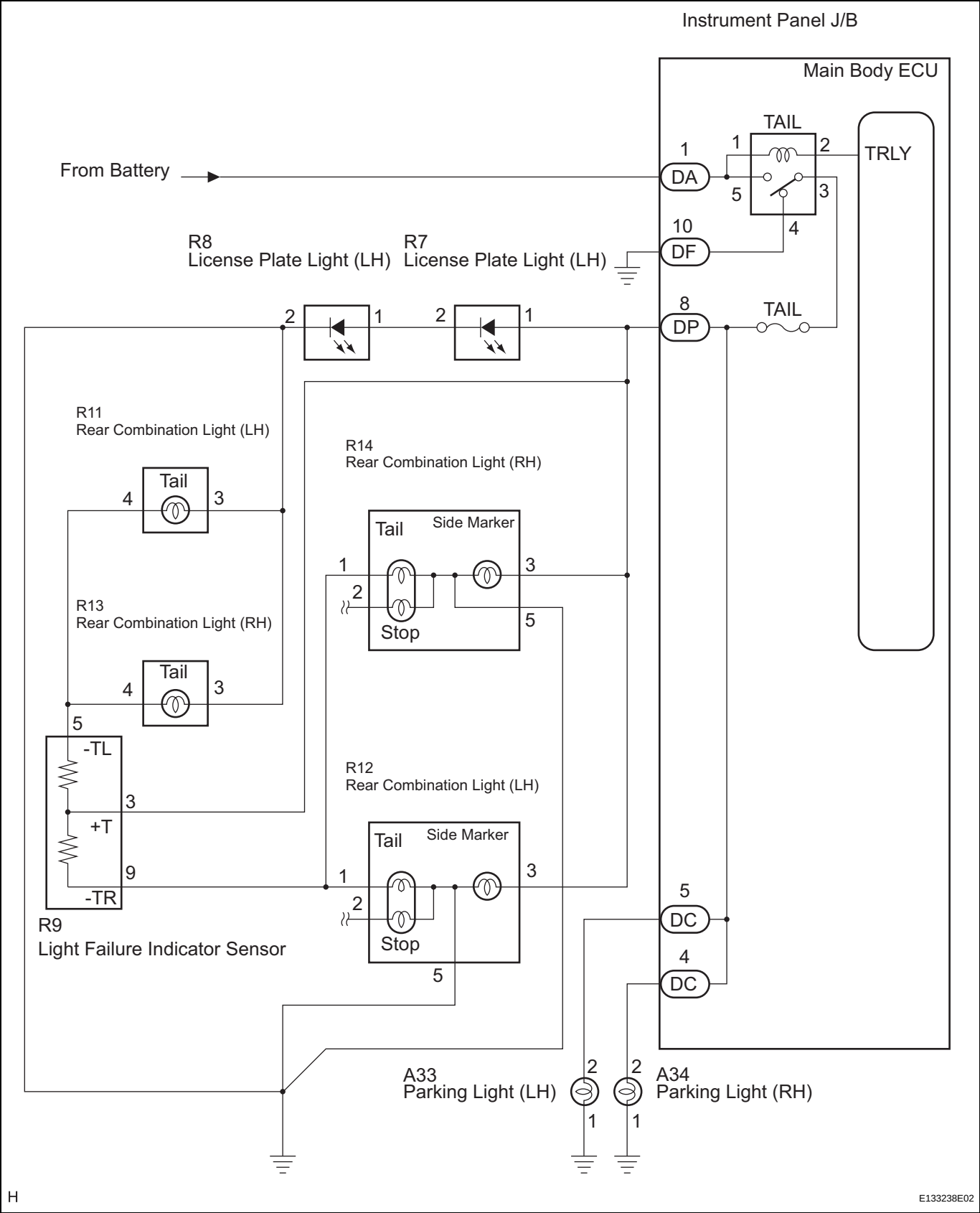
### DESCRIPTION

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

HINT:

- When any of the lights do not illuminate, check the bulb or wire harness that is related to the bulb.
- When all of the lights that are related to the TAIL relay do not illuminate and the TAIL fuse is normal, read the light control switch TAIL signal value in the data list and perform the taillight relay active test to determine if the malfunction exists on either the switch side or the relay side.

WIRING DIAGRAM



## INSPECTION PROCEDURE

**1 PERFORM ACTIVE TEST USING INTELLIGENT TESTER**

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine 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):**

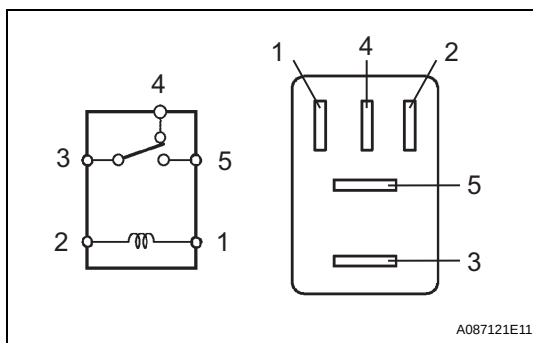
| Tester Display | Test Part       | Control Range | Diagnostic Note |
|----------------|-----------------|---------------|-----------------|
| TAIL LIGHT     | Taillight relay | ON / OFF      | -               |

**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  $\Omega$** **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 k $\Omega$ or higher                                                        |
|                   | Below 1 $\Omega$ (When battery voltage is applied to terminals 1 and 2)        |
| 3 - 4             | Below 1 $\Omega$                                                               |
|                   | 10 k $\Omega$ or higher (When battery voltage is applied to terminals 1 and 2) |

**NG****REPLACE TAILLIGHT RELAY****OK**

#### 4 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

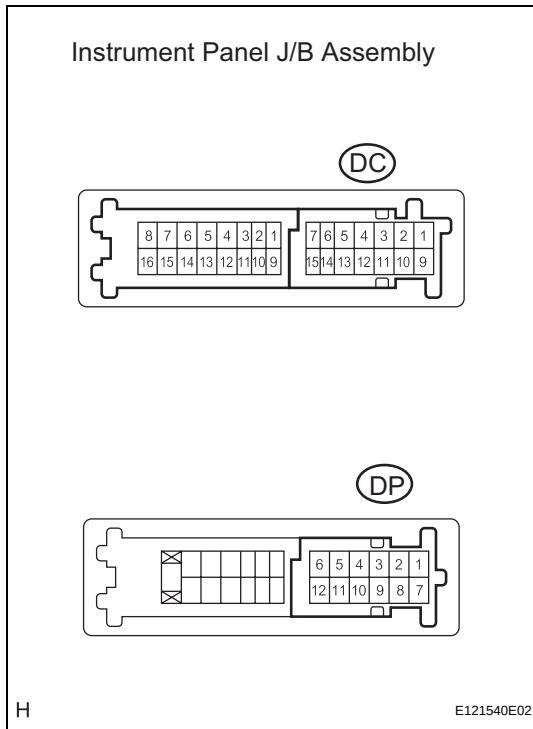
- (a) Disconnect the DP and DC instrument panel J/B assembly connectors.
- (b) Measure the voltage according to the value(s) in the table below.

##### Standard voltage

| Tester Connection  | Condition                          | Specified Condition    |
|--------------------|------------------------------------|------------------------|
| DC-4 - Body ground | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |
| DC-5 - Body ground | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |
| DP-8 - Body ground | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |

OK

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

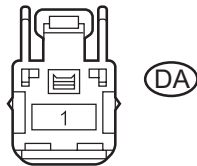


NG

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

##### Wire Harness Side:

Instrument Panel J/B Assembly



- (a) Disconnect the DA 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 |
|--------------------|-----------|---------------------|
| DA-1 - Body ground | Always    | 10 to 14 V          |

NG

**REPAIR OR REPLACE HARNESS OR  
CONNECTOR**

OK

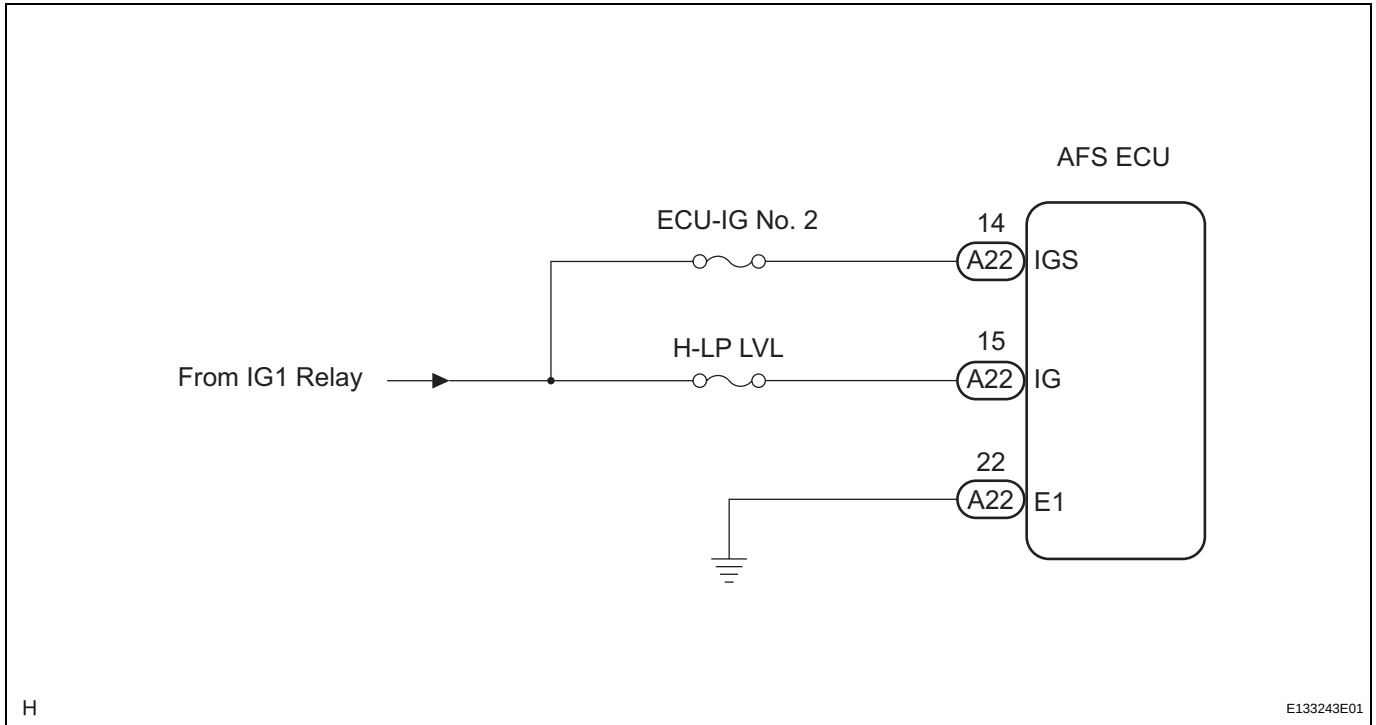
**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

## AFS ECU Power Source Circuit

### DESCRIPTION

This circuit detects the state of the engine switch. The AFS ECU receives it from the engine switch.

### WIRING DIAGRAM



### INSPECTION PROCEDURE

#### 1 INSPECT FUSE (ECU-IG NO. 2 OR H-LP LVL)

- (a) Remove the ECU-IG No. 2 fuse or H-LP LVL fuse from the instrument panel junction block assembly.
- (b) Measure the resistance of the fuse.

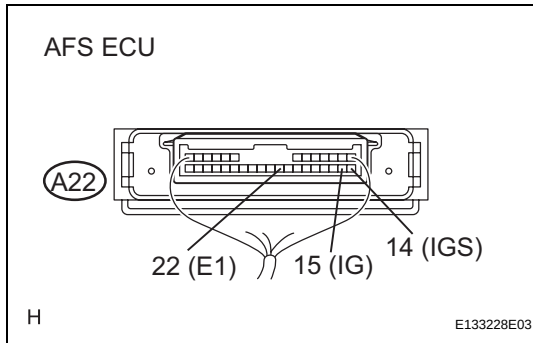
**Standard resistance:**

**Below 1  $\Omega$**

NG

REPLACE FUSE

OK

**2 INSPECT AFS ECU**

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

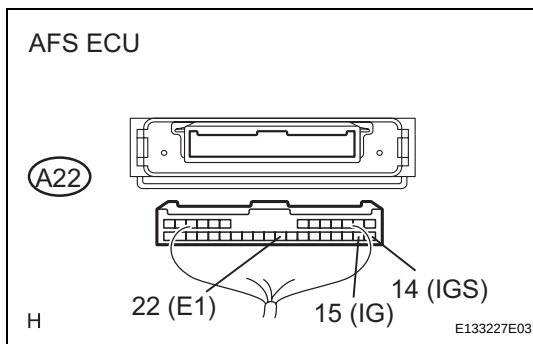
**Standard voltage**

| Tester Connection          | Condition             | Specified Condition |
|----------------------------|-----------------------|---------------------|
| A22-14 (IGS) - A22-22 (E1) | Engine switch off     | Below 1 V           |
| A22-14 (IGS) - A22-22 (E1) | Engine switch on (IG) | 10 to 14 V          |
| A22-15 (IG) - A22-22 (E1)  | Engine switch off     | Below 1 V           |
| A22-15 (IG) - A22-22 (E1)  | Engine switch on (IG) | 10 to 14 V          |

OK

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

NG

**3 CHECK WIRE HARNESS (AFS ECU - BATTERY AND BODY GROUND)**

- (a) Disconnect the A22 AFS ECU connector.  
(b) Measure the voltage and resistance according to the value(s) in the table below.

**Standard voltage**

| Tester Connection          | Condition             | Specified Condition |
|----------------------------|-----------------------|---------------------|
| A22-14 (IGS) - Body ground | Engine switch on (IG) | 10 to 14 V          |
| A22-15 (IG) - Body ground  | Engine switch on (IG) | 10 to 14 V          |

**Standard resistance**

| Tester Connection         | Condition | Specified Condition |
|---------------------------|-----------|---------------------|
| A22-22 (E1) - Body ground | Always    | Below 1 $\Omega$    |

NG

**REPAIR OR REPLACE HARNESS OR  
CONNECTOR**

OK

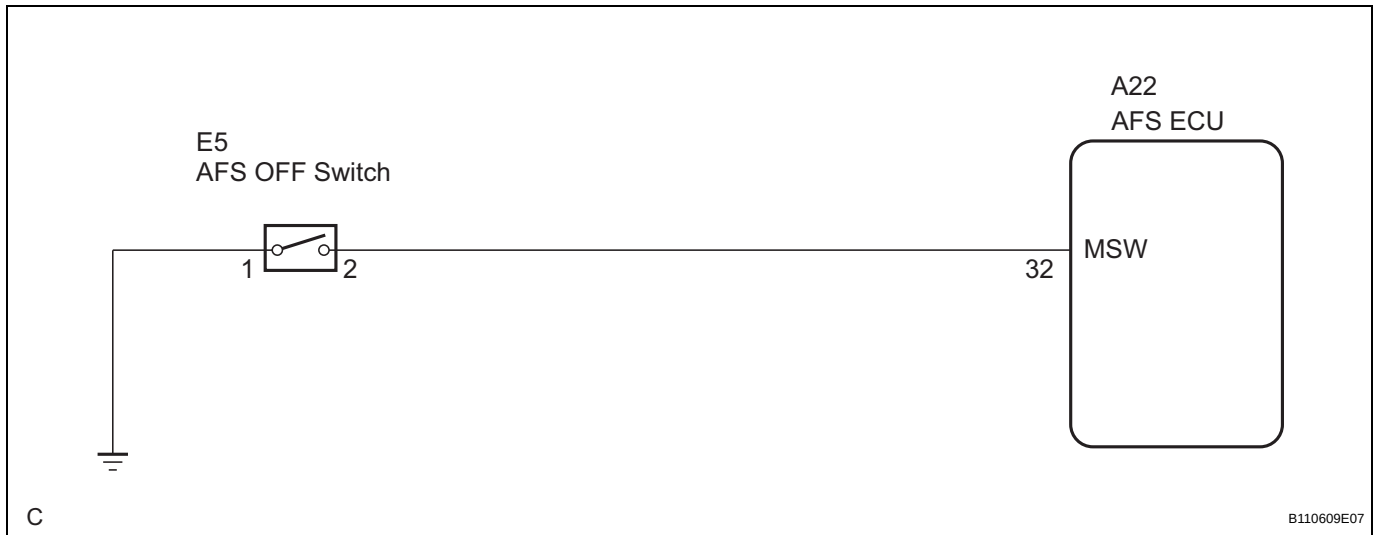
**REPLACE AFS ECU**

## AFS OFF Switch Circuit

### DESCRIPTION

When the AFS switch is pushed (ON), the AFS ECU will cancel the intelligent AFS control and turns on the AFS OFF indicator light.

### WIRING DIAGRAM



### INSPECTION PROCEDURE

#### 1 READ VALUE OF INTELLIGENT TESTER

- Connect the intelligent tester to the DLC3.
- Turn the engine switch on (IG).
- Turn the intelligent tester main switch on.
- Turn the clearance sonar main switch on.
- Select the item below in the DATA LIST, and read its value displayed on the intelligent tester.

#### AFS (AFS ECU)

| Tester Display | Measurement Item/Range         | Normal Condition                                                       | Diagnostic Note |
|----------------|--------------------------------|------------------------------------------------------------------------|-----------------|
| AFS OFF SW     | AFS OFF switch signal ON / OFF | ON: AFS OFF switch pushed (ON)<br>OFF: AFS OFF switch not pushed (OFF) | -               |

OK

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

NG

#### 2 INSPECT AFS OFF SWITCH

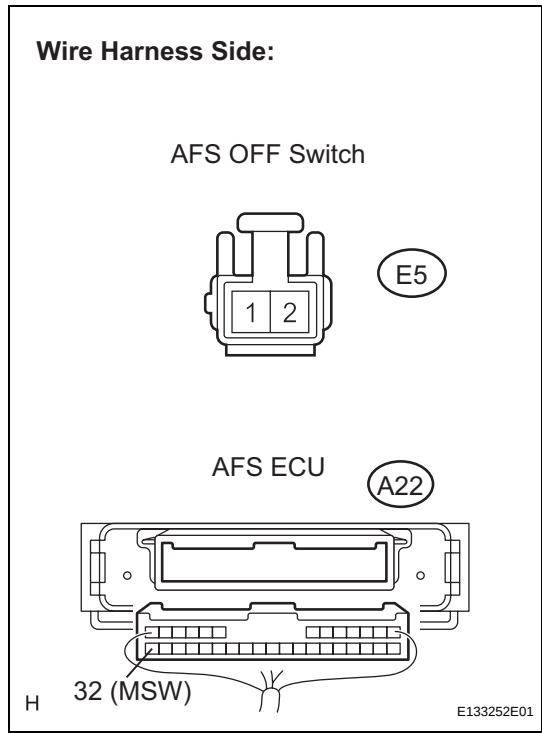
HINT:  
(See page [LI-198](#))

NG

**REPLACE AFS OFF SWITCH**

OK

3 CHECK HARNESS AND CONNECTOR (AFS OFF SWITCH - AFS ECU AND BODY GROUND)



- (a) Disconnect the A22 AFS ECU connector.
- (b) Disconnect the E5 AFS OFF switch connector.
- (c) Measure the resistance according to the value (s) in the table below.

Standard resistance

| Tester Connection          | Condition | Specified Condition |
|----------------------------|-----------|---------------------|
| A22-32 (MSW) - E5-2        | Always    | Below 1 Ω           |
| E5-1 - Body ground         | Always    | Below 1 Ω           |
| A22-32 (MSW) - Body ground | Always    | Below 1 Ω           |

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

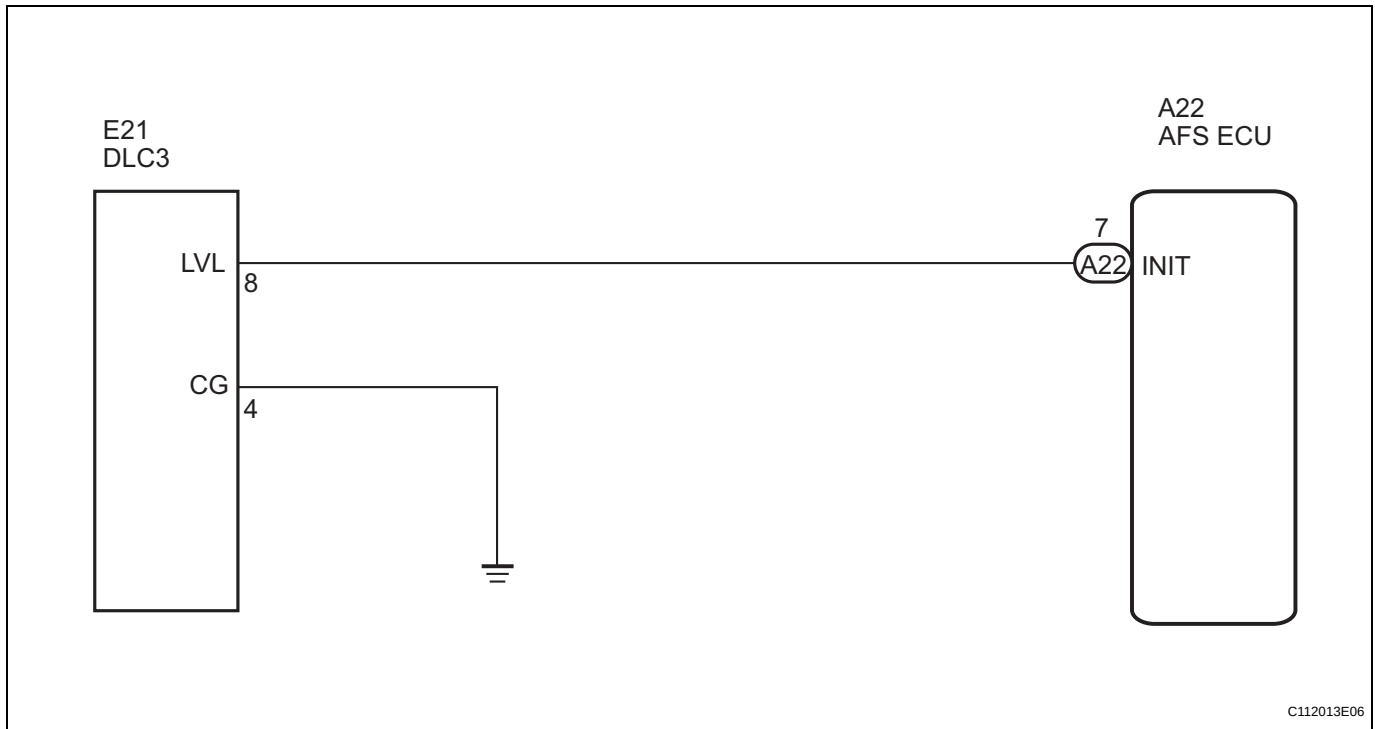
REPLACE AFS ECU

## LVL Terminal Circuit

### DESCRIPTION

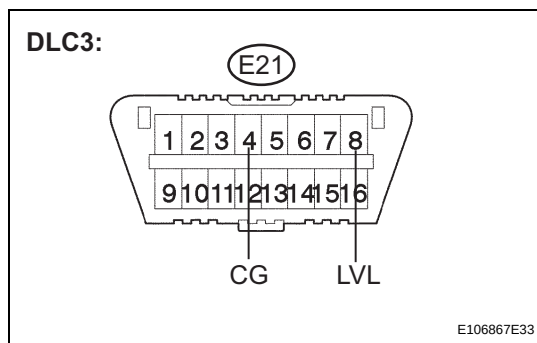
By connecting terminals LVL and CG of the DLC3, the AFS ECU initializes the height control sensor signal.

### WIRING DIAGRAM



### INSPECTION PROCEDURE

#### 1 INSPECT DLC3 TERMINAL VOLTAGE



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

#### Standard voltage

| Tester Connection        | Condition             | Specified Condition |
|--------------------------|-----------------------|---------------------|
| E21-4 (CG) - Body ground | Engine switch on (IG) | 10 to 14 V          |
| E21-4 (CG) - Body ground | Engine switch off     | Below 1 V           |

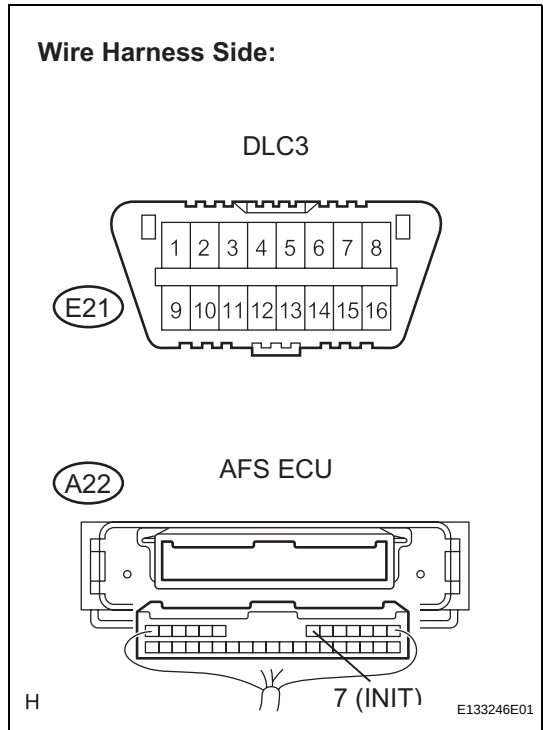
OK

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

NG

2

CHECK HARNESS AND CONNECTOR (DLC3 - HEADLIGHT BEAM LEVEL CONTROL ECU)



- (a) Disconnect the A22 AFS ECU connector.  
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

| Tester Connection          | Condition | Specified Condition     |
|----------------------------|-----------|-------------------------|
| A22-7 (INIT) - E21-8 (LVL) | Always    | Below 1 $\Omega$        |
| A22-7 (INIT) - Body ground | Always    | 10 k $\Omega$ or higher |

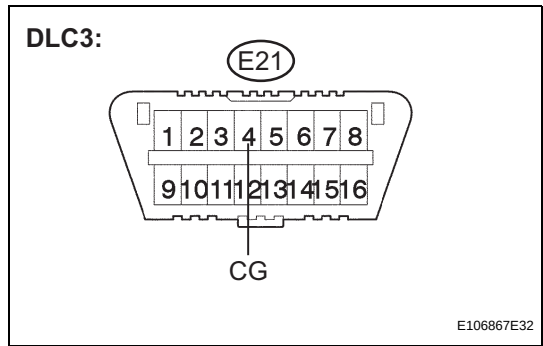
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

3

CHECK HARNESS AND CONNECTOR (DLC3 - BODY GROUND)



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

Standard resistance

| Tester Connection        | Condition | Specified Condition |
|--------------------------|-----------|---------------------|
| E21-4 (CG) - Body ground | Always    | Below 1 $\Omega$    |

NG

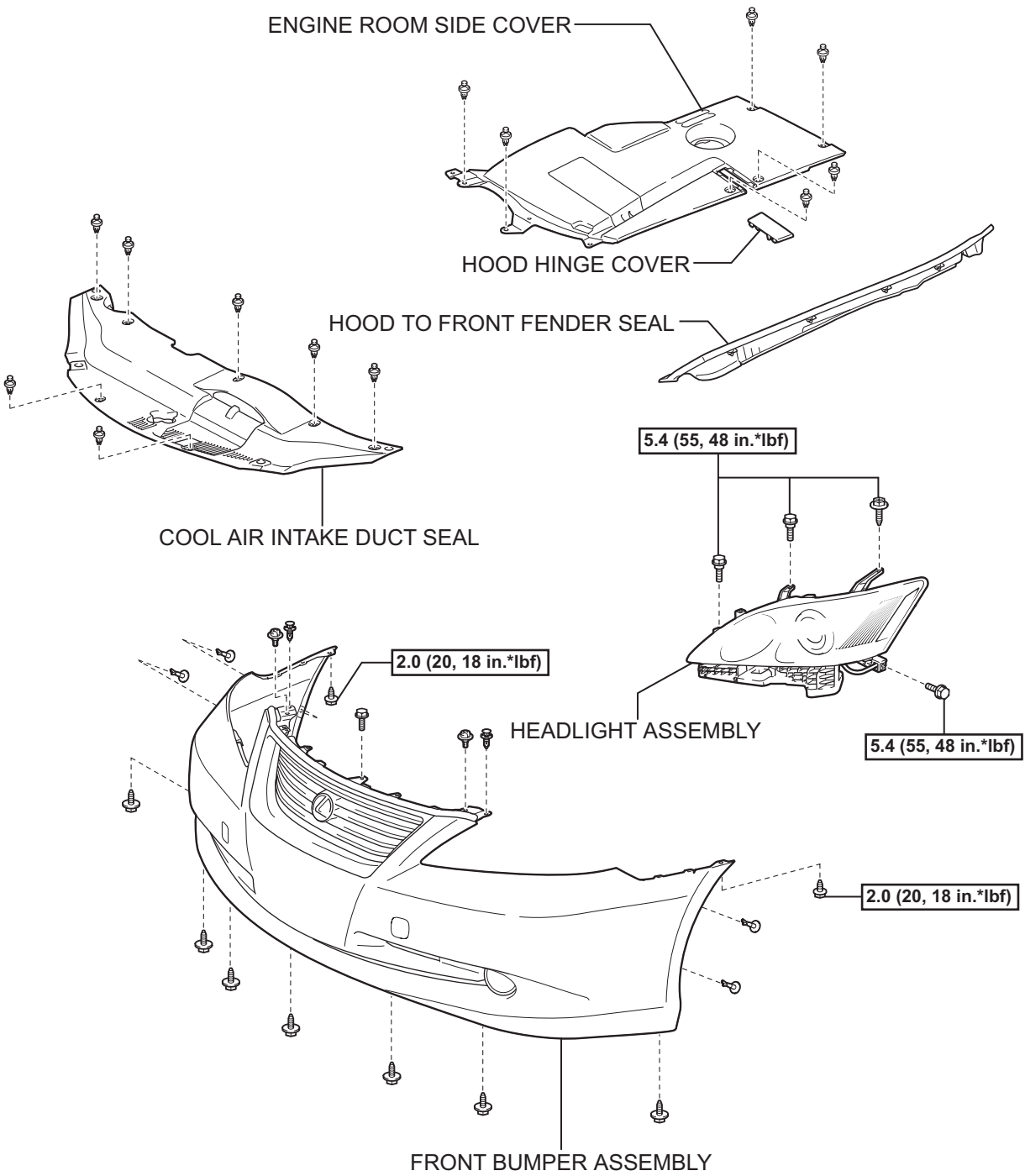
REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE AFS ECU

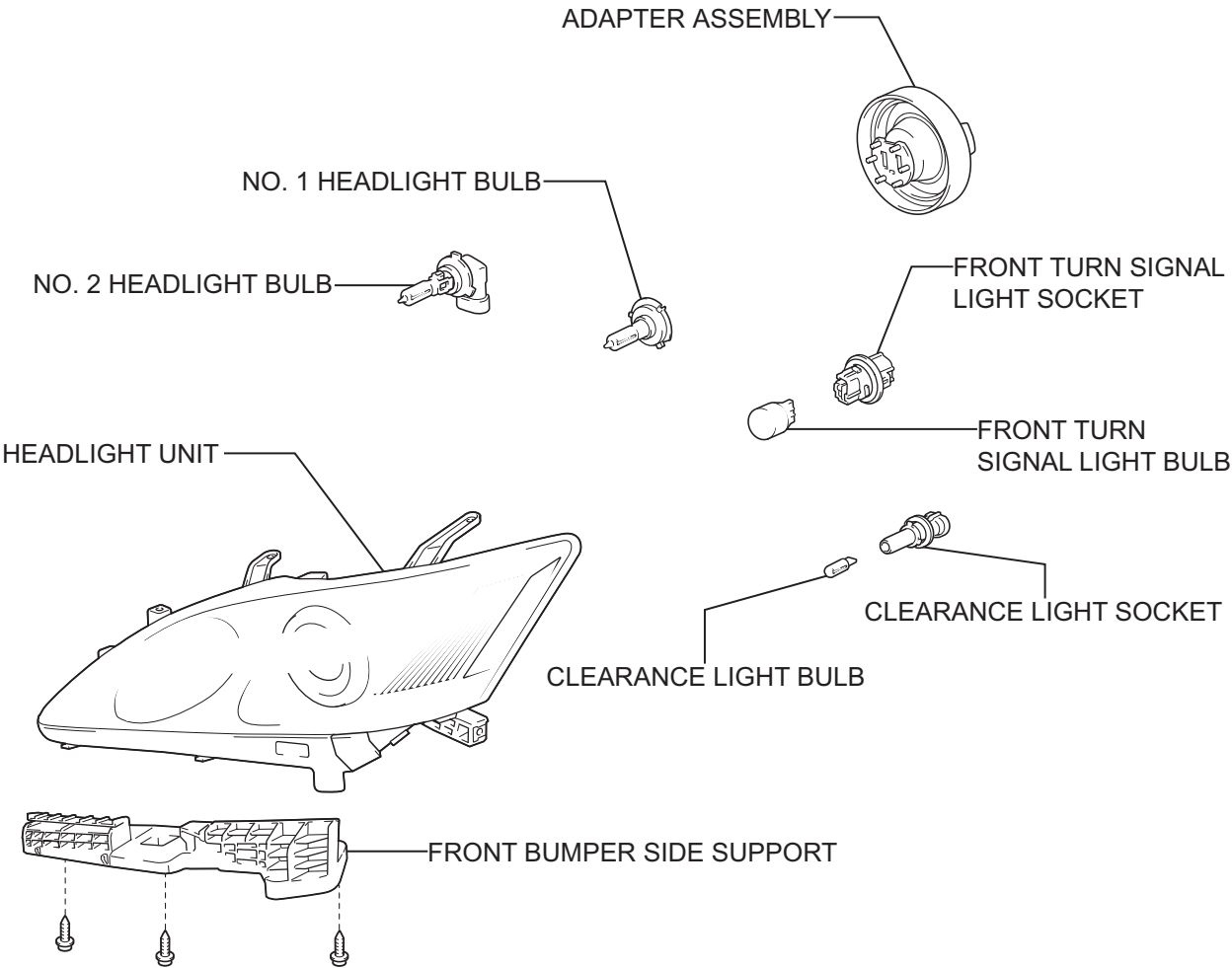
# HEADLIGHT ASSEMBLY

## COMPONENTS



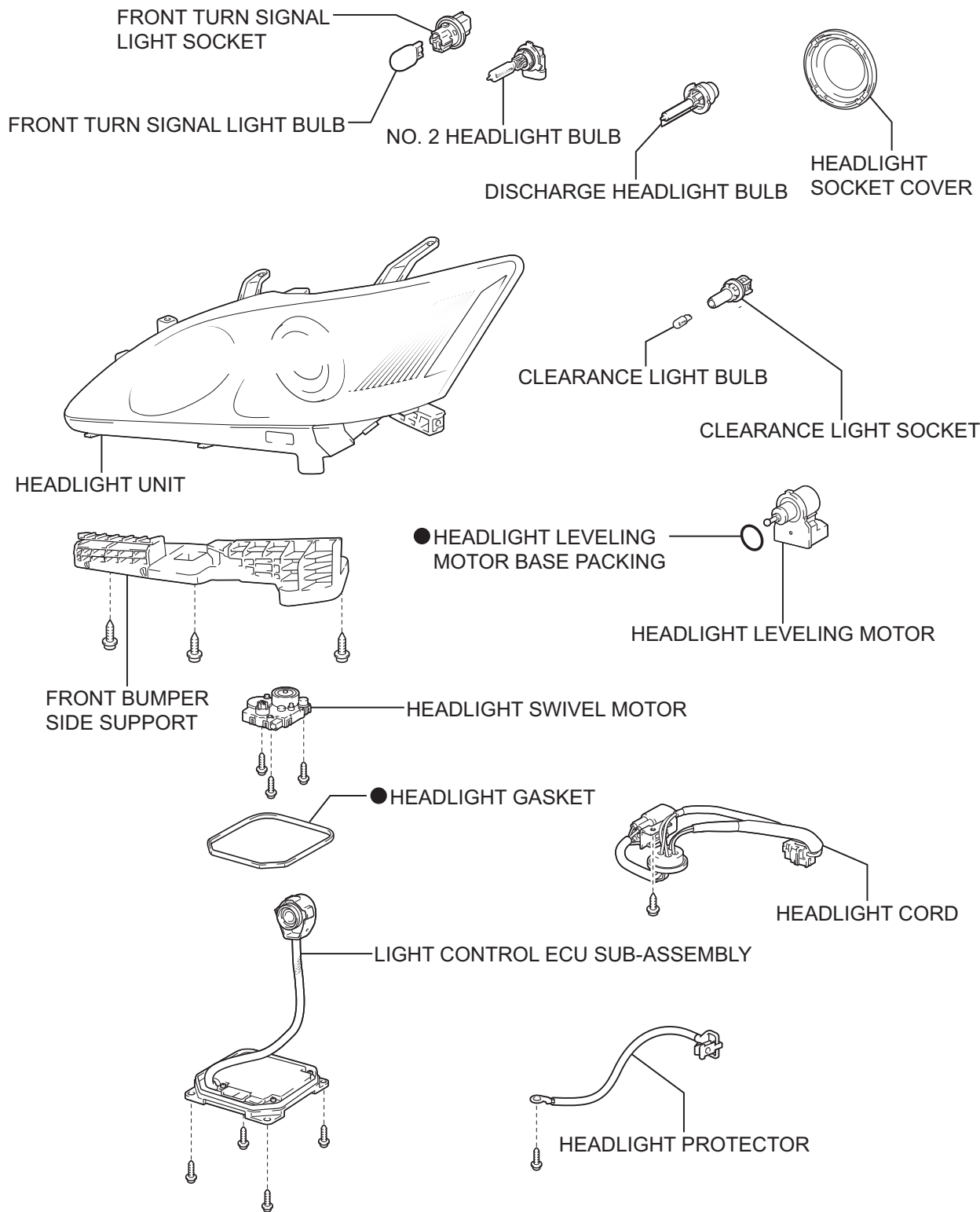
**N\*m (kgf\*cm, ft.\*lbf)** : Specified torque

for Halogen Headlight:



LI

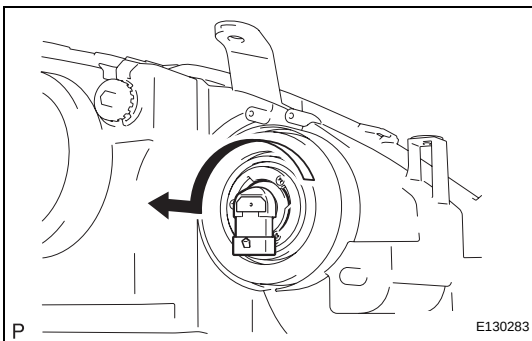
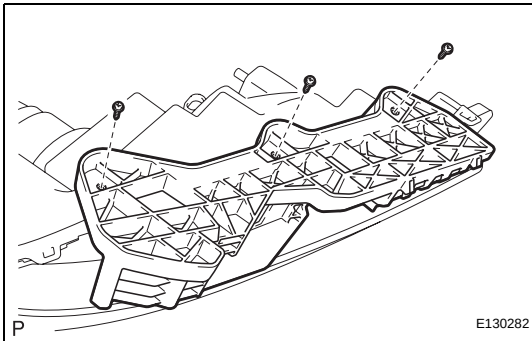
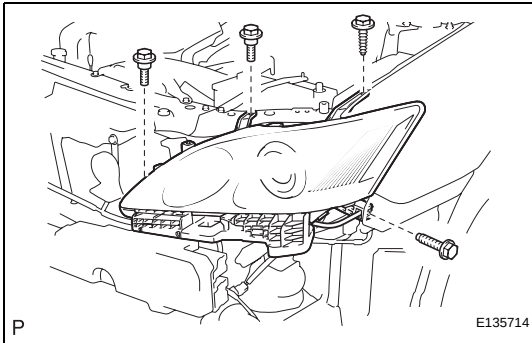
for HID Headlight:



● Non-reusable part

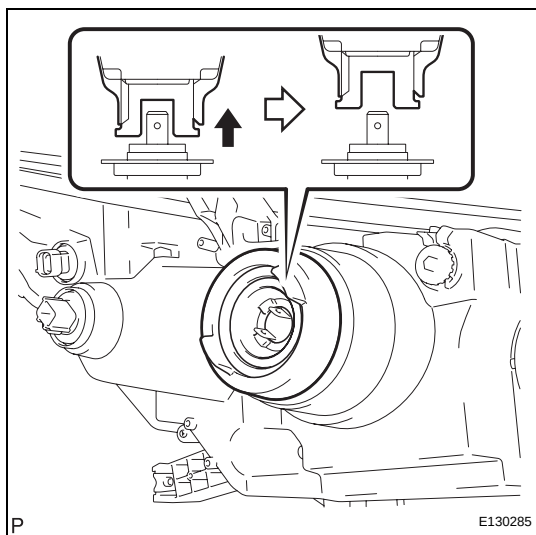
## REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL** (for HID Headlight)
2. **REMOVE COOL AIR INTAKE DUCT SEAL** (See page [ET-4](#))
3. **REMOVE FRONT BUMPER ASSEMBLY** (See page [ET-5](#))
4. **REMOVE HOOD HINGE COVER** (See page [WW-38](#))
5. **REMOVE ENGINE ROOM SIDE COVER** (See page [WW-39](#))
6. **REMOVE HOOD TO FRONT FENDER SEAL**
7. **REMOVE HEADLIGHT ASSEMBLY**
  - (a) Remove the 3 bolts and screw.
  - (b) Disconnect the connectors and remove the headlight assembly.



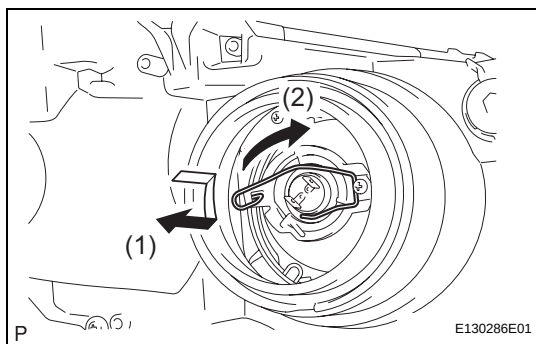
## DISASSEMBLY

1. **REMOVE FRONT BUMPER SIDE SUPPORT**
  - (a) Remove the 3 screws and the front bumper side support.
2. **REMOVE NO. 2 HEADLIGHT BULB**
  - (a) Remove the No. 2 headlight bulb as shown in the illustration.



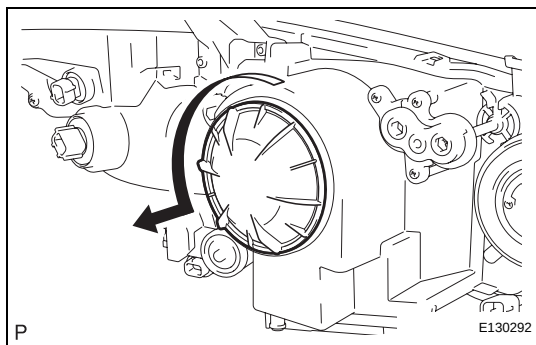
### 3. REMOVE ADAPTER ASSEMBLY (for Halogen Headlight)

- (a) Remove the adapter assembly as shown in the illustration.



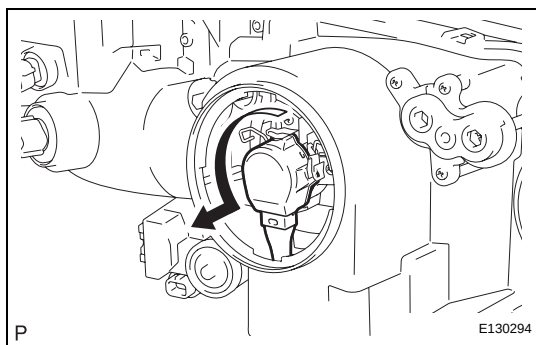
### 4. REMOVE NO. 1 HEADLIGHT BULB (for Halogen Headlight)

- (a) Release the set spring and remove the No. 1 headlight bulb as shown in the illustration.



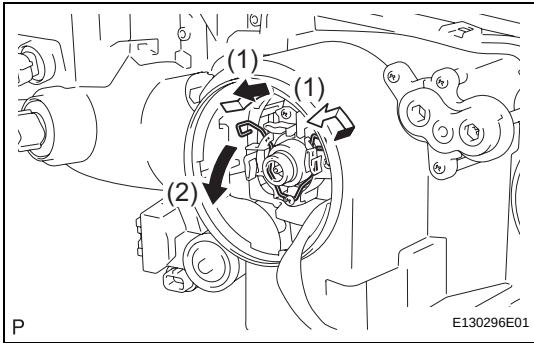
### 5. REMOVE HEADLIGHT SOCKET COVER (for HID Headlight)

- (a) Remove the headlight socket cover as shown in the illustration.



### 6. REMOVE DISCHARGE HEADLIGHT BULB (for HID Headlight)

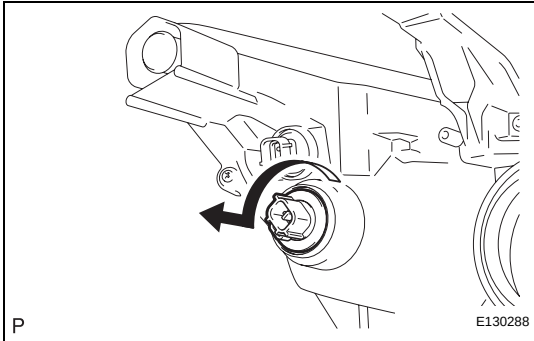
- (a) Separate the light control ECU socket as shown in the illustration.



- (b) Release the set spring and remove the discharge headlight bulb as shown in the illustration.

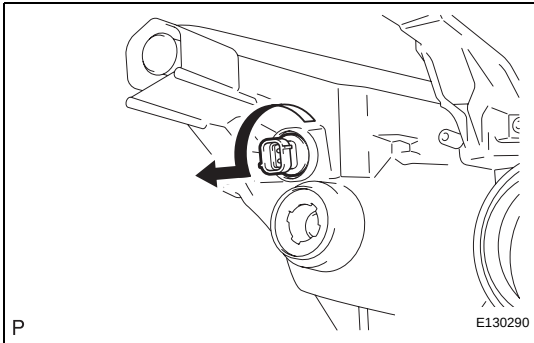
## 7. REMOVE FRONT TURN SIGNAL LIGHT BULB

- (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.



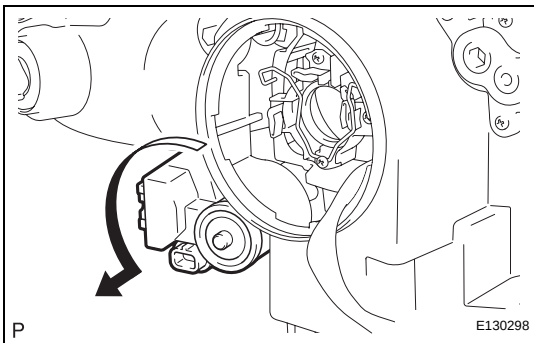
## 8. REMOVE CLEARANCE LIGHT BULB

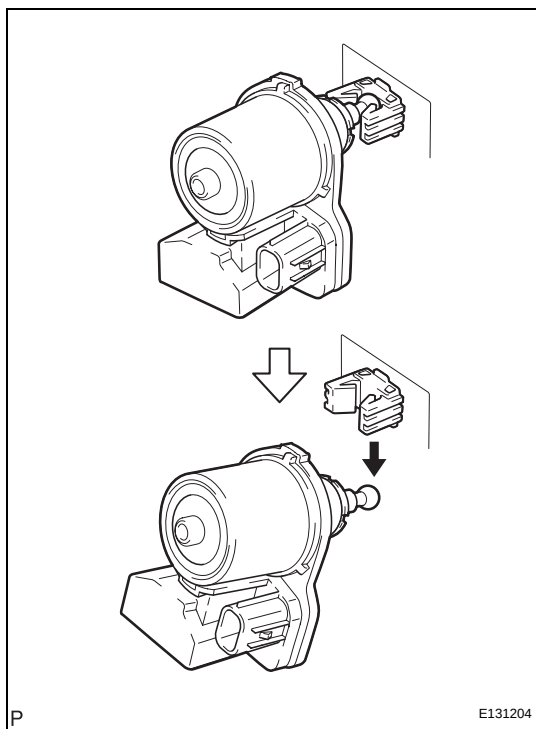
- (a) Turn the clearance light bulb and the clearance light socket in the direction indicated by the arrow and remove them as a unit.  
 (b) Remove the clearance light bulb from the clearance light socket.



## 9. REMOVE HEADLIGHT LEVELING MOTOR (for HID Headlight)

- (a) Align the notches of the headlight leveling motor and the housing, and pull out the headlight leveling motor slightly.





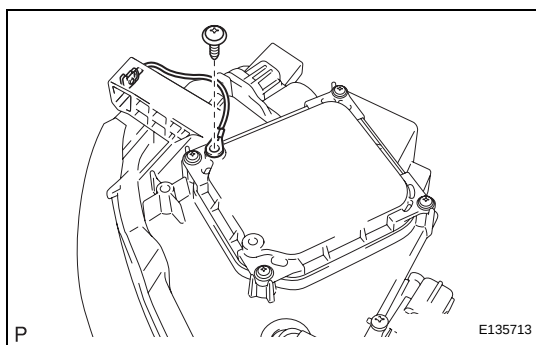
- (b) Lower the tip of the headlight leveling motor to disengage it from the reflector and remove the headlight leveling motor.

#### 10. REMOVE HEADLIGHT LEVELING MOTOR BASE PACKING (for HID Headlight)

- (a) Remove the headlight leveling motor base packing.

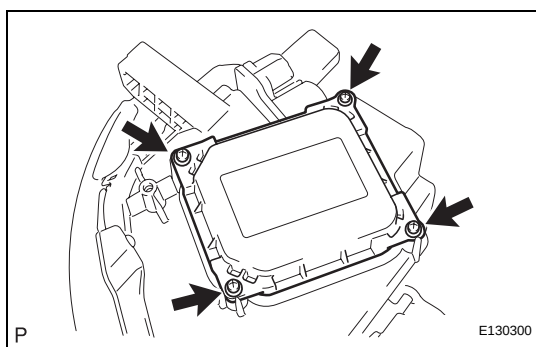
##### NOTICE:

After the headlight leveling motor base packing is removed, be sure to replace it with a new one. Failure to do this may cause water ingress.



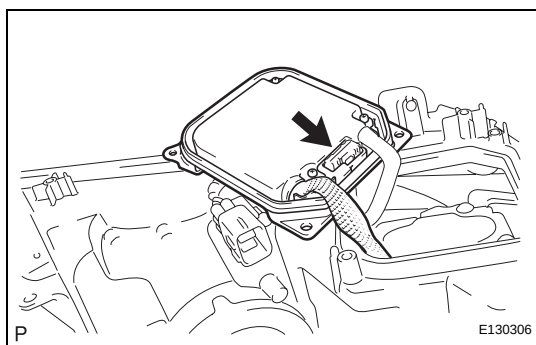
#### 11. REMOVE HEADLIGHT PROTECTOR (for HID Headlight)

- (a) Remove the screw and the headlight protector.



#### 12. REMOVE LIGHT CONTROL ECU SUB-ASSEMBLY (for HID Headlight)

- (a) Remove the 4 screws.



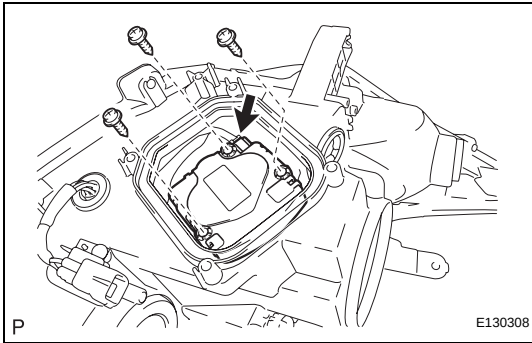
- (b) Disconnect the connector and remove the light control ECU sub-assembly.

#### 13. REMOVE HEADLIGHT GASKET (for HID Headlight)

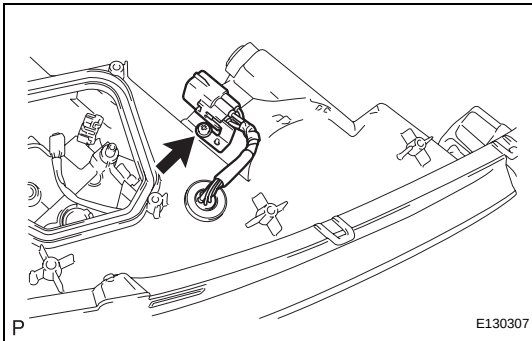
- (a) Remove the headlight gasket.

##### NOTICE:

After the headlight gasket is removed, be sure to replace it with a new one. Failure to do this may cause water ingress.

**14. REMOVE HEADLIGHT SWIVEL MOTOR (for HID Headlight)**

- (a) Disconnect the connector.
- (b) Remove the 3 screws and the headlight swivel motor.

**15. REMOVE HEADLIGHT CORD (for HID Headlight)**

- (a) Remove the screw and the headlight cord.

## 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.
- Vehicles with height adjustable suspension should set the vehicle height to the lowest setting prior to adjusting the headlight aim.
- Vehicles with manually adjustable headlights should be adjusted to "0".

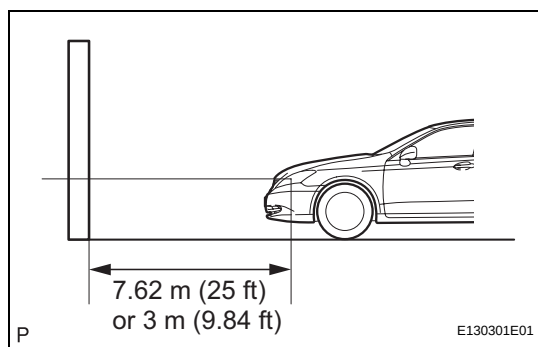
### 2. PREPARATION FOR HEADLIGHT AIMING (Using a headlight aim test machine)

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

### 3. PREPARATION FOR HEADLIGHT AIMING (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.

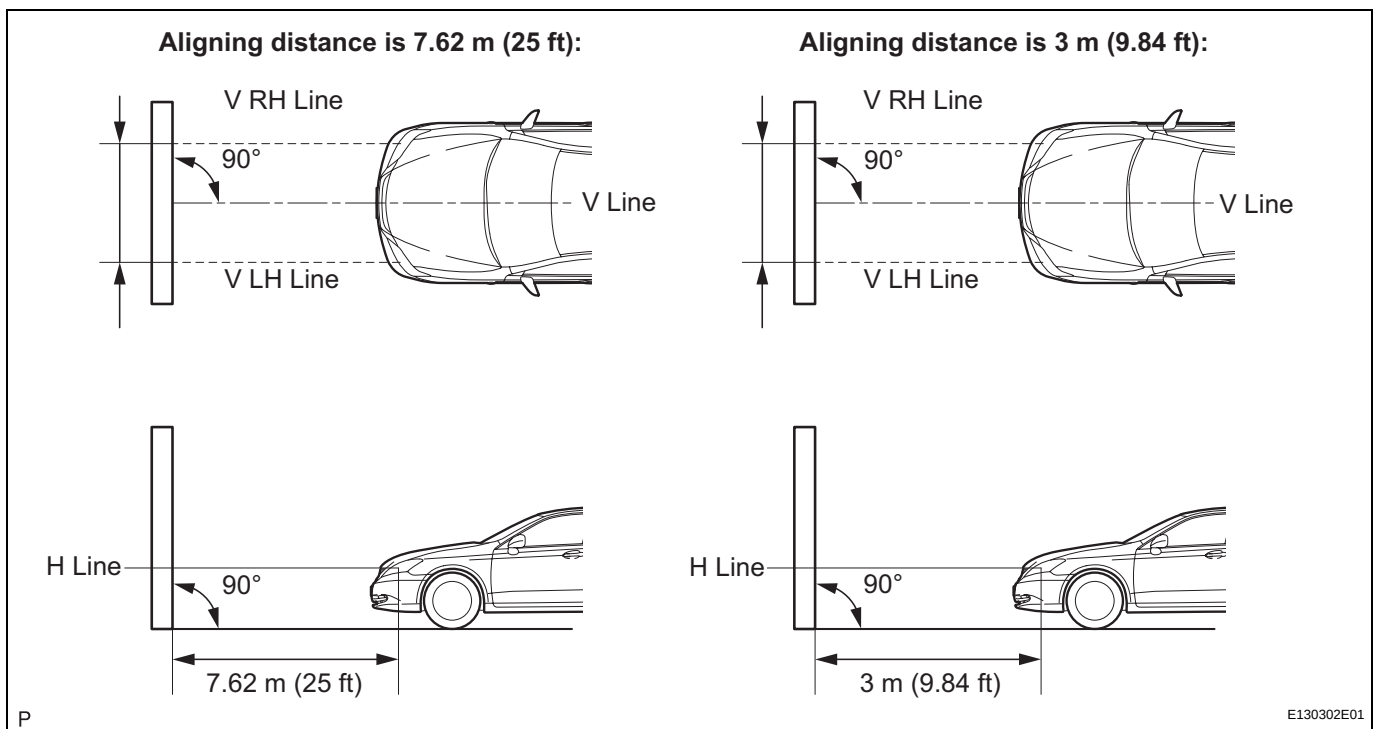


- Bounce the vehicle up and down to settle the suspension.

**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.)**

- 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.
- Draw a vertical line down the center of the screen (V line).
- Set the screen as shown in the illustration.

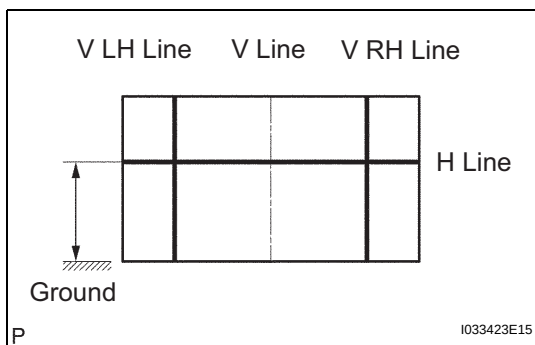
**HINT:**

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

- 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).

#### 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:**

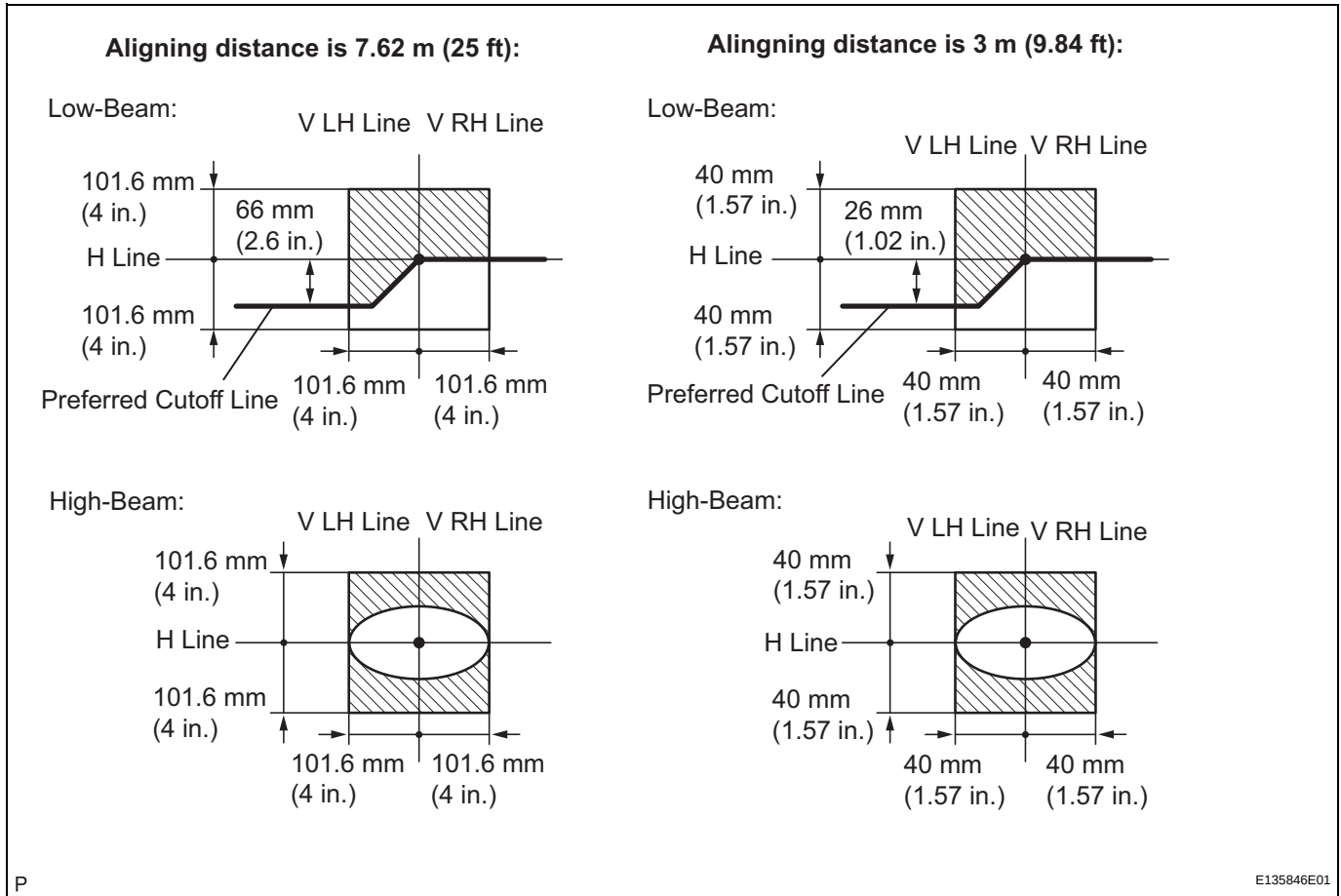
**Do not keep the headlight covered for more than 3 minutes. The headlight lens is made of synthetic resin, which may melt or be damaged due to excessive heat.**

**HINT:**

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

- (b) Start the engine.

- (c) 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 on each side have separate reflectors, it is necessary to check and adjust the aim separately for both.
- 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 66 mm (2.6 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 26 mm (1.02 in.) below the H line (preferred cutoff line target).

## 5. HEADLIGHT AIMING ADJUSTMENT

- (a) Adjust the aim vertically:

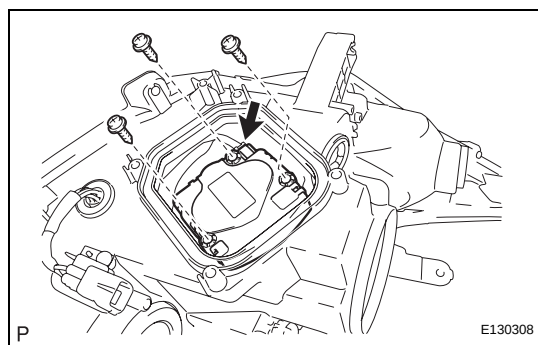
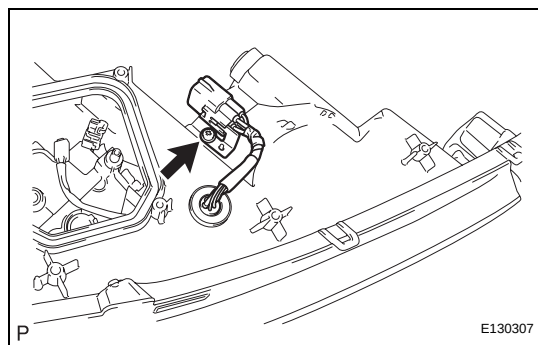
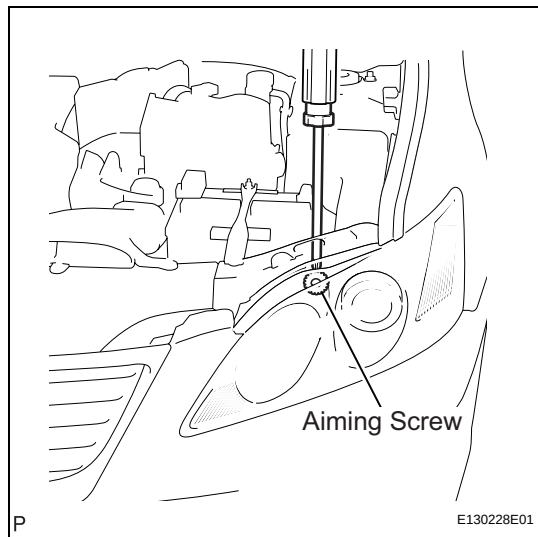
Adjust the headlight aim into the specified range by turning the aiming screw with a screwdriver.

### 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.



## REASSEMBLY

### 1. INSTALL HEADLIGHT CORD (for HID Headlight)

- (a) Install the headlight cord with the screw.

### 2. INSTALL HEADLIGHT SWIVEL MOTOR (for HID Headlight)

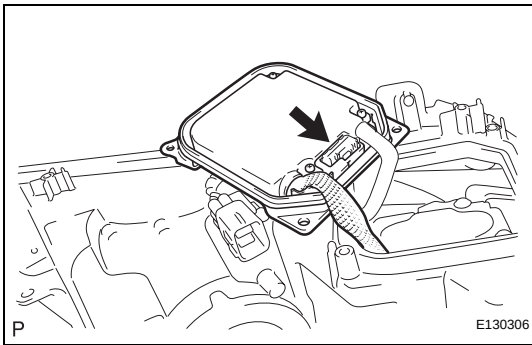
- (a) Install the headlight swivel motor with the 3 screws.  
(b) Connect the connector.

### 3. INSTALL HEADLIGHT GASKET (for HID Headlight)

- (a) Install a new headlight gasket.

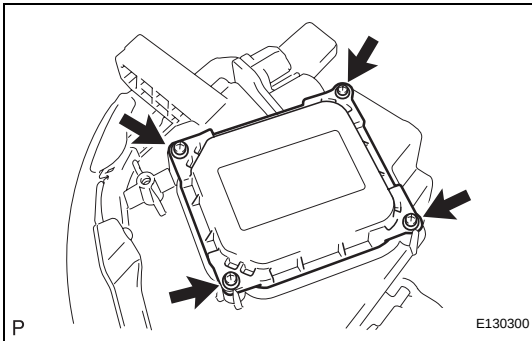
### NOTICE:

**After the headlight gasket is removed, be sure to replace it with a new one. Failure to do this may cause water ingress.**

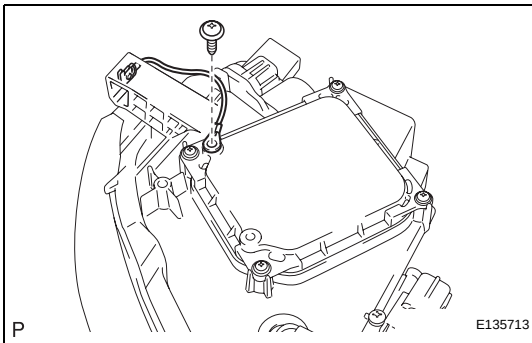


#### 4. INSTALL LIGHT CONTROL ECU SUB-ASSEMBLY (for HID Headlight)

- (a) Connect the connector.



- (b) Install the headlight control ECU sub-assembly with the 4 screws.



#### 5. INSTALL HEADLIGHT PROTECTOR (for HID Headlight)

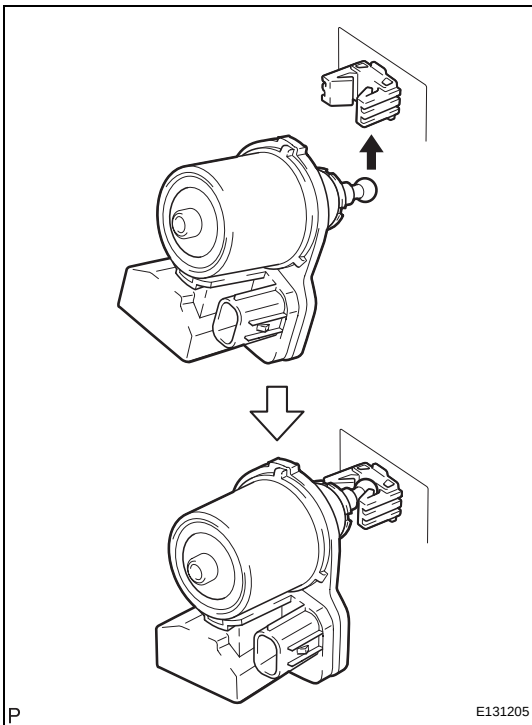
- (a) Install the headlight protector with the screw.

#### 6. INSTALL HEADLIGHT LEVELING MOTOR BASE PACKING (for HID Headlight)

- (a) Install a new headlight leveling motor base packing.

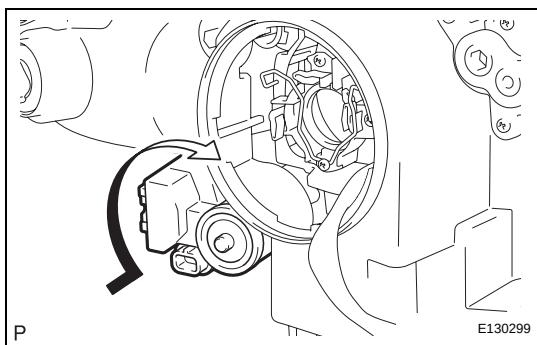
**NOTICE:**

After the headlight leveling motor base packing is removed, be sure to replace it with a new one. Failure to do this may cause water ingress.



#### 7. INSTALL HEADLIGHT LEVELING MOTOR (for HID Headlight)

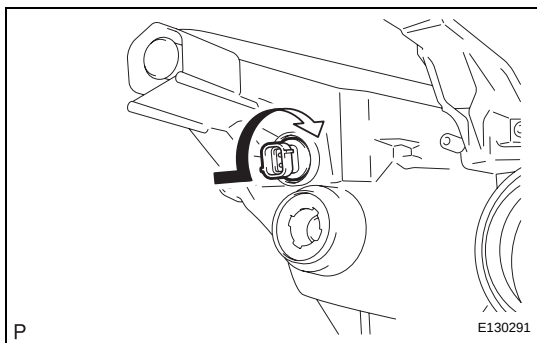
- (a) Engage the tip of the headlight leveling motor with the reflector.



(b) Turn the headlight leveling motor to install it.

## 8. INSTALL CLEARANCE LIGHT BULB

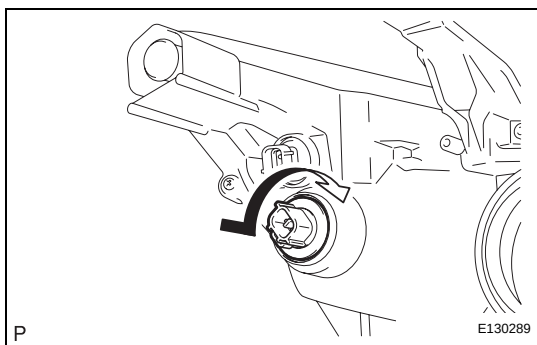
(a) Install the clearance light bulb to the clearance light socket.



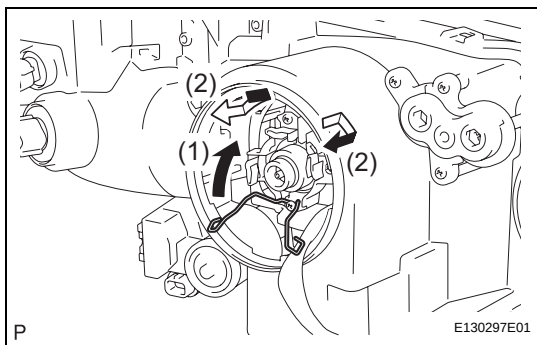
(b) Turn the clearance light bulb and clearance light socket in the direction indicated by the arrow and install them as a unit.

## 9. INSTALL FRONT TURN SIGNAL LIGHT BULB

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

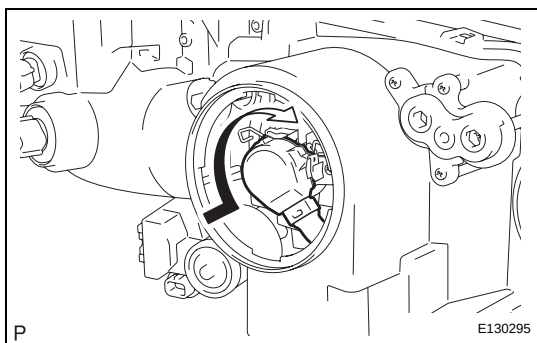


(b) Turn the front turn signal light bulb and front turn signal light socket in the direction indicated by the arrow and install them as a unit.

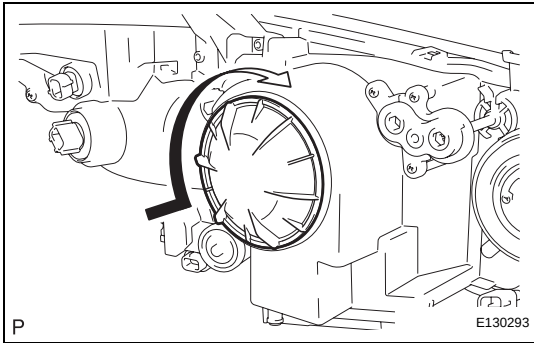


## 10. INSTALL DISCHARGE HEADLIGHT BULB (for HID Headlight)

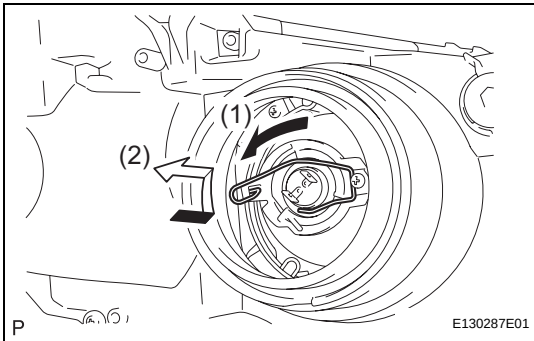
(a) Lock the set spring to install the discharge headlight bulb as shown in the illustration.



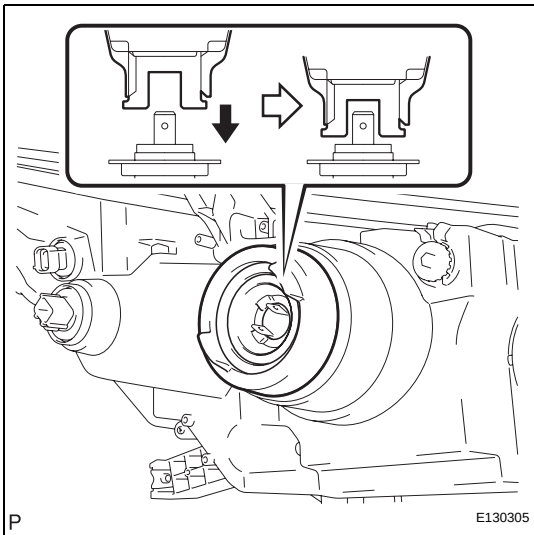
(b) Turn the socket of the light control ECU sub-assembly in the direction indicated by the arrow to connect the socket.

**11. INSTALL HEADLIGHT SOCKET COVER (for HID Headlight)**

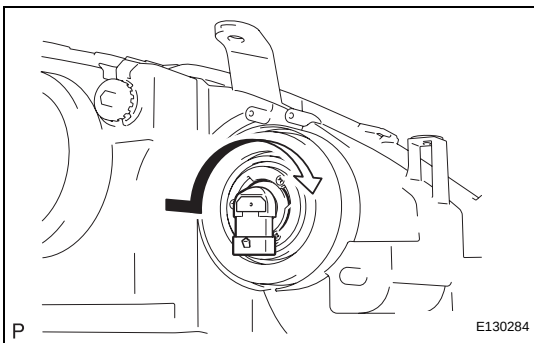
- (a) Install the headlight socket cover as shown in the illustration.

**12. INSTALL NO. 1 HEADLIGHT BULB (for Halogen Headlight)**

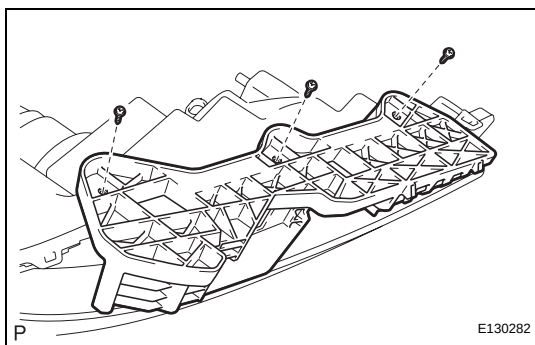
- (a) Lock the set spring to install the No. 1 headlight bulb as shown in the illustration.

**13. INSTALL ADAPTER ASSEMBLY (for Halogen Headlight)**

- (a) Install the adapter assembly as shown in the illustration.

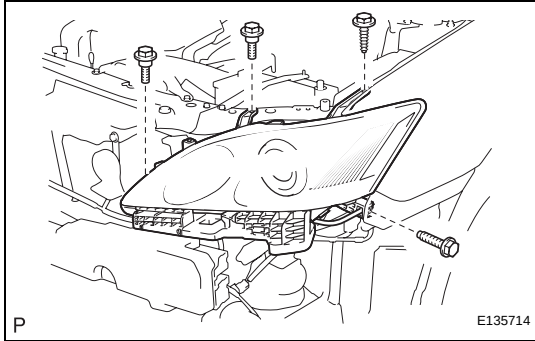
**14. INSTALL NO. 2 HEADLIGHT BULB**

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

**15. INSTALL FRONT BUMPER SIDE SUPPORT**

- (a) Install the front bumper side support with the 3 screws.

## INSTALLATION



### 1. INSTALL HEADLIGHT ASSEMBLY

- (a) Connect the connectors.
- (b) Install the headlight assembly with the 3 bolts and screw.

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

### 2. INSTALL HOOD TO FRONT FENDER SEAL

### 3. INSTALL ENGINE ROOM SIDE COVER (See page [WW-47](#))

### 4. INSTALL HOOD HINGE COVER (See page [WW-47](#))

### 5. INSTALL FRONT BUMPER ASSEMBLY (See page [ET-14](#))

### 6. INSTALL COOL AIR INTAKE DUCT SEAL (See page [ET-14](#))

### 7. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL (for HID Headlight)

### 8. VEHICLE PREPARATION FOR HEADLIGHT AIM ADJUSTMENT (See page [LI-129](#))

### 9. PREPARATION FOR HEADLIGHT AIMING (Using a headlight aim test machine) (See page [LI-129](#))

### 10. PREPARATION FOR HEADLIGHT AIMING (Using a Screen) (See page [LI-130](#))

### 11. HEADLIGHT AIMING INSPECTION (See page [LI-131](#))

### 12. HEADLIGHT AIMING ADJUSTMENT (See page [LI-133](#))

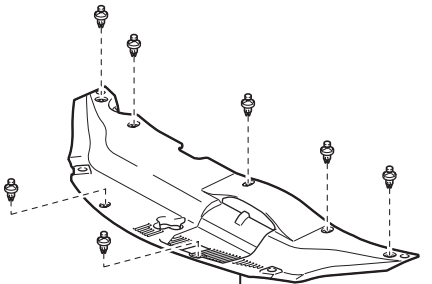
### 13. PERFORM INITIALIZATION (for HID Headlight)

#### NOTICE:

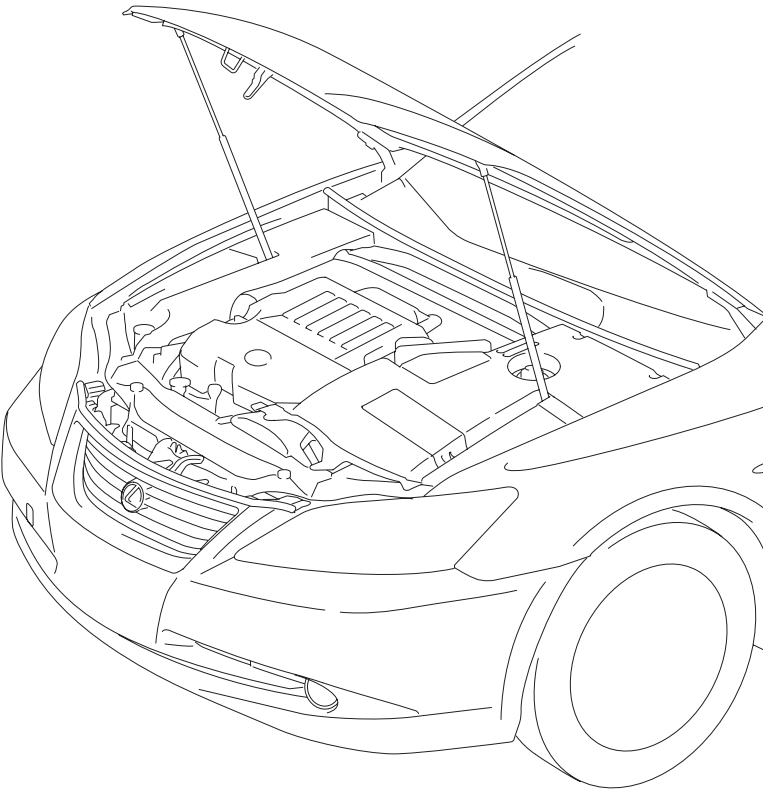
Some systems need initialization after reconnecting the cable to the negative battery terminal (See page [IN-33](#)).

# HIGH INTENSITY DISCHARGE HEADLIGHT BULB

## COMPONENTS



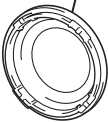
COOL AIR INTAKE DUCT SEAL



DISCHARGE HEADLIGHT BULB



HEADLIGHT SOCKET COVER



## REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE COOL AIR INTAKE DUCT SEAL (See page [ET-4](#))
3. REMOVE HEADLIGHT SOCKET COVER (See page [LI-126](#))
4. REMOVE DISCHARGE HEADLIGHT BULB (See page [LI-126](#))

## INSTALLATION

1. INSTALL DISCHARGE HEADLIGHT BULB (See page [LI-135](#))
2. INSTALL HEADLIGHT SOCKET COVER (See page [LI-136](#))
3. INSTALL COOL AIR INTAKE DUCT SEAL (See page [ET-14](#))
4. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
5. PERFORM INITIALIZATION

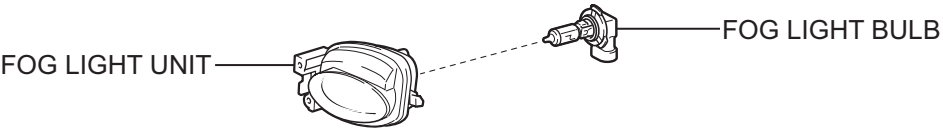
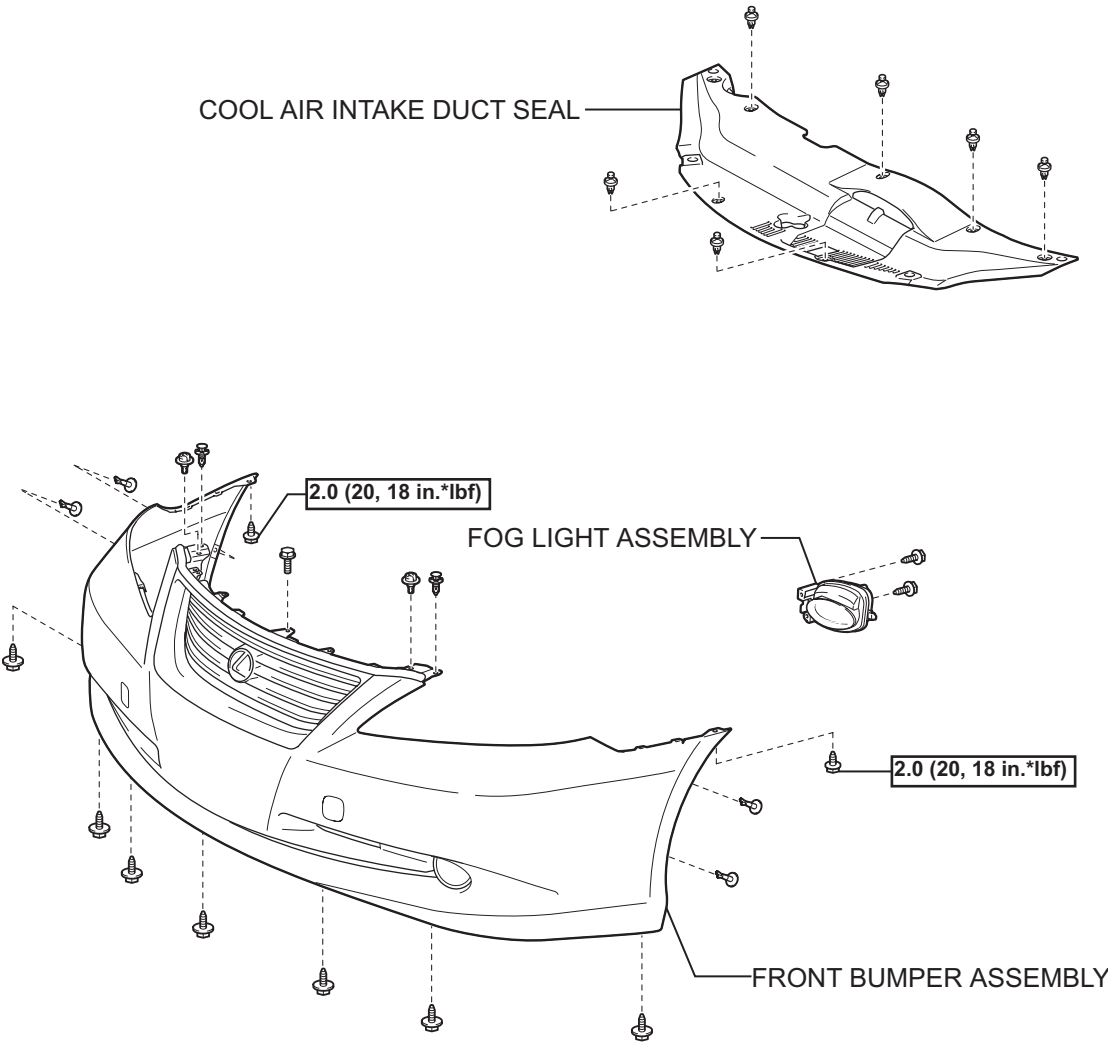
**NOTICE:**

Some systems need initialization after reconnecting the cable to the negative battery terminal (See page [IN-33](#)).

# FOG LIGHT ASSEMBLY

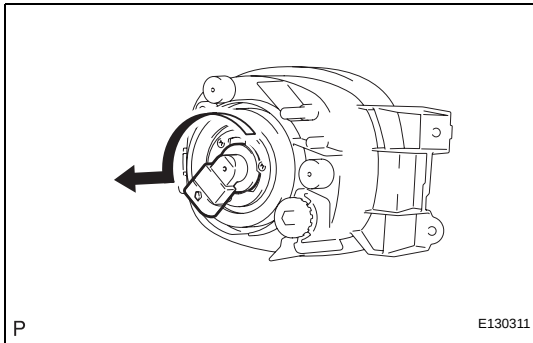
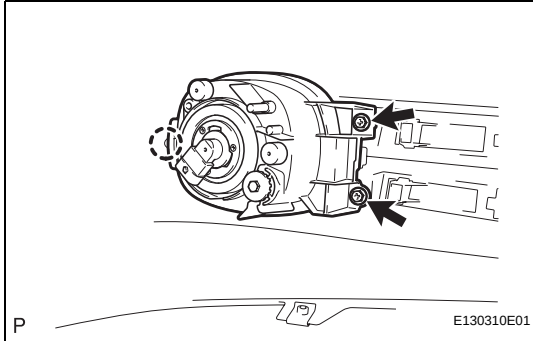
## COMPONENTS

LI



## REMOVAL

1. REMOVE COOL AIR INTAKE DUCT SEAL (See page [ET-4](#))
2. REMOVE FRONT BUMPER ASSEMBLY (See page [ET-5](#))
3. REMOVE FOG LIGHT ASSEMBLY
  - (a) Remove the 2 screws.
  - (b) Disengage the claw and remove 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 ADJUSTMENT

- (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.

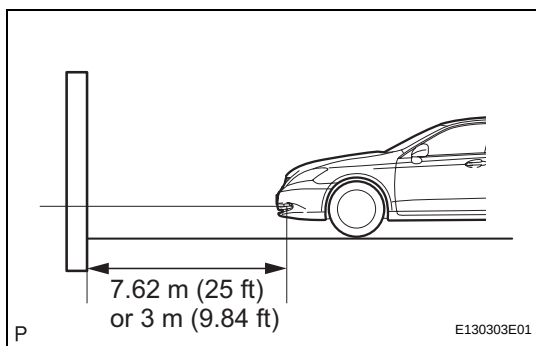
### 2. PREPARATION FOR FOG LIGHT AIMING

- (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.

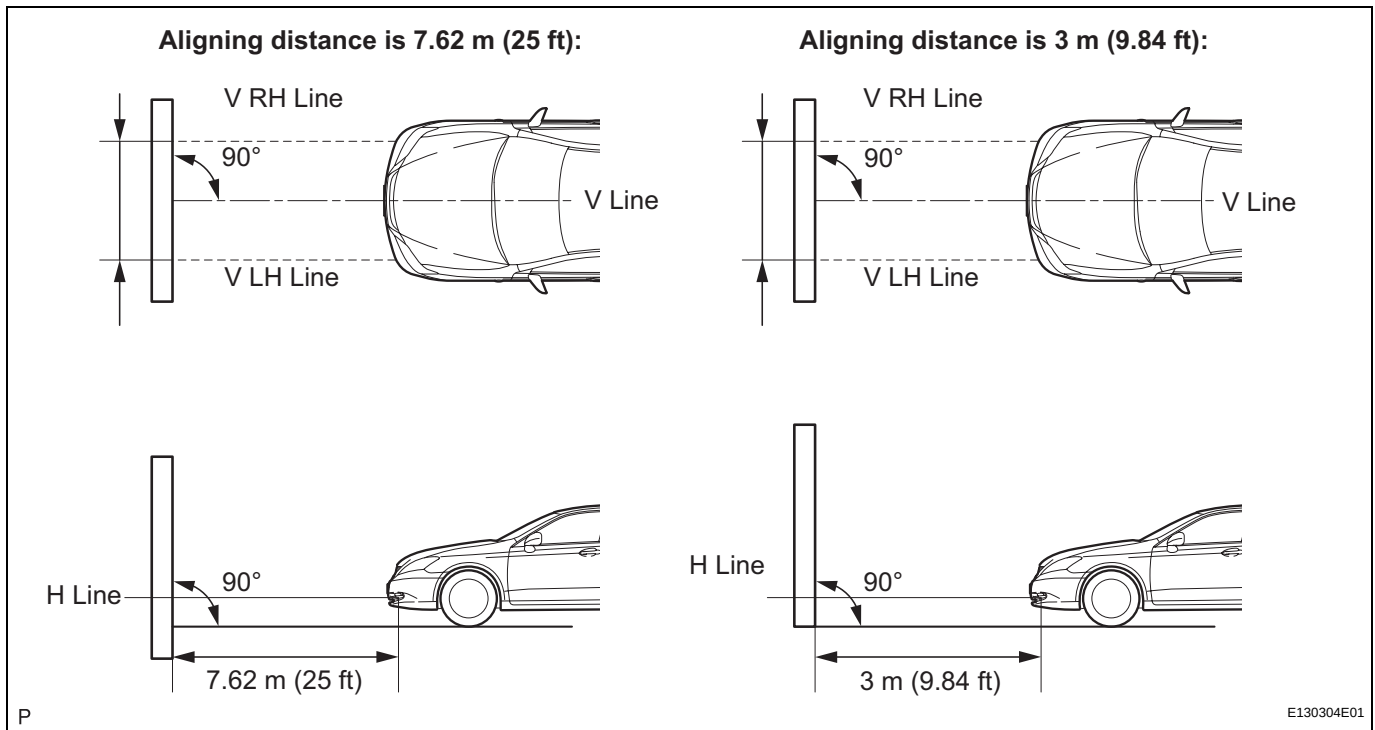
#### NOTICE:

**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 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:

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):

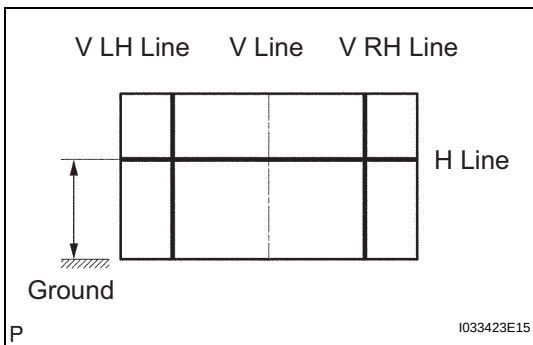
Draw two vertical lines so that they intersect the H line at each center mark.

### 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.

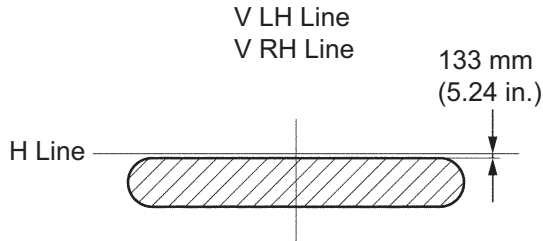
**NOTICE:**

**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.**

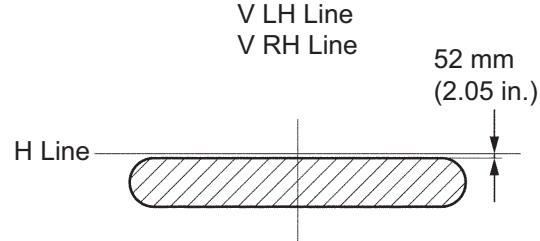


- (b) Start the engine.
- (c) Turn on the fog light and check if the cut off line falls within the specified area in the following illustration.

Aligning distance is 7.62 m (25 ft):



Aligning distance is 3 m (9.84 ft):



I041221E18

#### 4. FOG LIGHT AIMING ADJUSTMENT

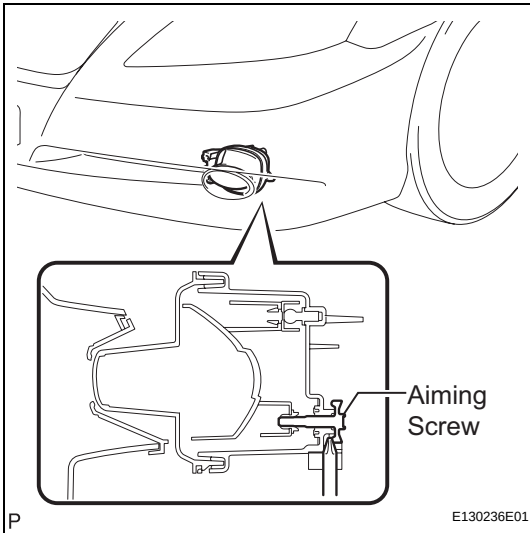
- (a) Adjust the aim vertically:  
Adjust the aim of each fog light to the specified range by turning each aiming screw with a screwdriver.

**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.



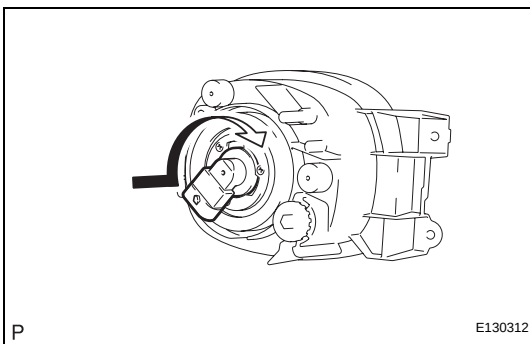
P

E130236E01

## REASSEMBLY

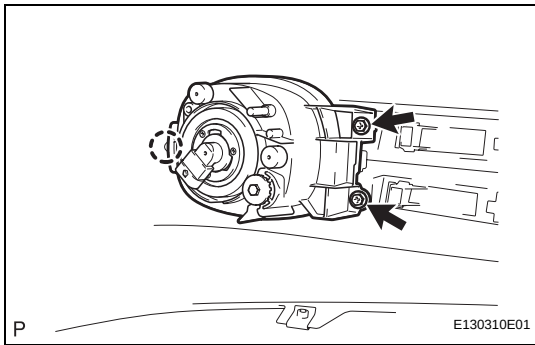
#### 1. INSTALL FOG LIGHT BULB

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



P

E130312



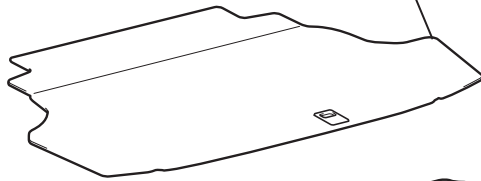
## INSTALLATION

1. **INSTALL FOG LIGHT ASSEMBLY**
  - (a) Engage the claw.
  - (b) Install the fog light assembly with the 2 screws.
2. **INSTALL FRONT BUMPER ASSEMBLY** (See page [ET-14](#))
3. **INSTALL COOL AIR INTAKE DUCT SEAL** (See page [ET-14](#))
4. **VEHICLE PREPARATION FOR FOG LIGHT AIM ADJUSTMENT** (See page [LI-141](#))
5. **PREPARATION FOR FOG LIGHT AIMING** (See page [LI-142](#))
6. **FOG LIGHT AIMING INSPECTION** (See page [LI-143](#))
7. **FOG LIGHT AIMING ADJUSTMENT** (See page [LI-144](#))

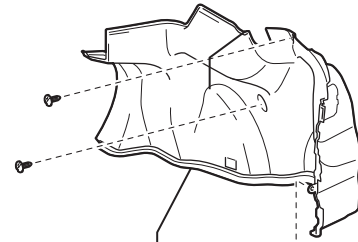
# REAR COMBINATION LIGHT ASSEMBLY

## COMPONENTS

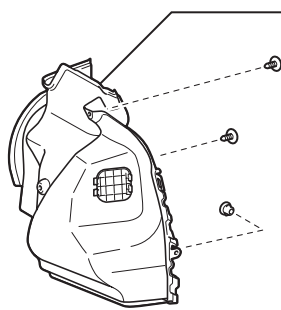
LUGGAGE COMPARTMENT FLOOR MAT



with Intuitive Parking Assist System:

LUGGAGE COMPARTMENT  
INNER TRIM COVER RHSPARE WHEEL  
COVER TRAY

NO. 2 SPARE WHEEL COVER

LUGGAGE COMPARTMENT  
INNER TRIM COVER LHLUGGAGE HOLD BELT  
STRIKER ASSEMBLYNO. 1 LUGGAGE  
COMPARTMENT  
TRIM HOOKNO. 1 LUGGAGE  
COMPARTMENT  
TRIM HOOK

5.4 (55, 48 in.\*lbf)

5.4 (55, 48 in.\*lbf)

REAR COMBINATION  
LIGHT ASSEMBLY

5.4 (55, 48 in.\*lbf)

LUGGAGE HOLD BELT  
STRIKER ASSEMBLY

REAR FLOOR FINISH PLATE

5.5 (56, 49 in.\*lbf)

5.5 (56, 49 in.\*lbf)

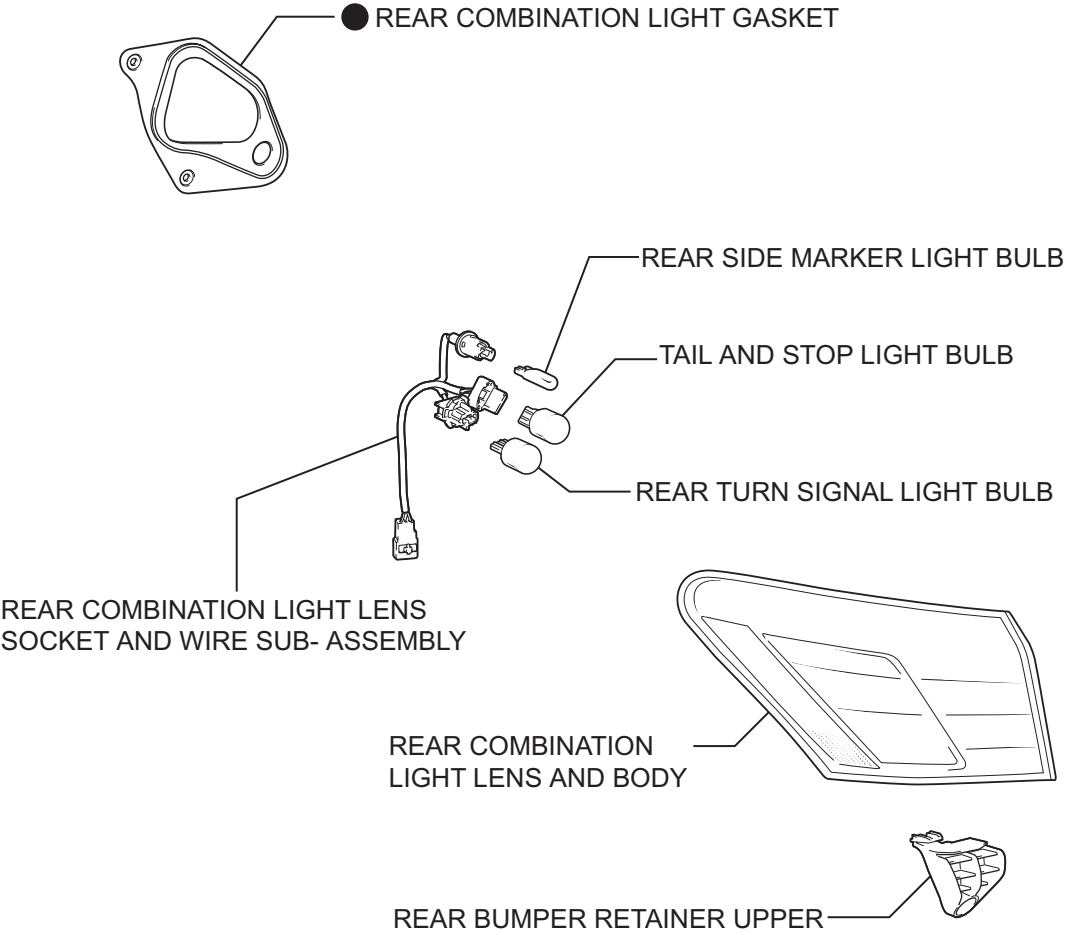
2.0 (20, 18 in.\*lbf)

2.0 (20, 18 in.\*lbf)

REAR BUMPER ASSEMBLY

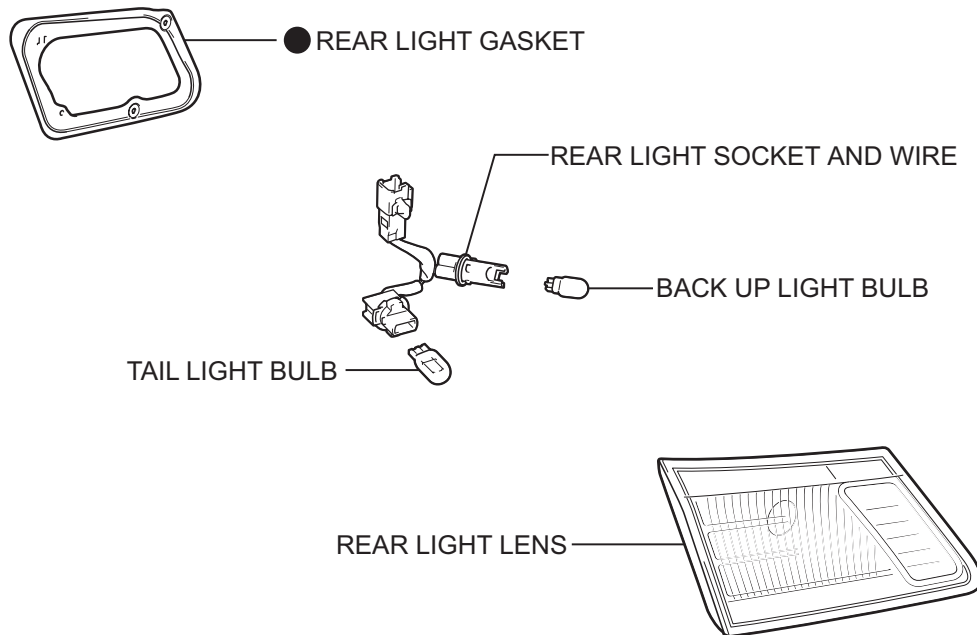
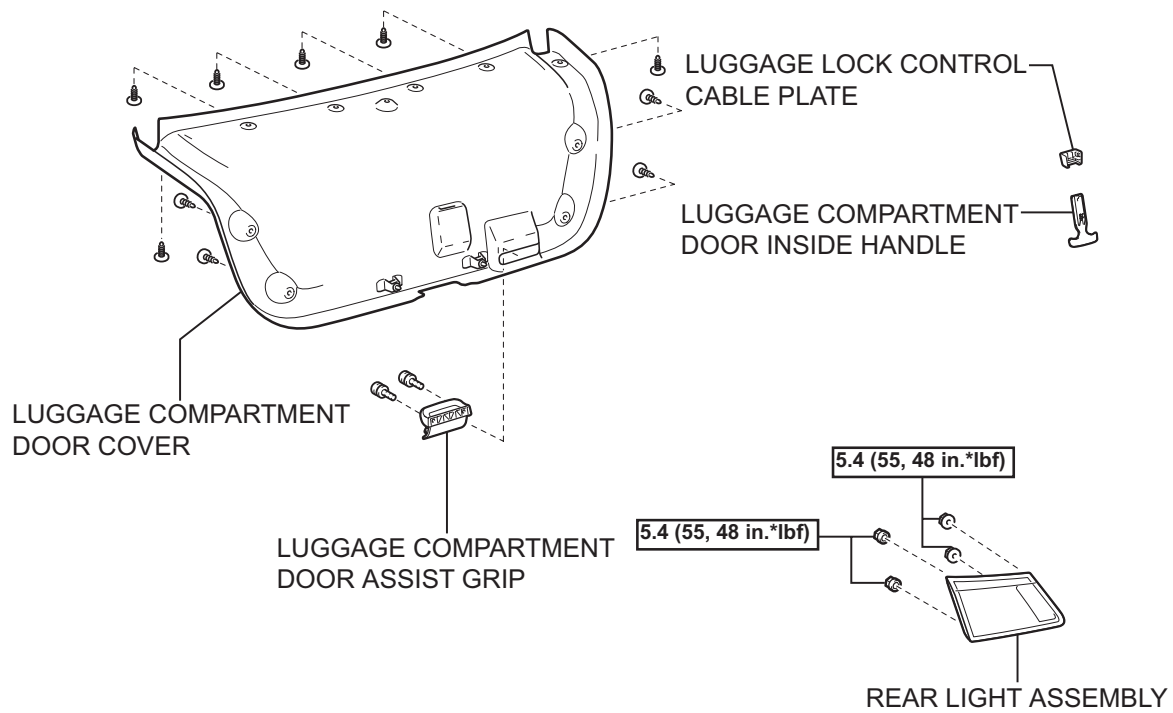
N\*m (kgf\*cm, ft.\*lbf) : Specified torque

LI



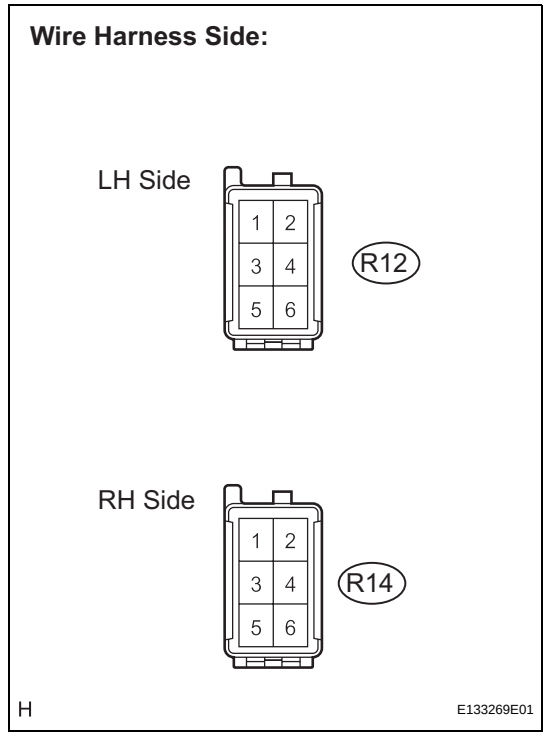
● Non-reusable part

P



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

● Non-reusable part



## ON-VEHICLE INSPECTION

### 1. INSPECT REAR OUTER COMBINATION LIGHT ASSEMBLY

- (a) Disconnect the connector from the rear outer combination light.
- (b) Measure the voltage according to the value(s) in the table below.

**Standard voltage:**

**LH Side**

| Tester Connection | Condition                        | Specified Condition    |
|-------------------|----------------------------------|------------------------|
| R12-2 - R12-5 (E) | Brake pedal released → depressed | Below 1 V → 10 to 14 V |
| R12-1 - R12-5 (E) | Light control switch OFF → TAIL  | Below 1 V → 10 to 14 V |
| R12-1 - R12-5 (E) | Light control switch OFF → TAIL  | Below 1 V → 10 to 14 V |

**RH Side**

| Tester Connection | Condition                        | Specified Condition    |
|-------------------|----------------------------------|------------------------|
| R14-2 - R14-5 (E) | Brake pedal released → depressed | Below 1 V → 10 to 14 V |
| R14-1 - R14-5 (E) | Light control switch OFF → TAIL  | Below 1 V → 10 to 14 V |
| R14-1 - R14-5 (E) | Light control switch OFF → TAIL  | Below 1 V → 10 to 14 V |

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

### 2. INSPECT REAR INNER COMBINATION LIGHT ASSEMBLY

- (a) Disconnect the connector from the rear inner combination light.
- (b) Measure the voltage according to the value(s) in the table below.

**Standard voltage:**

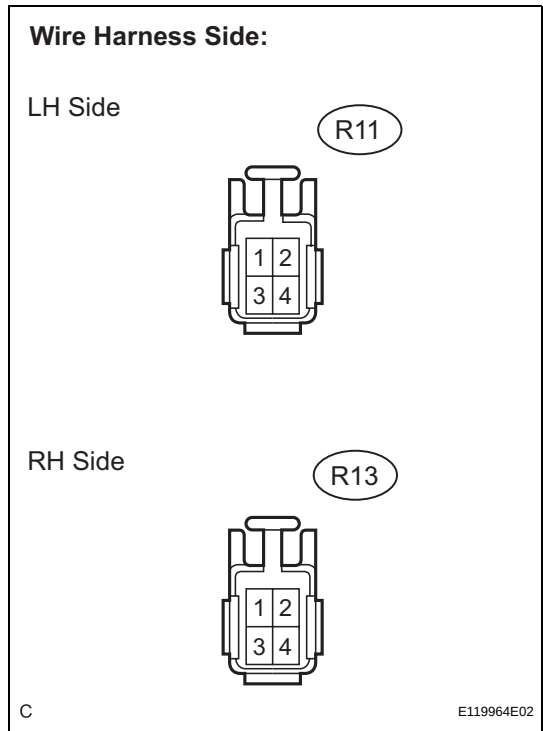
**LH Side**

| Tester Connection | Condition                       | Specified Condition    |
|-------------------|---------------------------------|------------------------|
| R11-4 - R11-3     | Light control switch OFF → TAIL | Below 1 V → 10 to 14 V |

**RH Side**

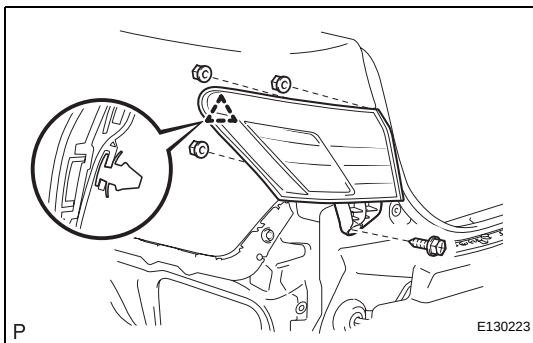
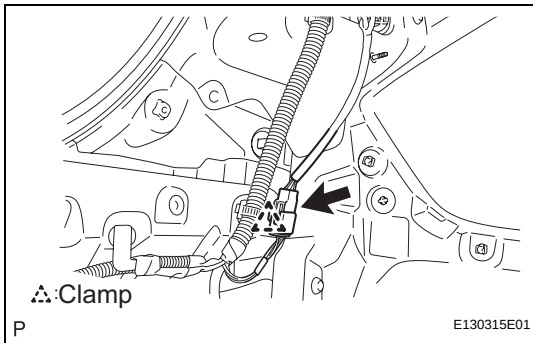
| Tester Connection | Condition                       | Specified Condition    |
|-------------------|---------------------------------|------------------------|
| R13-4 - R11-3     | Light control switch OFF → TAIL | Below 1 V → 10 to 14 V |

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

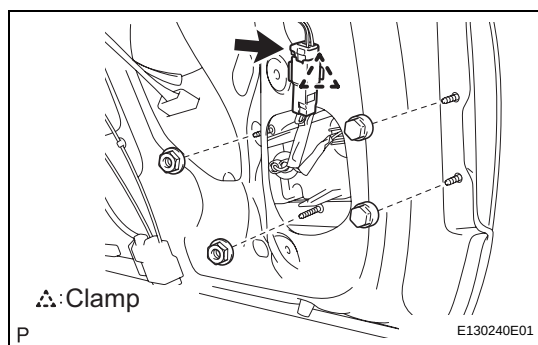


## REMOVAL

1. REMOVE LUGGAGE COMPARTMENT FLOOR MAT
2. REMOVE NO. 2 SPARE WHEEL COVER
3. REMOVE SPARE WHEEL COVER TRAY
4. REMOVE LUGGAGE HOLD BELT STRIKER ASSEMBLY (See page [ED-82](#))
5. REMOVE NO. 1 LUGGAGE COMPARTMENT TRIM HOOK (See page [ED-83](#))
6. REMOVE REAR FLOOR FINISH PLATE (See page [ED-83](#))
7. REMOVE LUGGAGE COMPARTMENT INNER TRIM COVER LH (See page [ED-83](#))
8. REMOVE REAR BUMPER ASSEMBLY (w/o Intuitive Parking Assist System) (See page [ET-18](#))
9. REMOVE LUGGAGE COMPARTMENT INNER TRIM COVER RH (w/ Intuitive Parking Assist System) (See page [ED-83](#))
10. REMOVE REAR BUMPER ASSEMBLY (w/ Intuitive Parking Assist System) (See page [ET-19](#))
11. REMOVE REAR COMBINATION LIGHT ASSEMBLY
  - (a) Disconnect the connector and clamp.



- (b) Remove the screw and 3 nuts.
  - (c) Disengage the clip and remove the rear combination light assembly.
12. REMOVE LUGGAGE COMPARTMENT DOOR ASSIST GRIP (See page [ET-71](#))
13. REMOVE LUGGAGE LOCK CONTROL CABLE PLATE (See page [ET-71](#))
14. REMOVE LUGGAGE COMPARTMENT DOOR INSIDE HANDLE (See page [ET-71](#))
15. REMOVE LUGGAGE COMPARTMENT DOOR COVER (See page [ET-72](#))



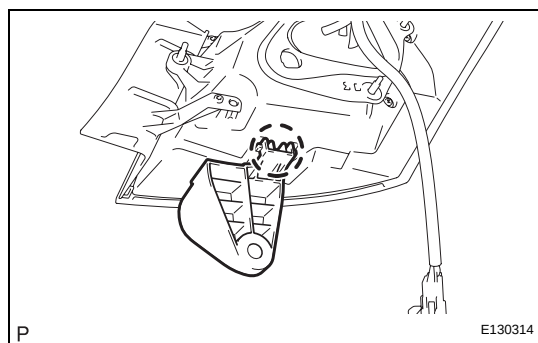
## 16. REMOVE REAR LIGHT ASSEMBLY

- (a) Disconnect the connector and clamp.
- (b) Remove the 4 nuts and remove the rear light assembly.

## DISASSEMBLY

### 1. REMOVE REAR BUMPER RETAINER UPPER

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

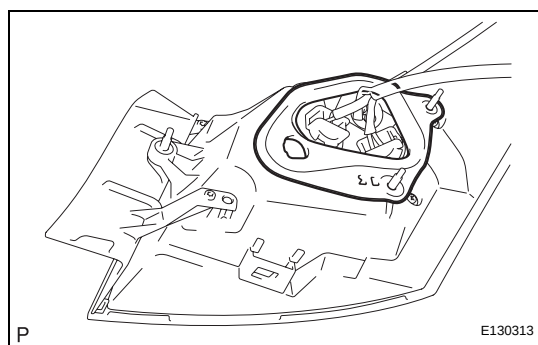


### 2. REMOVE REAR COMBINATION LIGHT GASKET

- (a) Remove the rear combination light gasket.

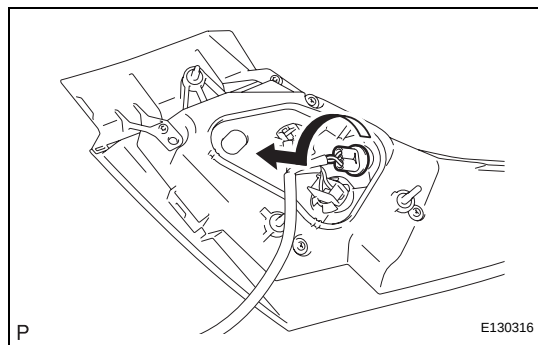
#### NOTICE:

- 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 combination light gasket to prevent water ingress.



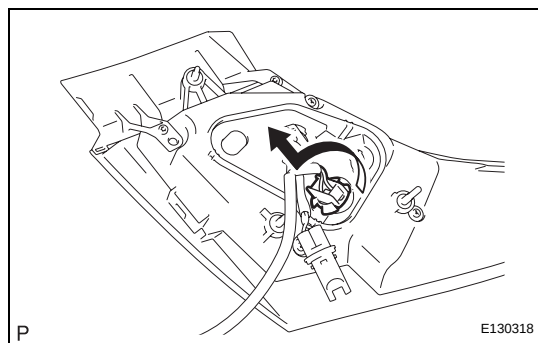
### 3. REMOVE REAR SIDE MARKER LIGHT BULB

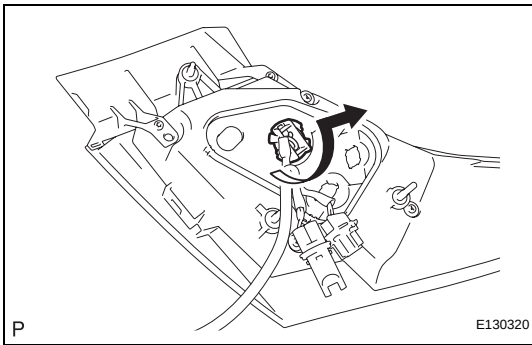
- (a) Turn the rear side marker light bulb and the rear combination light socket and wire sub-assembly in the direction indicated by the arrow and remove them as a unit.
- (b) Remove the rear side marker light bulb from the rear combination light socket and wire sub-assembly.



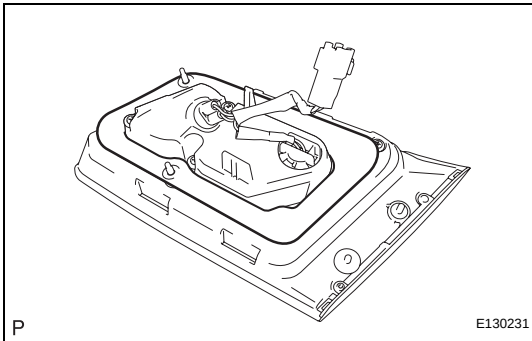
### 4. REMOVE REAR TURN SIGNAL LIGHT BULB

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



**5. REMOVE TAIL AND STOP LIGHT BULB**

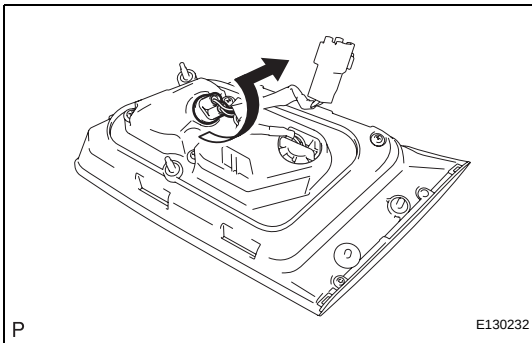
- (a) Turn the tail and stop light bulb and the rear combination light socket and wire sub-assembly in the direction indicated by the arrow and remove them as a unit.
- (b) Remove the tail and stop light bulb from the rear combination light socket and wire sub-assembly.

**6. REMOVE REAR LIGHT GASKET**

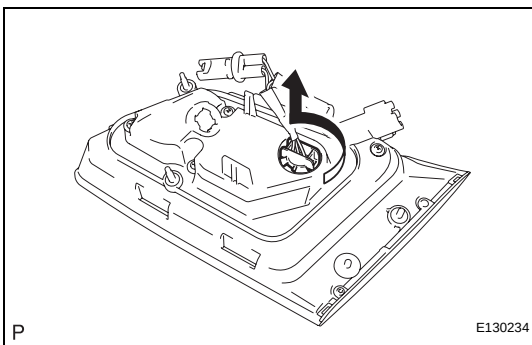
- (a) Remove the rear light gasket.

**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.

**7. 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.

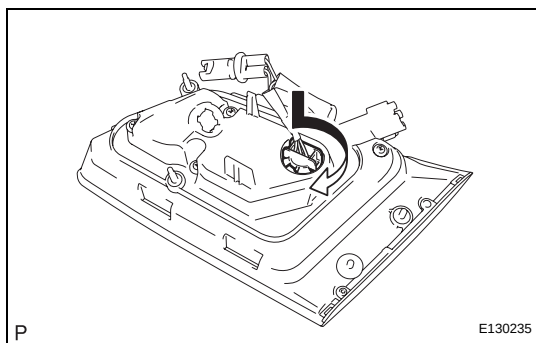
**8. REMOVE TAIL LIGHT BULB**

- (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.

## REASSEMBLY

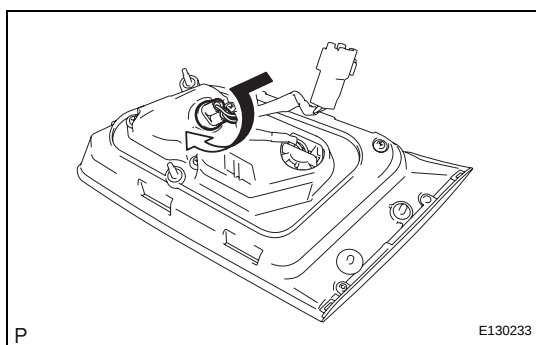
### 1. INSTALL TAIL LIGHT BULB

- (a) Install the tail light bulb to the tail and 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.

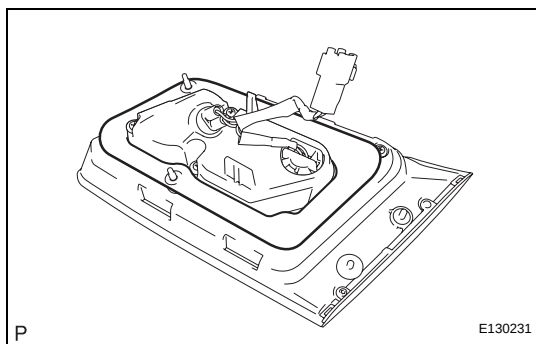


### 2. INSTALL BACK UP LIGHT BULB

- (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.



### 3. INSTALL REAR LIGHT GASKET

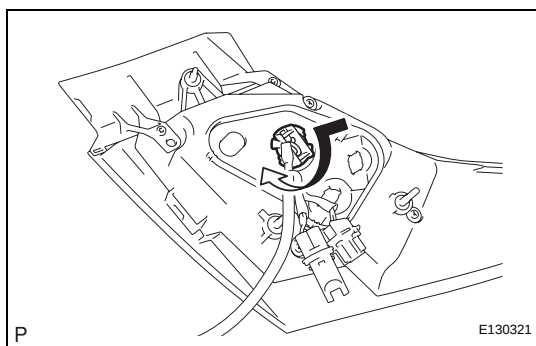
- (a) Install a new rear light gasket.

#### 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.

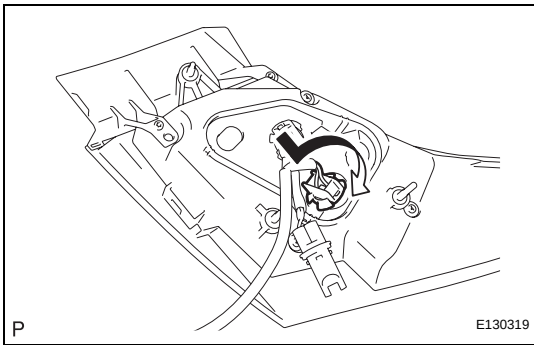
### 4. INSTALL TAIL AND STOP LIGHT BULB

- (a) Install the tail and stop light bulb to the tail and rear combination light socket and wire sub-assembly.
- (b) Turn the tail and stop light bulb and rear combination light socket and wire sub-assembly in the direction indicated by the arrow and install them as a unit.



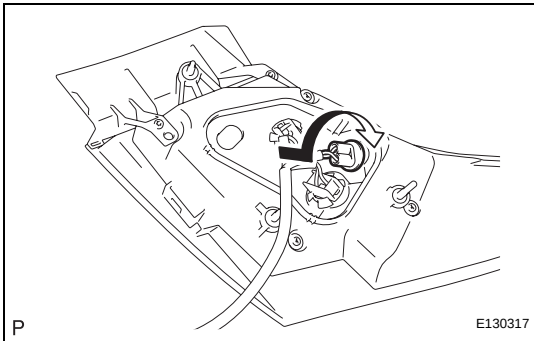
### 5. INSTALL REAR TURN SIGNAL LIGHT BULB

- (a) Install the rear turn signal light bulb to the rear combination light socket and wire sub-assembly.



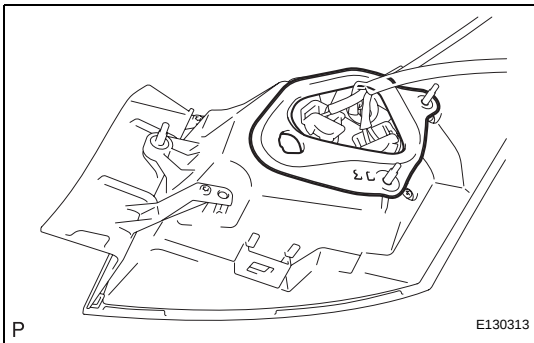
- (b) Turn the rear turn signal light bulb and rear combination light socket and wire sub-assembly in the direction indicated by the arrow and install them as a unit.

#### 6. INSTALL REAR SIDE MARKER LIGHT BULB



- (a) Install the rear side marker light bulb to the rear combination light socket and wire sub-assembly.

- (b) Turn the rear side marker light bulb and rear combination light socket and wire sub-assembly in the direction indicated by the arrow and install them as a unit.

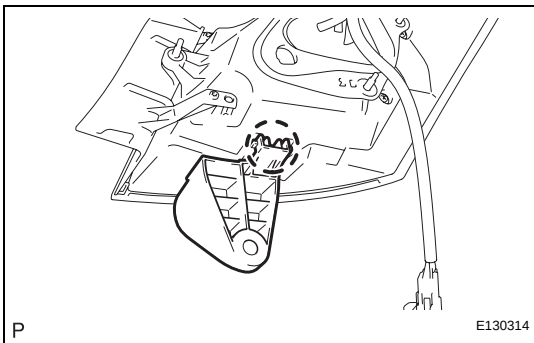


#### 7. INSTALL REAR COMBINATION LIGHT GASKET

- (a) Install a new rear combination light gasket.

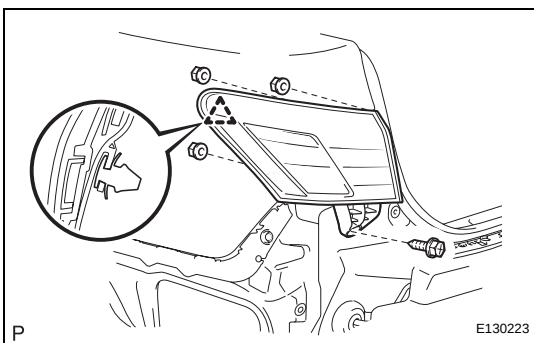
##### NOTICE:

- 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 combination light gasket to prevent water ingress.



#### 8. INSTALL REAR BUMPER RETAINER UPPER

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

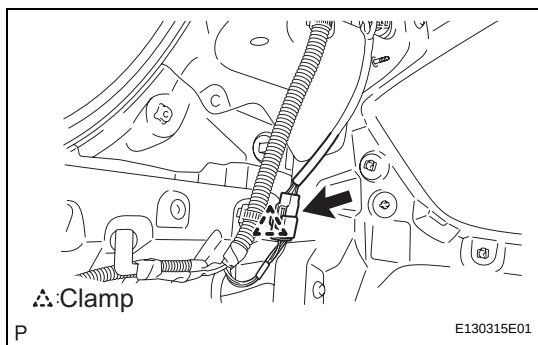


## INSTALLATION

#### 1. INSTALL REAR COMBINATION LIGHT ASSEMBLY

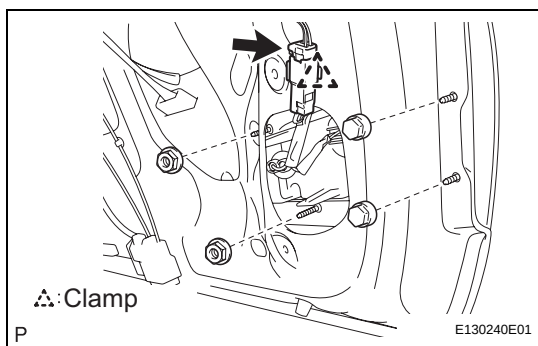
- (a) Engage the clip and install the rear combination light assembly with the screw and 3 nuts.

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



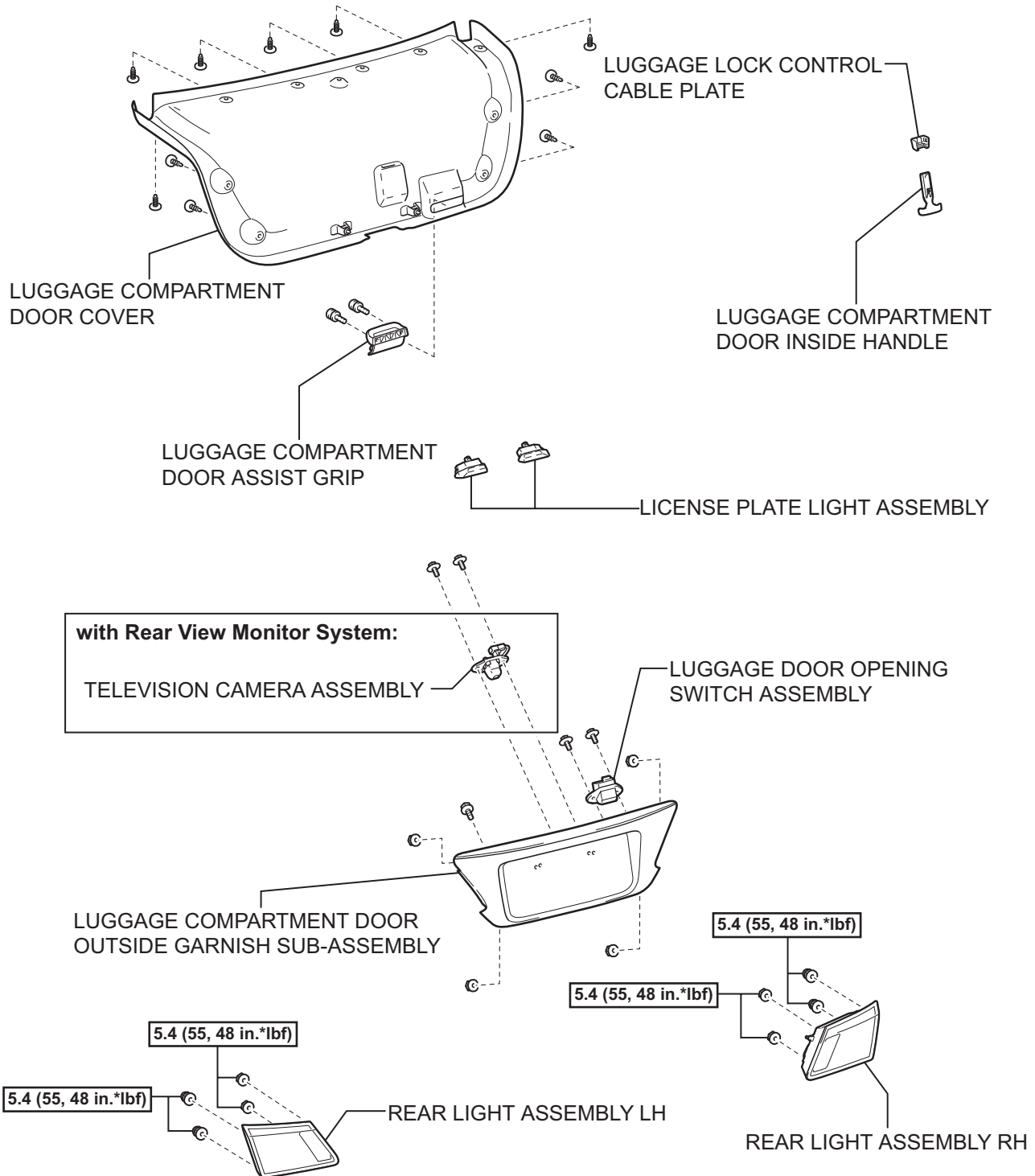
(b) Connect the connector and clamp.

2. **INSTALL REAR BUMPER ASSEMBLY (w/o Intuitive Parking Assist System)** (See page [ET-23](#))
3. **INSTALL REAR BUMPER ASSEMBLY (w/ Intuitive Parking Assist System)** (See page [ET-23](#))
4. **INSTALL LUGGAGE COMPARTMENT INNER TRIM COVER RH (w/ Intuitive Parking Assist System)** (See page [ED-88](#))
5. **INSTALL LUGGAGE COMPARTMENT INNER TRIM COVER LH** (See page [ED-88](#))
6. **INSTALL REAR FLOOR FINISH PLATE** (See page [ED-88](#))
7. **INSTALL NO. 1 LUGGAGE COMPARTMENT TRIM HOOK** (See page [ED-89](#))
8. **INSTALL LUGGAGE HOLD BELT STRIKER ASSEMBLY** (See page [ED-89](#))
9. **INSTALL SPARE WHEEL COVER TRAY**
10. **INSTALL NO. 2 SPARE WHEEL COVER**
11. **INSTALL LUGGAGE COMPARTMENT FLOOR MAT**
12. **INSTALL REAR LIGHT ASSEMBLY**
  - (a) Install the rear light assembly with the 4 nuts.  
**Torque: 5.4 N\*m (55 kgf\*cm, 48 in.\*lbf)**
  - (b) Connect the connector and clamp.
13. **INSTALL LUGGAGE COMPARTMENT DOOR COVER** (See page [ET-74](#))
14. **INSTALL LUGGAGE COMPARTMENT DOOR INSIDE HANDLE** (See page [ET-74](#))
15. **INSTALL LUGGAGE LOCK CONTROL CABLE PLATE** (See page [ET-75](#))
16. **INSTALL LUGGAGE COMPARTMENT DOOR ASSIST GRIP** (See page [ET-75](#))

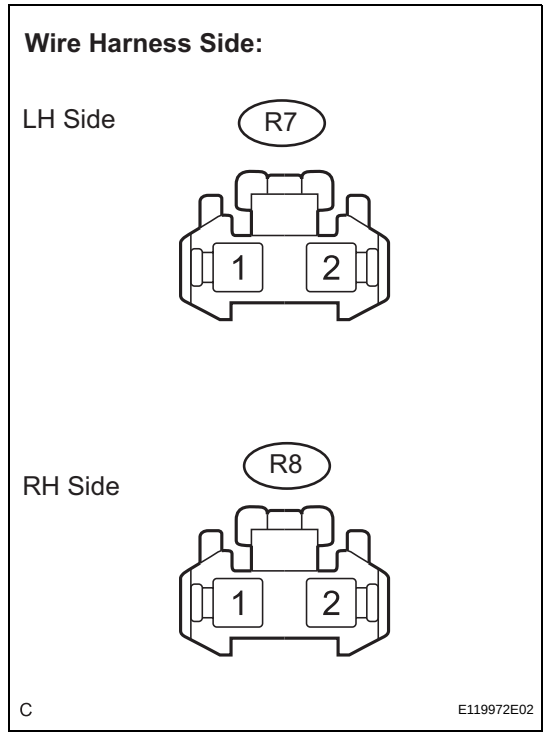


# LICENSE PLATE LIGHT ASSEMBLY

## COMPONENTS



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



## ON-VEHICLE INSPECTION

### 1. INSPECT LICENSE PLATE LIGHT ASSEMBLY

- (a) Disconnect the connector from the license plate light assembly.
- (b) Measure the voltage according to the value(s) in the table below.

**Standard voltage:**

**LH Side**

| Tester Connection | Condition                          | Specified Condition    |
|-------------------|------------------------------------|------------------------|
| R7-1 - R7-2       | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |
| R7-1 - R7-2       | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |

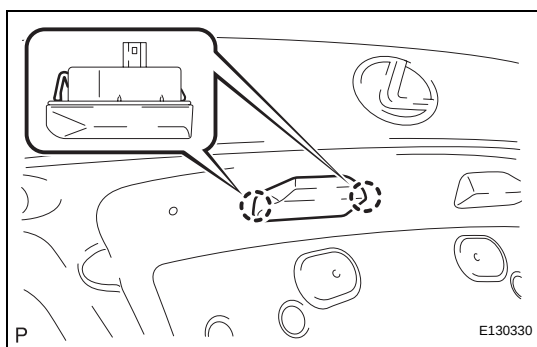
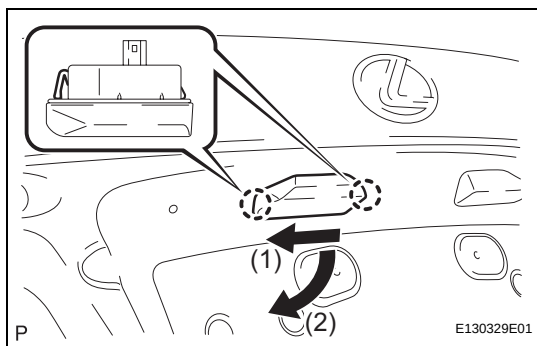
**RH Side**

| Tester Connection | Condition                          | Specified Condition    |
|-------------------|------------------------------------|------------------------|
| R7-1 - R7-2       | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |
| R7-1 - R7-2       | Light control switch<br>OFF → TAIL | Below 1 V → 10 to 14 V |

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

## REMOVAL

1. REMOVE LUGGAGE COMPARTMENT DOOR ASSIST GRIP (See page [ET-71](#))
2. REMOVE LUGGAGE LOCK CONTROL CABLE PLATE (See page [ET-71](#))
3. REMOVE LUGGAGE COMPARTMENT DOOR INSIDE HANDLE (See page [ET-71](#))
4. REMOVE LUGGAGE COMPARTMENT DOOR COVER (See page [ET-72](#))
5. REMOVE REAR LIGHT ASSEMBLY LH (See page [LI-149](#))
6. REMOVE REAR LIGHT ASSEMBLY RH  
HINT:  
Use the same procedures for the RH side and the LH side.
7. REMOVE LUGGAGE DOOR OPENING SWITCH ASSEMBLY (See page [DL-203](#))
8. REMOVE LUGGAGE COMPARTMENT DOOR OUTSIDE GARNISH SUB-ASSEMBLY (See page [ET-72](#))
9. REMOVE TELEVISION CAMERA ASSEMBLY (w/ Rear View Monitor System) (See page [PM-105](#))
10. REMOVE LUGGAGE COMPARTMENT DOOR OUTSIDE GARNISH SUB-ASSEMBLY (w/ Rear View Monitor System) (See page [ET-73](#))
11. 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.



## INSTALLATION

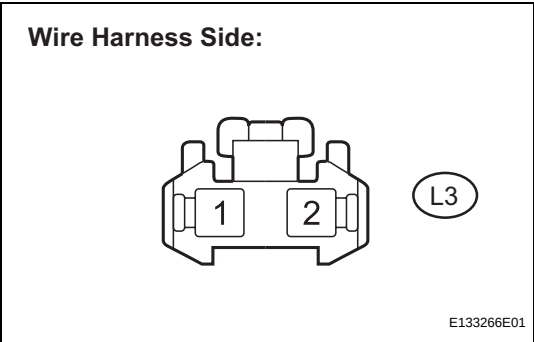
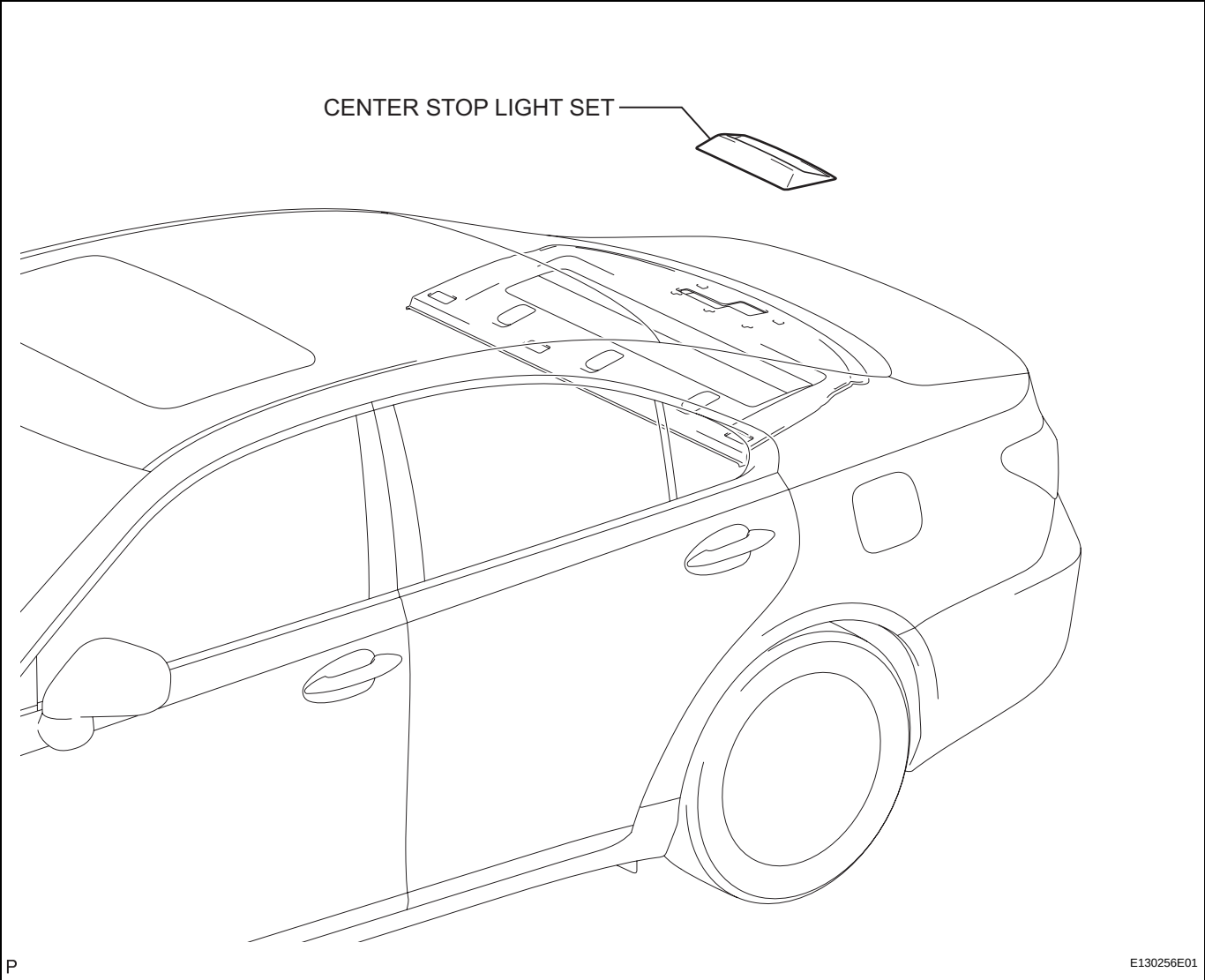
1. INSTALL LICENSE PLATE LIGHT ASSEMBLY
  - (a) Engage the 2 claws and install the license plate light assembly.
  - (b) Connect the connector.
2. INSTALL LUGGAGE COMPARTMENT DOOR OUTSIDE GARNISH SUB-ASSEMBLY (See page [ET-73](#))

3. INSTALL LUGGAGE COMPARTMENT DOOR  
OUTSIDE GARNISH SUB-ASSEMBLY (w/ Rear View  
Monitor System) (See page [ET-74](#))
4. INSTALL TELEVISION CAMERA ASSEMBLY (w/ Rear  
View Monitor System) (See page [PM-105](#))
5. INSTALL LUGGAGE DOOR OPENING SWITCH  
ASSEMBLY (See page [DL-203](#))
6. INSTALL REAR LIGHT ASSEMBLY LH (See page [LI-154](#))
7. INSTALL REAR LIGHT ASSEMBLY RH  
HINT:  
Use the same procedures for the RH side and the LH  
side.
8. INSTALL LUGGAGE COMPARTMENT DOOR COVER  
(See page [ET-74](#))
9. INSTALL LUGGAGE COMPARTMENT DOOR INSIDE  
HANDLE (See page [ET-74](#))
10. INSTALL LUGGAGE LOCK CONTROL CABLE PLATE  
(See page [ET-75](#))
11. INSTALL LUGGAGE COMPARTMENT DOOR ASSIST  
GRIP (See page [ET-75](#))

LI

# HIGH MOUNTED STOP LIGHT ASSEMBLY

## COMPONENTS



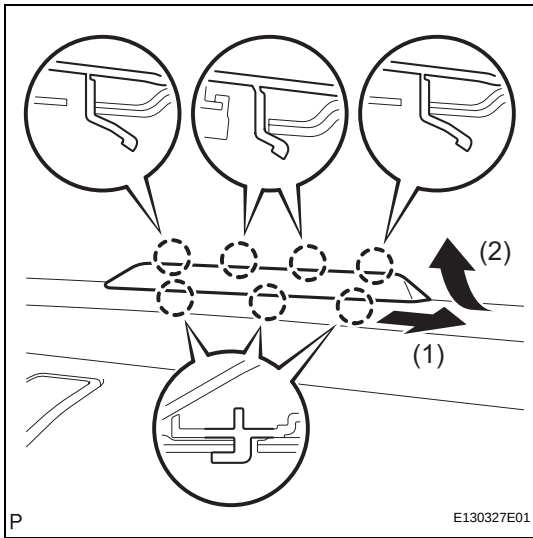
### ON-VEHICLE INSPECTION

1. INSPECT HIGH MOUNTED STOP LIGHT ASSEMBLY
- (a) Disconnect the high mounted stop light connector.
  - (b) Measure the voltage according to the value(s) in the table below.

Standard voltage

| Tester Connection | Condition             | Specified Condition |
|-------------------|-----------------------|---------------------|
| L3-1 - L3-2       | Brake pedal released  | Below 1 V           |
| L3-1 - L3-2       | Brake pedal depressed | 10 to 14 V          |

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



## REMOVAL

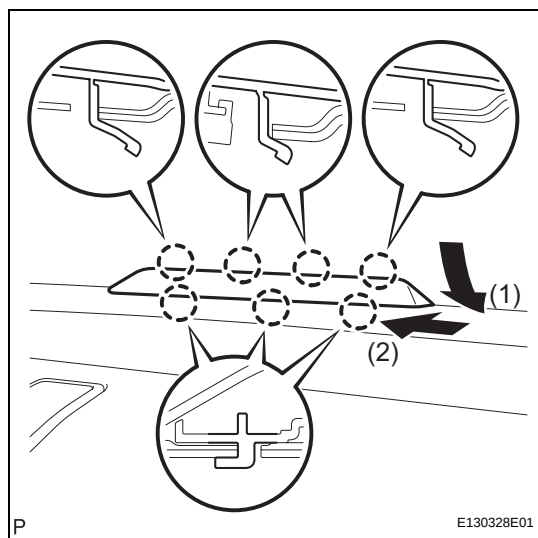
### 1. REMOVE CENTER STOP LIGHT SET

- Disengage the 7 claws and disconnect the center stop light set as shown in the illustration.
- Disconnect the connector and remove the center stop light set.

## INSTALLATION

### 1. INSTALL CENTER STOP LIGHT SET

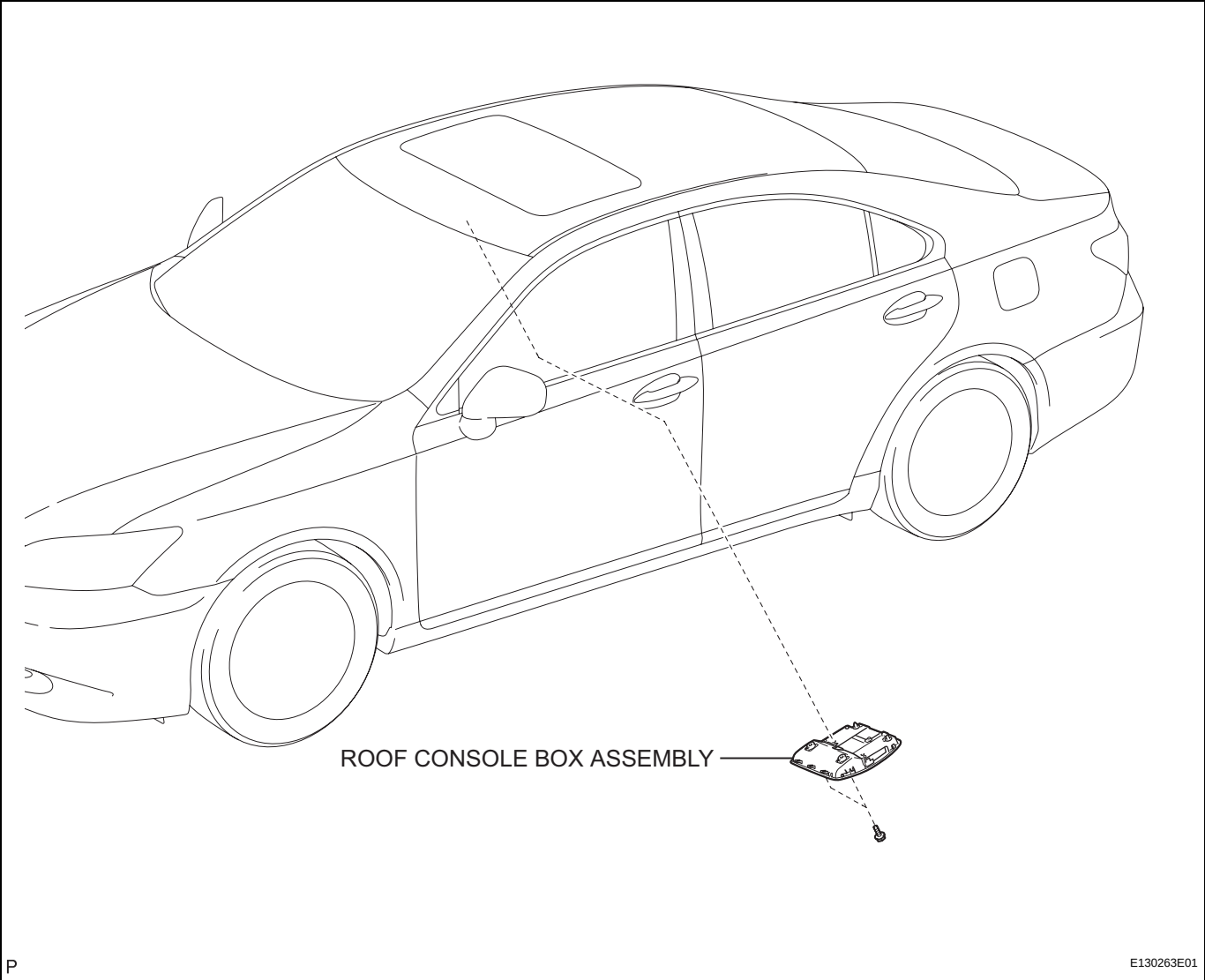
- (a) Connect the connector.
- (b) Engage the 7 claws and install the center stop light set as shown in the illustration.



# PERSONAL LIGHT ASSEMBLY

## COMPONENTS

LI



REMOVAL

1. REMOVE ROOF CONSOLE BOX ASSEMBLY (See page IR-44)

INSPECTION

1. INSPECT ROOF CONSOLE BOX ASSEMBLY (PERSONAL LIGHT ASSEMBLY)

- (a) Disconnect the Q2 personal light assembly connector.
- (b) Measure the voltage and resistance according to the value(s) in the table below.

Standard voltage

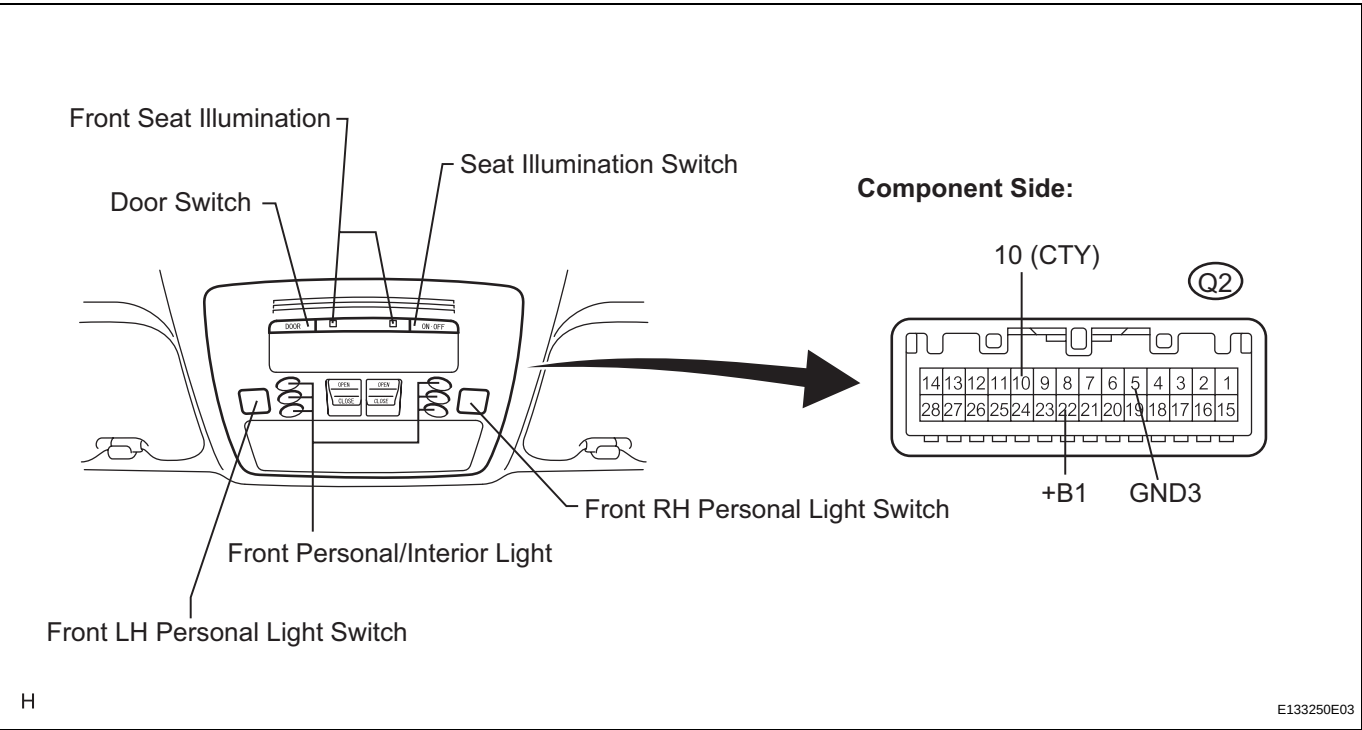
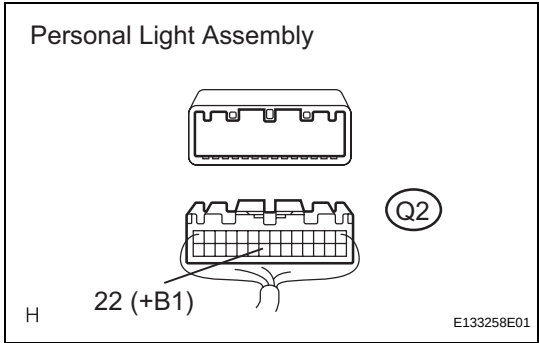
| Tester Connection         | Condition | Specified Condition |
|---------------------------|-----------|---------------------|
| Q2-22 (+B1) - Body ground | Always    | 10 to 14 V          |

Standard resistance

| Tester Connection         | Condition | Specified Condition |
|---------------------------|-----------|---------------------|
| Q2-5 (GND3) - Body ground | Always    | Below 1 Ω           |

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

- (c) Apply battery voltage to the roof console box assembly connector.



- (d) Check that each light comes on.  
**OK**

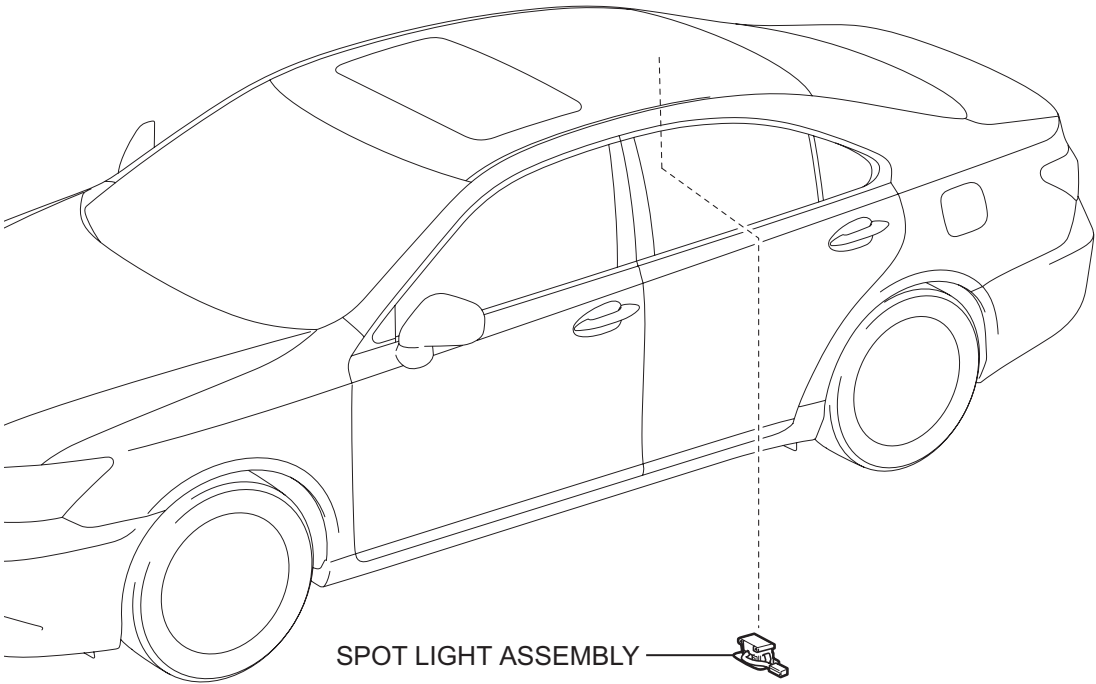
| Measurement Condition                                                                      | Switch Condition                                                                                                        | Specified Condition                                |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Battery positive (+) → Terminal Q2-22 (+B1)<br>Battery negative (-) → Terminal Q2-10 (CTY) | DOOR switch is pushed (ON), seat illumination switch is not pushed (OFF), and personal light switch is not pushed (OFF) | Interior light and front seat illumination come on |
| Battery positive (+) → Terminal Q2-22 (+B1)<br>Battery negative (-) → Terminal Q2-5 (GND3) | Front RH personal light switch ON                                                                                       | Front RH personal light comes on                   |
|                                                                                            | Front LH personal light switch ON                                                                                       | Front LH personal light comes on                   |
| Battery positive (+) → Terminal Q2-22 (+B1)<br>Battery negative (-) → Body ground          | Front seat illumination switch is pushed (ON)                                                                           | Front seat illumination comes on                   |

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

# REAR ROOM LIGHT ASSEMBLY

## COMPONENTS

LI



REMOVAL

- 1. REMOVE SPOT LIGHT ASSEMBLY (for Standard)  
(See page IR-46)
- 2. REMOVE SPOT LIGHT ASSEMBLY (for Glass Roof)  
(See page IR-46)

INSPECTION

- 1. INSPECT SPOT LIGHT ASSEMBLY (REAR SEAT ILLUMINATION)
  - (a) Disconnect the Q6 spot light assembly connector.
  - (b) Measure the voltage according to the value(s) in the table below.

Standard voltage

| Tester Connection   | Condition                                    | Specified Condition |
|---------------------|----------------------------------------------|---------------------|
| Q6-1 (B) - Q6-2 (L) | Seat illumination switch is not pushed (OFF) | Below 1 V           |
| Q6-1 (B) - Q6-2 (L) | Seat illumination switch is pushed (ON)      | 10 to 14 V          |

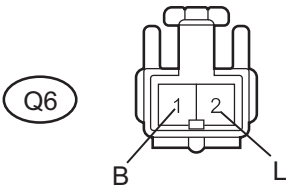
If the result is not as specified, there is a malfunction on the wire harness side.

- (c) Apply battery voltage to the spot light assembly connector.
- (d) Check that the rear seat illumination comes on.  
OK

| Measurement Condition                                                                | Switch Condition | Specified Condition             |
|--------------------------------------------------------------------------------------|------------------|---------------------------------|
| Battery positive (+) → Terminal Q6-1 (B)<br>Battery negative (-) → Terminal Q6-2 (L) | Always           | Rear seat illumination comes on |

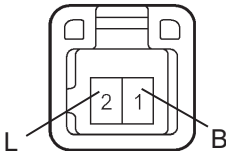
If the result is not as specified, replace the spot light assembly.

Wire Harness Side:

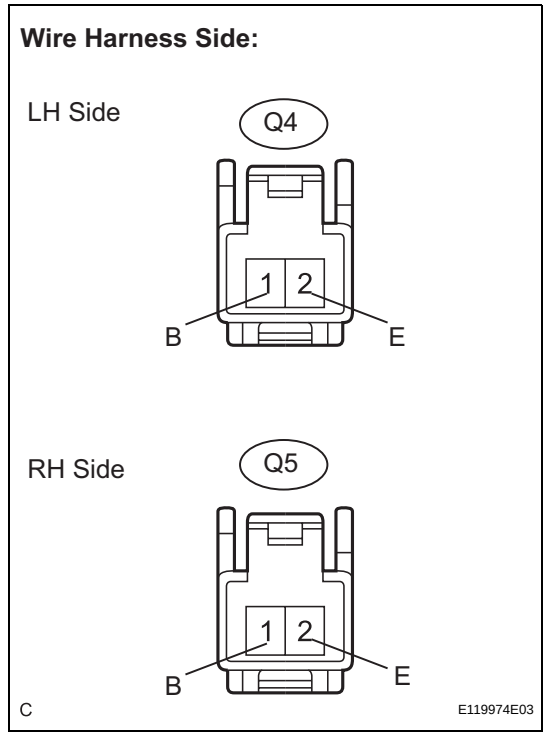


B109979E07

Component Side:



I036073E02



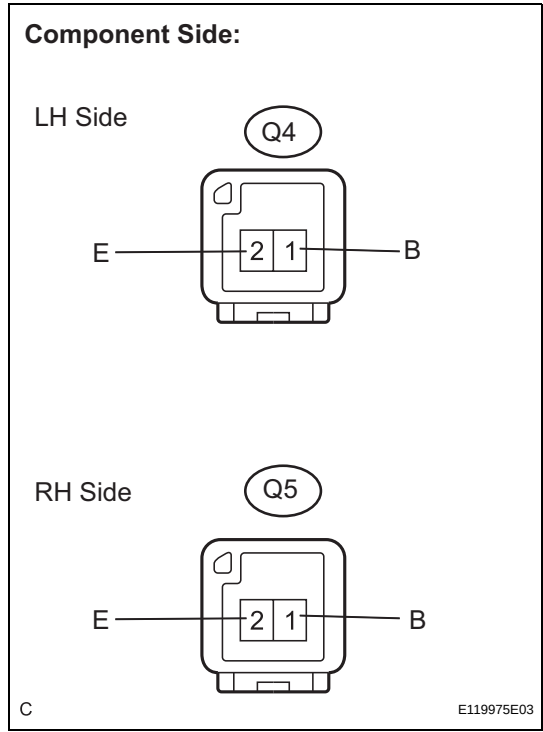
**2. INSPECT REAR ROOM LIGHT ASSEMBLY (REAR PERSONAL LIGHT)**

- (a) Disconnect the Q4 or Q5 rear room light assembly connector.
- (b) Measure the voltage according to the value(s) in the table below.

**Standard voltage**

| Tester Connection   | Condition                                          | Specified Condition |
|---------------------|----------------------------------------------------|---------------------|
| Q4-1 (B) - Q4-2 (E) | Front LH personal light switch is not pushed (OFF) | Below 1 V           |
| Q4-1 (B) - Q4-2 (E) | Front LH personal light switch is pushed (ON)      | 10 to 14 V          |
| Q5-1 (B) - Q5-2 (E) | Front RH personal light switch is not pushed (OFF) | Below 1 V           |
| Q5-1 (B) - Q5-2 (E) | Front RH personal light switch is pushed (ON)      | 10 to 14 V          |

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



- (c) Apply battery voltage to the spot light assembly connector.
- (d) Check that the rear personal light comes on.

**OK**

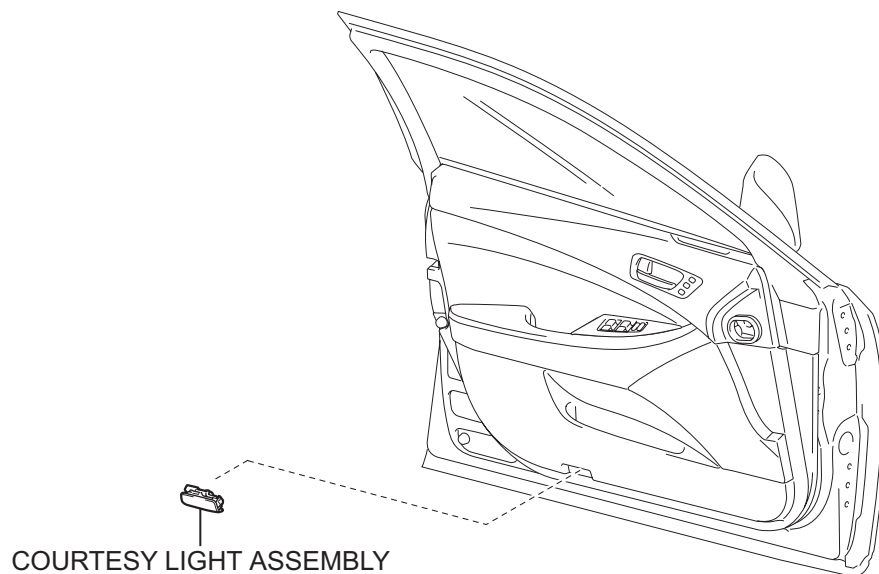
| Measurement Condition                                                        | Switch Condition                             | Specified Condition             |
|------------------------------------------------------------------------------|----------------------------------------------|---------------------------------|
| Battery positive (+) → Terminal Q4-1<br>Battery negative (-) → Terminal Q4-2 | Rear LH personal light switch is pushed (ON) | Rear LH personal light comes on |
| Battery positive (+) → Terminal Q5-1<br>Battery negative (-) → Terminal Q5-2 | Rear RH personal light switch is pushed (ON) | Rear RH personal light comes on |

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

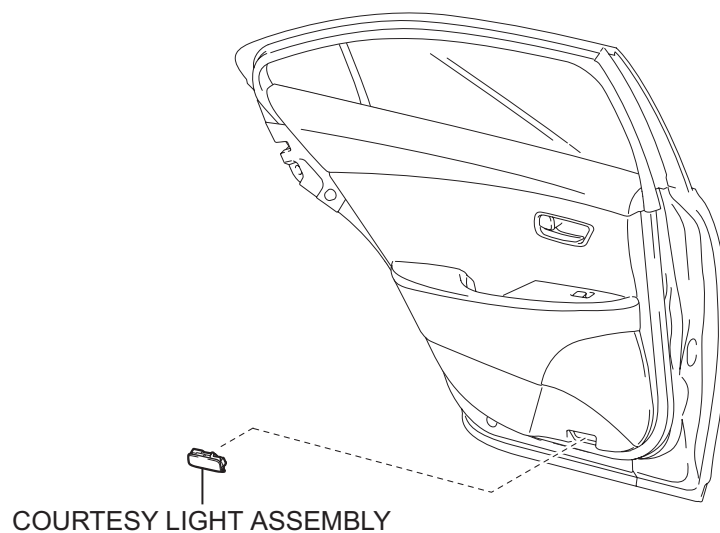
# DOOR COURTESY LIGHT

## COMPONENTS

for Front Side:



for Rear Side:



REMOVAL

- 1. REMOVE COURTESY LIGHT ASSEMBLY (for Front Side) (See page ED-34)
- 2. REMOVE COURTESY LIGHT ASSEMBLY (for Rear Side) (See page ED-59)

INSPECTION

- 1. INSPECT COURTESY LIGHT ASSEMBLY (for Front Side)
  - (a) Disconnect the I1 or H1 front courtesy light assembly connector.
  - (b) Measure the voltage according to the value(s) in the table below.

Standard voltage:

LH Side

| Tester Connection | Condition               | Specified Condition |
|-------------------|-------------------------|---------------------|
| I1-1 - I1-2       | Front LH door is opened | 10 to 14 V          |
|                   | Front LH door is closed | Below 1 V           |

RH Side

| Tester Connection | Condition               | Specified Condition |
|-------------------|-------------------------|---------------------|
| H1-1 - H1-2       | Front RH door is opened | 10 to 14 V          |
|                   | Front RH door is closed | Below 1 V           |

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

- (c) Apply battery voltage to the courtesy light assembly connector.
- (d) Check that the courtesy light comes on.

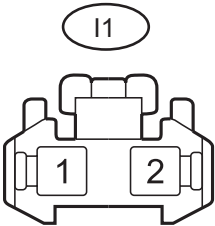
OK

| Measurement Condition                                                  | Specified Condition     |
|------------------------------------------------------------------------|-------------------------|
| Battery positive (+) → Terminal 1<br>Battery negative (-) → Terminal 2 | Courtesy light comes on |

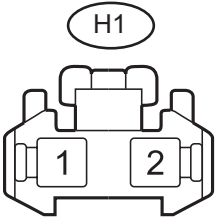
If the result is not as specified, replace the bulb or courtesy light assembly.

Wire Harness Side:

LH Side



RH Side

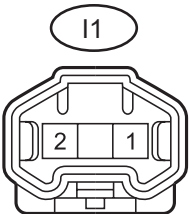


C

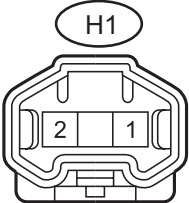
E119972E03

Component Side:

LH Side



RH Side

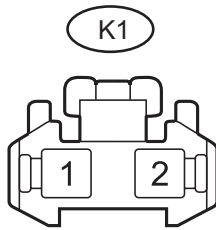


C

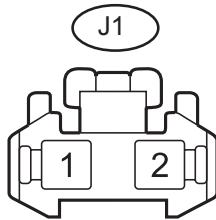
E119973E02

**Wire Harness Side:**

LH Side



RH Side



C

E119972E04

**2. INSPECT COURTESY LIGHT ASSEMBLY (for Rear Side)**

- (a) Disconnect the K1 or J1 rear courtesy light assembly connector.
- (b) Measure the voltage according to the value(s) in the table below.

**Standard voltage:****LH Side**

| Tester Connection | Condition              | Specified Condition |
|-------------------|------------------------|---------------------|
| K1-1 - K1-2       | Rear LH door is opened | 10 to 14 V          |
|                   | Rear LH door is closed | Below 1 V           |

**RH Side**

| Tester Connection | Condition              | Specified Condition |
|-------------------|------------------------|---------------------|
| J1-1 - J1-2       | Rear RH door is opened | 10 to 14 V          |
|                   | Rear RH door is closed | Below 1 V           |

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

- (c) Apply battery voltage to the courtesy light assembly connector.
- (d) Check that the courtesy light comes on.

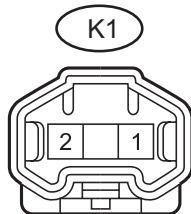
**OK**

| Measurement Condition                                                  | Specified Condition     |
|------------------------------------------------------------------------|-------------------------|
| Battery positive (+) → Terminal 1<br>Battery negative (-) → Terminal 2 | Courtesy light comes on |

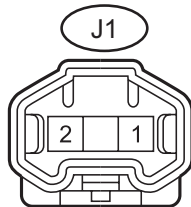
If the result is not as specified, replace the bulb or courtesy light assembly.

**Component Side:**

LH Side



RH Side



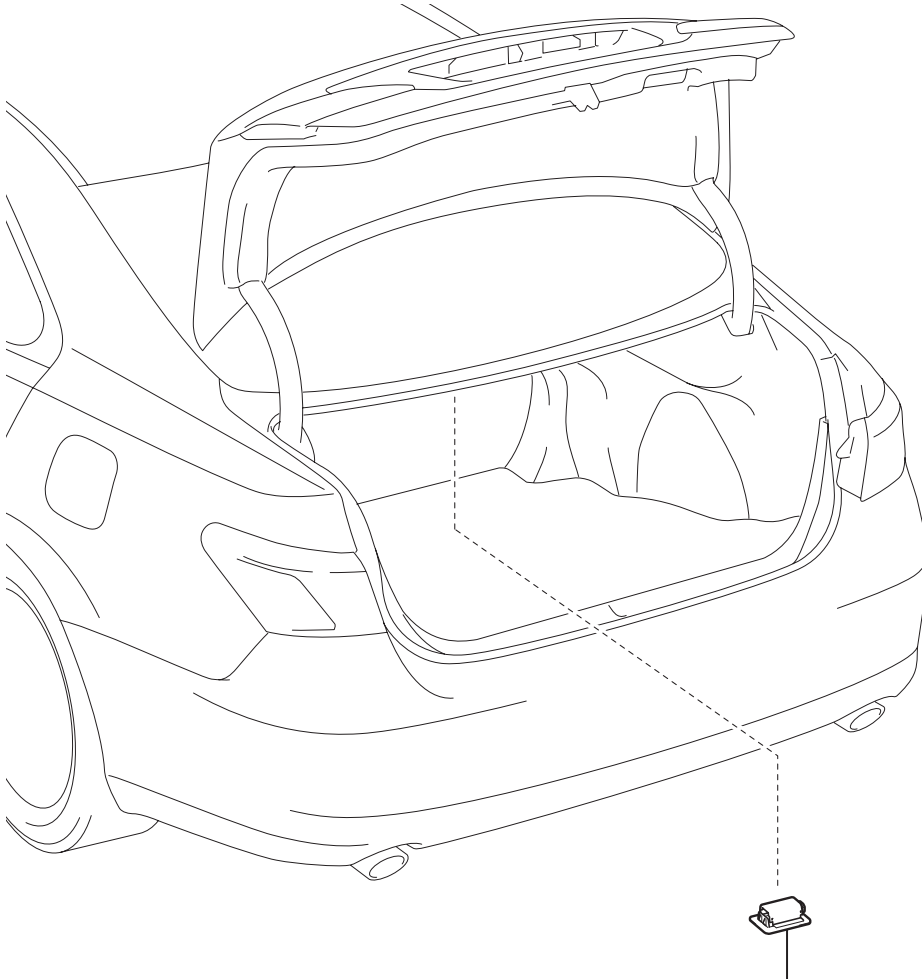
C

E119973E03

# LUGGAGE COMPARTMENT ROOM LIGHT

## COMPONENTS

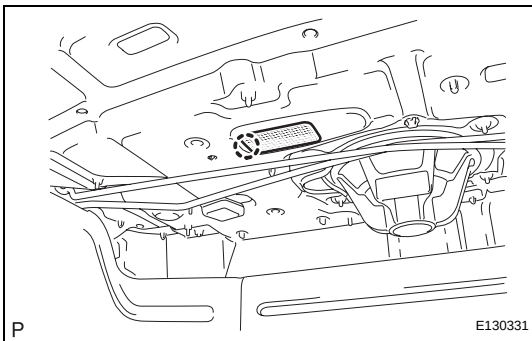
LI



NO. 1 LUGGAGE COMPARTMENT LIGHT ASSEMBLY

P

E130257E01



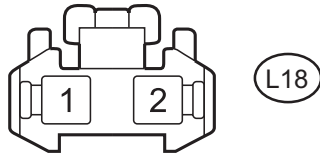
P

E130331

## REMOVAL

### 1. REMOVE NO. 1 LUGGAGE COMPARTMENT LIGHT ASSEMBLY

- Disengage the claw and disconnect the No. 1 luggage compartment light assembly.
- Disconnect the connector and remove the No. 1 luggage compartment light assembly.

**Wire Harness Side:**

E133266E02

**INSPECTION****1. INSPECT NO. 1 LUGGAGE COMPARTMENT LIGHT ASSEMBLY**

- (a) Disconnect the L18 No. 1 luggage compartment light assembly connector.
- (b) Measure the voltage according to the value(s) in the table below.

**Standard voltage**

| Tester Connection | Condition                          | Specified Condition |
|-------------------|------------------------------------|---------------------|
| L18-1 - L18-2     | Luggage compartment door is closed | Below 1 V           |
|                   | Luggage compartment door is opened | 10 to 14 V          |

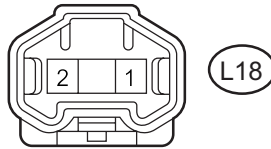
If the result is not specified, there is a malfunction on the wire harness side.

- (c) Apply battery voltage to the No. 1 luggage compartment light assembly connector.
- (d) Check that the No. 1 luggage compartment light comes on.

**OK**

| Measurement Condition                                                          | Specified Condition                |
|--------------------------------------------------------------------------------|------------------------------------|
| Battery positive (+) → Terminal L18-1<br>Battery negative (-) → Terminal L18-2 | Luggage compartment light comes on |

If the result is not as specified, replace the bulb or No. 1 luggage compartment light assembly.

**Component Side:**

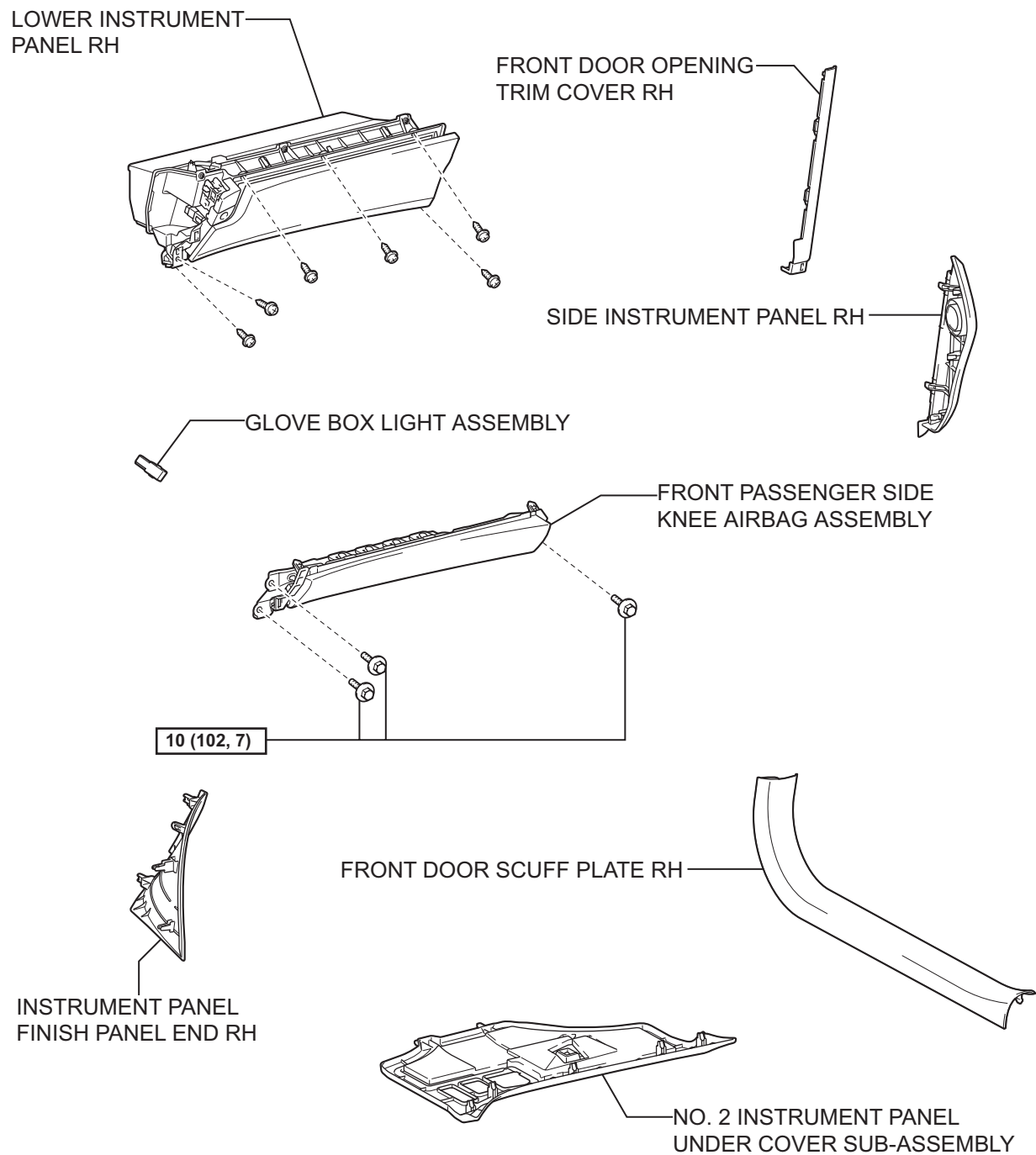
B113722E01

H

# GLOVE BOX LIGHT

## COMPONENTS

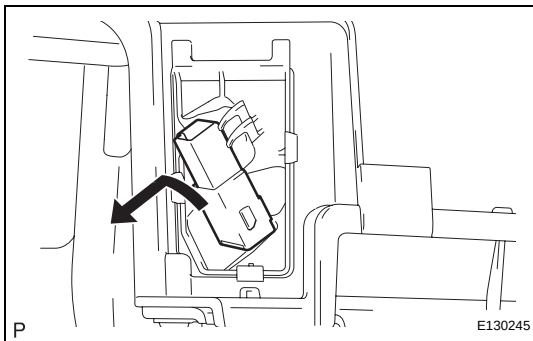
LI



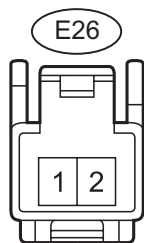
**N\*m (kgf\*cm, ft.\*lbf)** : Specified torque

## REMOVAL

1. **PRECAUTION**  
**CAUTION:**  
 Be sure to read "PRECAUTION" thoroughly before servicing (See page [RS-1](#)).
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**  
**NOTICE:**  
 Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.
3. **REMOVE INSTRUMENT PANEL FINISH PANEL END RH** (See page [IP-15](#))
4. **REMOVE FRONT DOOR SCUFF PLATE RH** (See page [IR-42](#))
5. **REMOVE FRONT DOOR OPENING TRIM COVER RH** (See page [IR-42](#))
6. **REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See page [IP-15](#))
7. **REMOVE SIDE INSTRUMENT PANEL RH** (See page [IP-15](#))
8. **REMOVE FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY** (See page [RS-396](#))
9. **REMOVE LOWER INSTRUMENT PANEL RH** (See page [IP-16](#))
10. **REMOVE GLOVE BOX LIGHT ASSEMBLY**
  - (a) Remove the glove box light assembly as shown in the illustration.



Wire Harness Side:



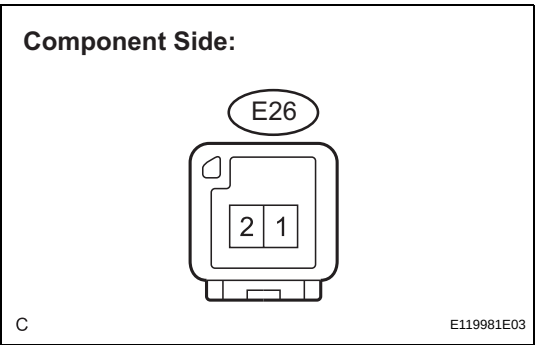
## INSPECTION

1. **INSPECT GLOVE BOX LIGHT ASSEMBLY**
  - (a) Disconnect the E26 glove box light assembly connector.
  - (b) Measure the voltage according to the value(s) in the table below.

### Standard voltage

| Tester Connection | Condition                    | Specified Condition |
|-------------------|------------------------------|---------------------|
| E26-2 - E26-1     | Light control switch in TAIL | 10 to 14 V          |
|                   | Light control switch OFF     | Below 1 V           |

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



- (c) Apply battery voltage to the glove box light assembly connector.
  - (d) Check that the glove box light comes on.
- OK**

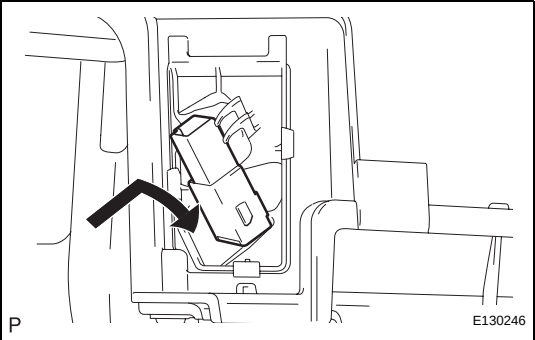
| Measurement Condition                                                  | Condition                 | Specified Condition      |
|------------------------------------------------------------------------|---------------------------|--------------------------|
| Battery positive (+) → Terminal 2<br>Battery 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**

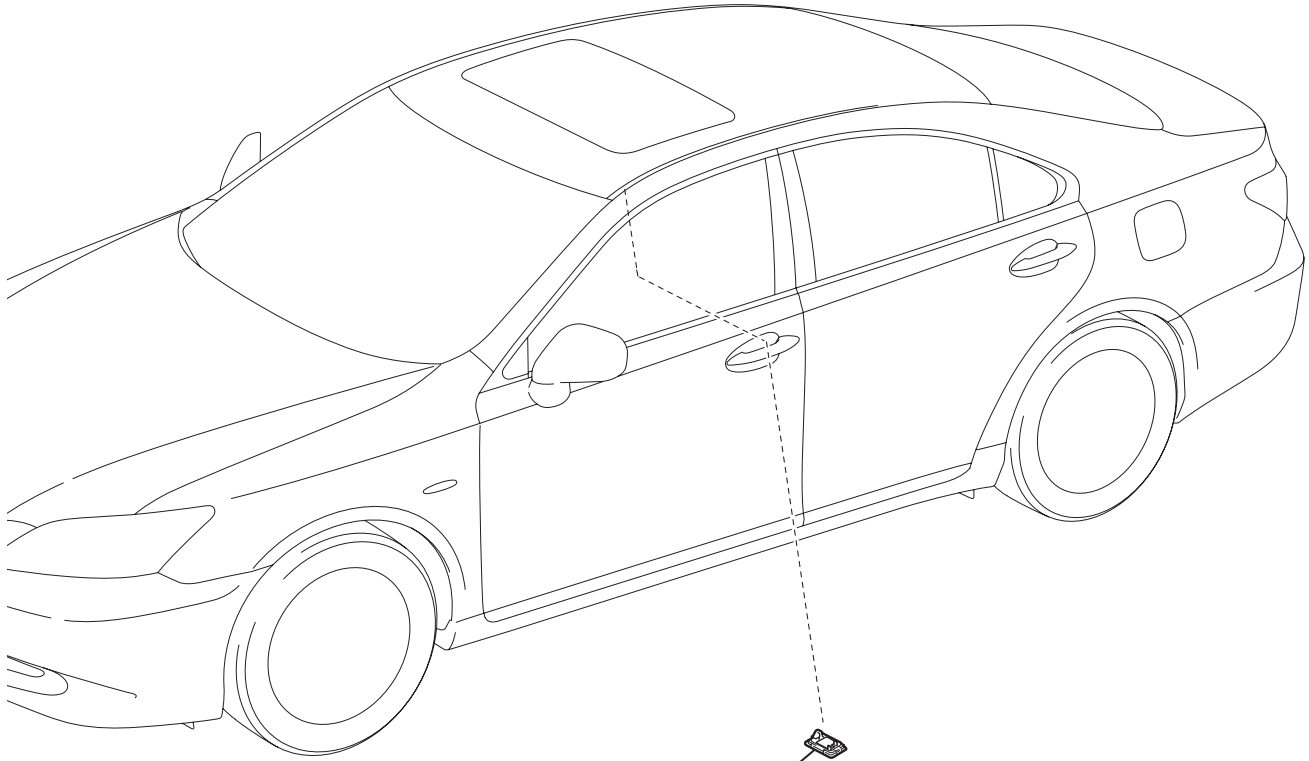
1. **INSTALL GLOVE BOX LIGHT ASSEMBLY**
  - (a) Install the glove box light assembly as shown in the illustration.
2. **INSTALL LOWER INSTRUMENT PANEL RH** (See page [IP-42](#))
3. **INSTALL FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY** (See page [RS-396](#))
4. **INSTALL SIDE INSTRUMENT PANEL RH** (See page [IP-43](#))
5. **INSTALL NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See page [IP-44](#))
6. **INSTALL FRONT DOOR OPENING TRIM COVER RH** (See page [IR-65](#))
7. **INSTALL FRONT DOOR SCUFF PLATE RH** (See page [IR-65](#))
8. **INSTALL INSTRUMENT PANEL FINISH PANEL END RH** (See page [IP-44](#))
9. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
10. **INSPECT SRS WARNING LIGHT** (See page [RS-37](#))
11. **PERFORM INITIALIZATION**

**NOTICE:**  
Some systems need initialization after reconnecting the cable to the negative battery terminal (See page [IN-33](#)).



# VANITY LIGHT COMPONENTS

LI



VANITY LIGHT ASSEMBLY

REMOVAL

1. REMOVE VANITY LIGHT ASSEMBLY (See page [IR-50](#))

INSPECTION

1. INSPECT VANITY LIGHT ASSEMBLY
- (a) Disconnect the Q8 or Q9 vanity light assembly connector.
  - (b) Measure the voltage according to the value(s) in the table below.

Standard voltage:

LH Side

| Tester Connection | Condition               | Specified Condition |
|-------------------|-------------------------|---------------------|
| Q8-1 - Q8-2       | Vanity light switch ON  | 10 to 14 V          |
|                   | Vanity light switch OFF | Below 1 V           |

RH Side

| Tester Connection | Condition               | Specified Condition |
|-------------------|-------------------------|---------------------|
| Q9-1 - Q9-2       | Vanity light switch ON  | 10 to 14 V          |
|                   | Vanity light switch OFF | Below 1 V           |

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

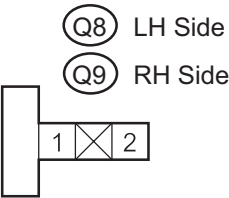
- (c) Apply battery voltage to the vanity light assembly connector.
- (d) Check that the vanity light comes on.

OK

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

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

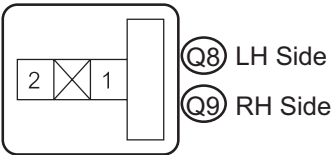
Wire Harness Side:



H

E133263E01

Component Side:

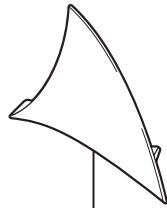


H

E121462E01

# CONSOLE BOX LIGHT

## COMPONENTS



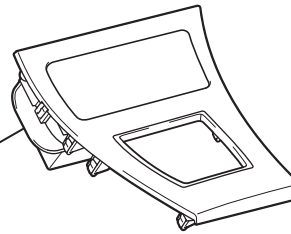
INSTRUMENT PANEL  
FINISH PANEL END LH



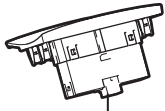
INSTRUMENT PANEL FINISH PANEL END RH

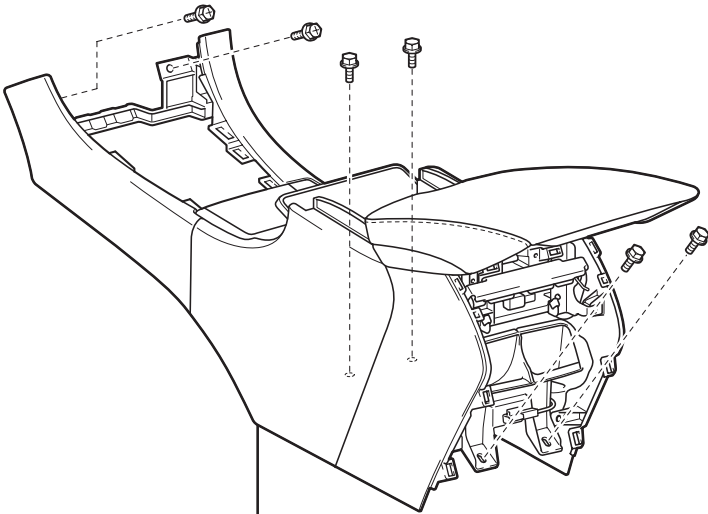


SHIFT LEVER KNOB SUB-ASSEMBLY

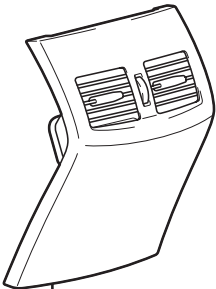


UPPER CONSOLE PANEL ASSEMBLY WITH FRONT ASH RECEPTACLE

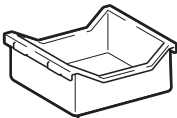
| with Seat Heater System:                                                          | without Seat Heater System:                                                         |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |
| HEATER SEAT SWITCH<br>CONSOLE BASE                                                | HEATER SEAT SWITCH<br>CONSOLE BASE                                                  |



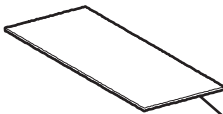
REAR CONSOLE BOX ASSEMBLY



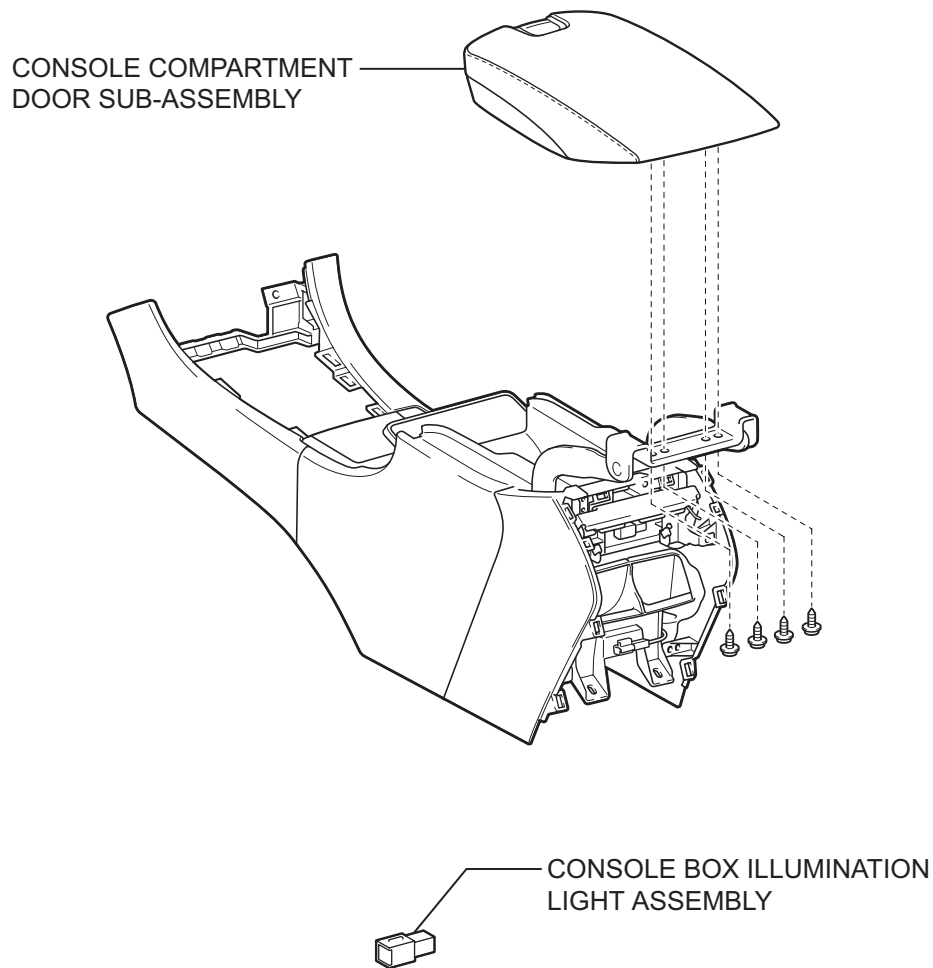
CONSOLE REAR END PANEL SUB-ASSEMBLY



CONSOLE BOX POCKET



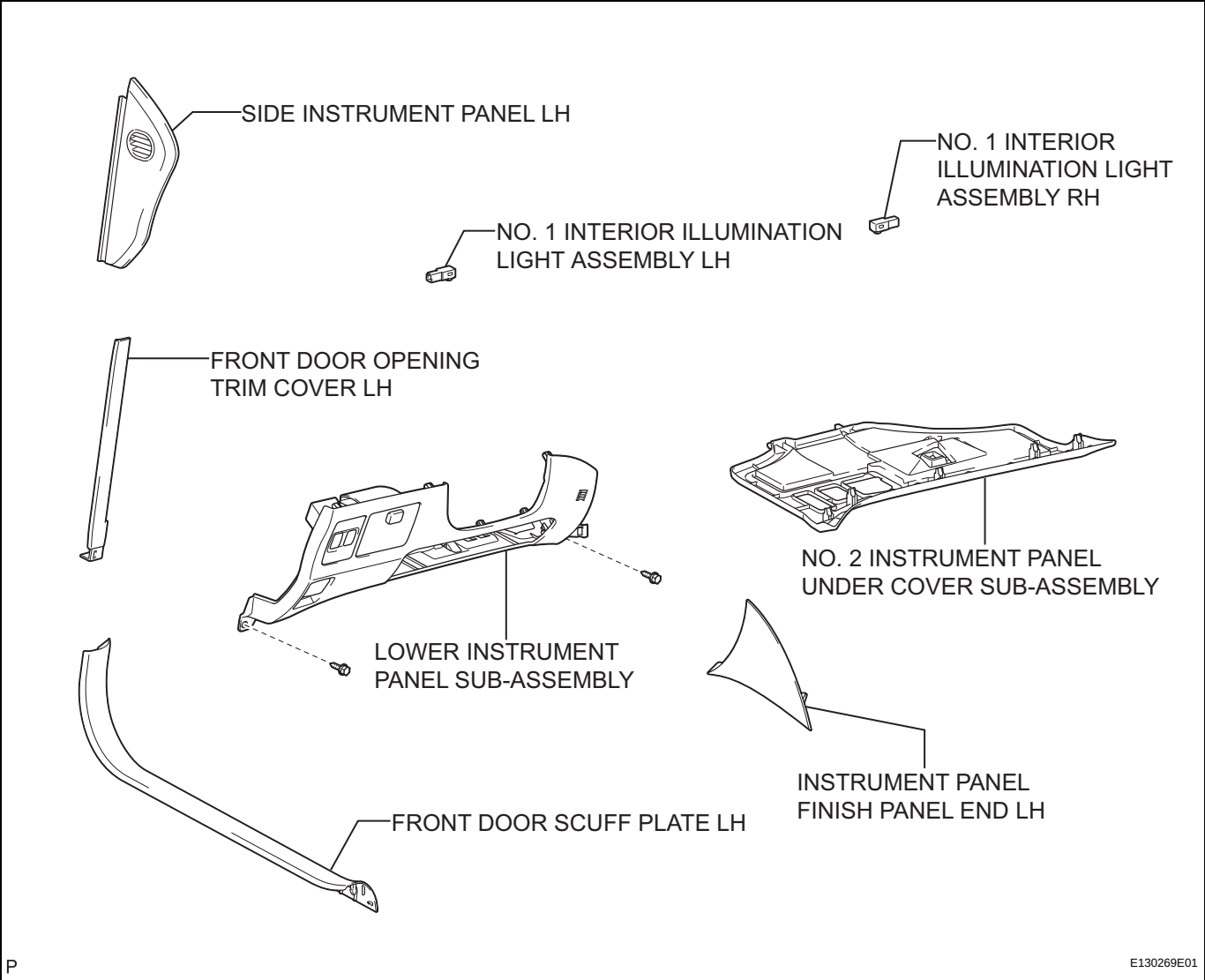
CONSOLE BOX CARPET



LI

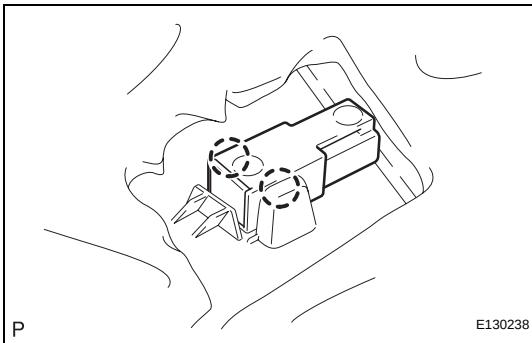
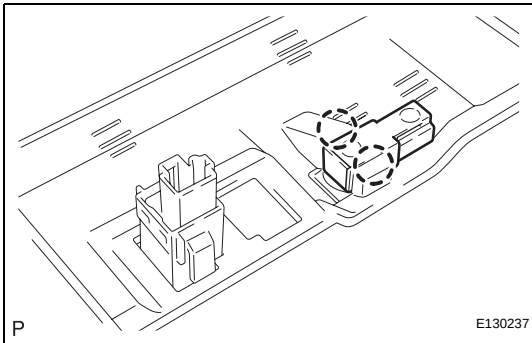
# FOOTWELL LIGHT

## COMPONENTS



## REMOVAL

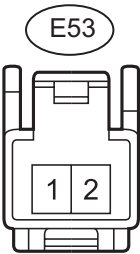
1. REMOVE FRONT DOOR SCUFF PLATE LH (See page [IR-39](#))
2. REMOVE FRONT DOOR OPENING TRIM COVER LH (See page [IR-39](#))
3. REMOVE SIDE INSTRUMENT PANEL LH (See page [IP-12](#))
4. REMOVE INSTRUMENT PANEL FINISH PANEL END LH (See page [IP-13](#))
5. REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY (See page [IP-13](#))
6. REMOVE NO. 1 INTERIOR ILLUMINATION LIGHT ASSEMBLY LH
  - (a) Disengage the 2 claws and remove the No. 1 interior illumination light assembly LH.
7. REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY (See page [IP-15](#))



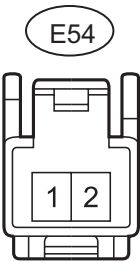
8. REMOVE NO. 1 INTERIOR ILLUMINATION LIGHT ASSEMBLY RH  
Disengage the 2 claws and remove the No. 1 interior illumination light assembly RH.

Wire Harness Side:

LH Side



RH Side



C

E119974E04

INSPECTION

1. INSPECT FOOTWELL LIGHT

- (a) Disconnect the E53 or E54 footwell light connector.
- (b) Measure the voltage according to the value(s) in the tables below.

Standard voltage:

LH Side

| Tester Connection | Condition                                                                    | Specified Condition |
|-------------------|------------------------------------------------------------------------------|---------------------|
| E53-2 - E53-1     | Any door is opened.                                                          | 10 to 14 V          |
|                   | Any door is unlocked when the engine switch is off and all doors are closed. | 10 to 14 V          |
|                   | The engine switch is turned from off to on (IG) when all doors are closed.   | 10 to 14 V          |
|                   | The engine switch is turned from on (IG) to off when all door are closed.    | Below 1 V           |
|                   | All doors are locked when the engine switch is off.                          | Below 1 V           |

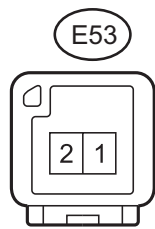
RH Side

| Tester Connection | Condition                                                                    | Specified Condition |
|-------------------|------------------------------------------------------------------------------|---------------------|
| E54-2 - E54-1     | Any door is opened.                                                          | 10 to 14 V          |
|                   | Any door is unlocked when the engine switch is off and all doors are closed. | 10 to 14 V          |
|                   | The engine switch is turned from off to on (IG) when all doors are closed.   | 10 to 14 V          |
|                   | The engine switch is turned from on (IG) to off when all door are closed.    | Below 1 V           |
|                   | All doors are locked when the engine switch is off.                          | Below 1 V           |

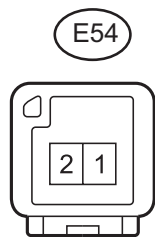
If the result is not as specified, there is a malfunction on the wire harness side.

**Component Side:**

LH Side



RH Side



C

E119975E04

- (c) Apply battery voltage to the footwell light connector.
- (d) Check that the footwell light comes on.

**OK**

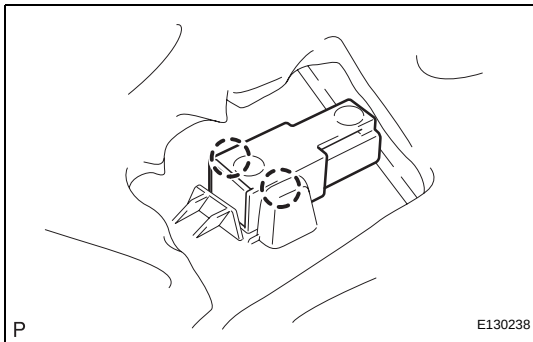
| Measurement Condition                                                  | Specified Condition     |
|------------------------------------------------------------------------|-------------------------|
| Battery positive (+) → Terminal 2<br>Battery negative (-) → Terminal 1 | Footwell light comes on |

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

LI

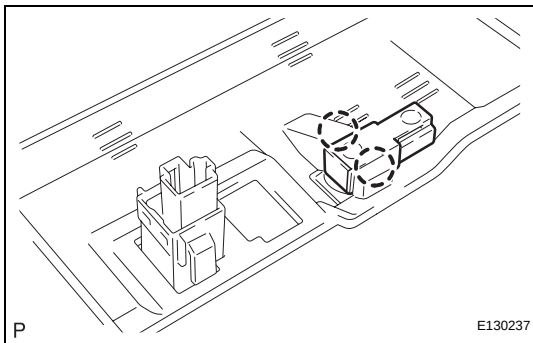
## INSTALLATION

1. **INSTALL NO. 1 INTERIOR ILLUMINATION LIGHT ASSEMBLY RH**
  - (a) Engage the 2 claws and install the No. 1 interior illumination light assembly RH.
2. **INSTALL NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY (See page [IP-44](#))**
3. **INSTALL NO. 1 INTERIOR ILLUMINATION LIGHT ASSEMBLY LH**
  - (a) Engage the 2 claws and install the No. 1 interior illumination light assembly LH.
4. **INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY (See page [IP-46](#))**
5. **INSTALL INSTRUMENT PANEL FINISH PANEL END LH (See page [IP-46](#))**
6. **INSTALL SIDE INSTRUMENT PANEL LH (See page [IP-47](#))**
7. **INSTALL FRONT DOOR OPENING TRIM COVER LH (See page [IR-64](#))**
8. **INSTALL FRONT DOOR SCUFF PLATE LH (See page [IR-65](#))**



P

E130238



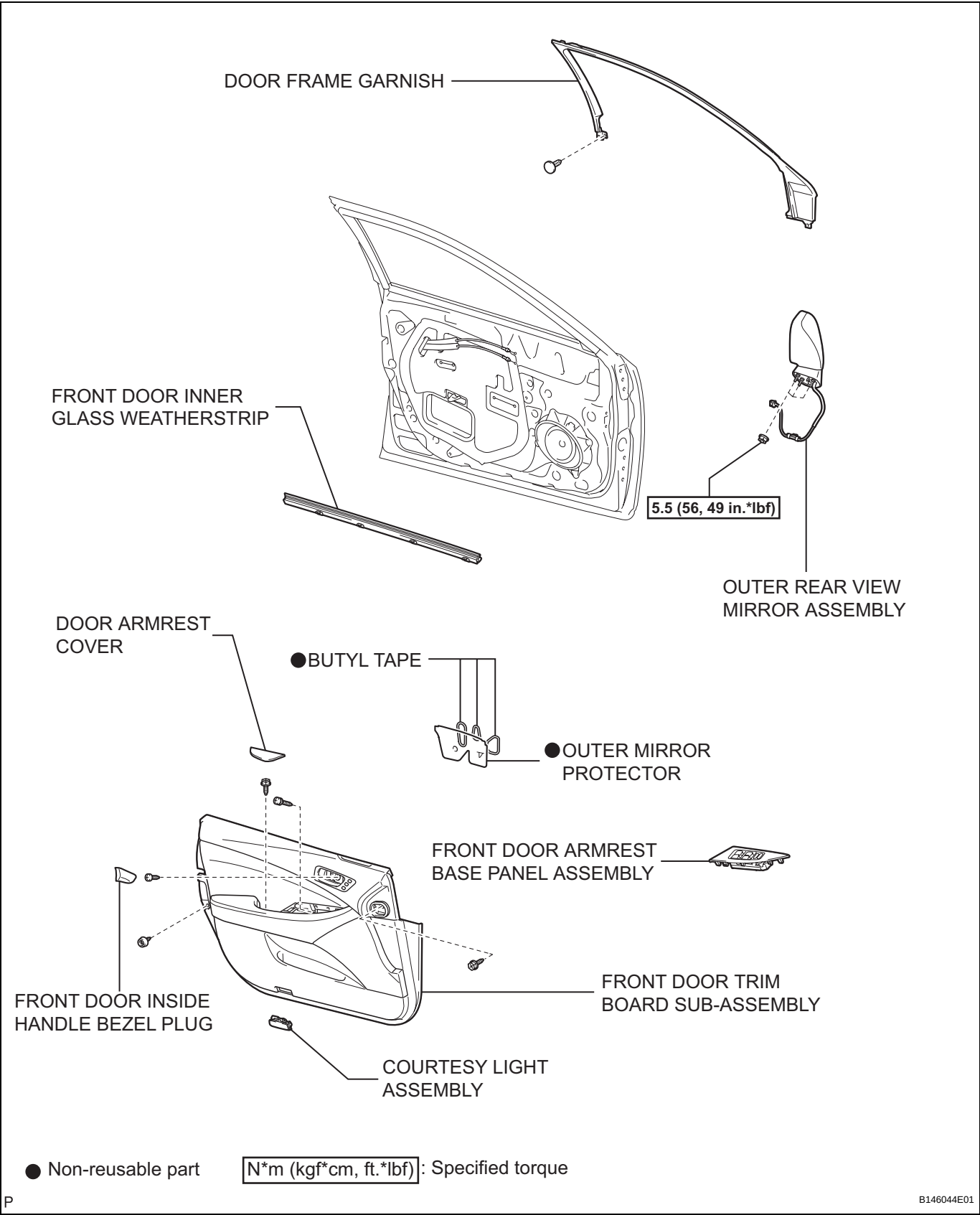
P

E130237

# DOOR MIRROR FOOT LIGHT

## COMPONENTS

LI



## REMOVAL

1. REMOVE FRONT DOOR INSIDE HANDLE BEZEL PLUG (See page [ED-32](#))
2. REMOVE FRONT DOOR ARMREST BASE PANEL ASSEMBLY (See page [ED-33](#))
3. REMOVE COURTESY LIGHT ASSEMBLY (See page [ED-34](#))
4. REMOVE DOOR ARMREST COVER (See page [ED-34](#))
5. REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY (See page [ED-34](#))
6. REMOVE FRONT DOOR INNER GLASS WEATHERSTRIP (See page [ED-35](#))
7. REMOVE DOOR FRAME GARNISH (See page [ED-35](#))
8. REMOVE OUTER MIRROR PROTECTOR (See page [ED-35](#))
9. REMOVE OUTER REAR VIEW MIRROR ASSEMBLY (See page [MI-46](#))

## INSPECTION

1. INSPECT DOOR MIRROR FOOT LIGHT
  - (a) Disconnect the connector from the outer rear view mirror assembly.
  - (b) Measure the voltage according to the value(s) in the tables below.

### Standard voltage:

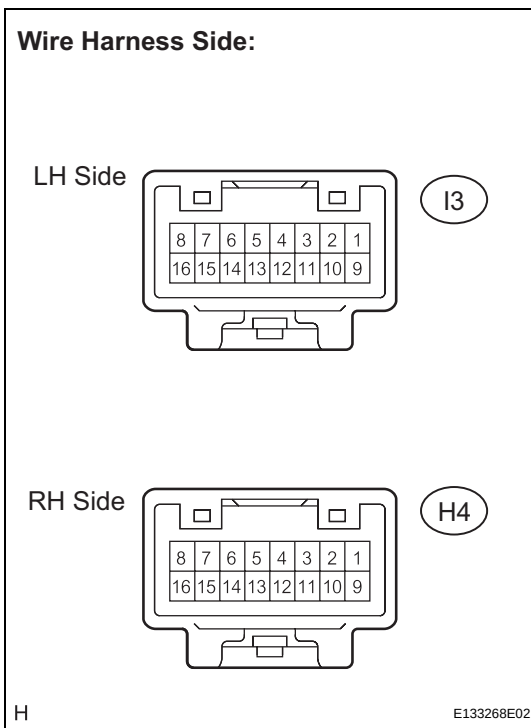
#### LH Side

| Tester Connection | Condition                             | Specified Condition |
|-------------------|---------------------------------------|---------------------|
| I3-2 - I3-12      | Doors are unlocked by the transmitter | 10 to 14 V          |
| I3-2 - I3-12      | All doors are locked                  | Below 1 V           |

#### RH Side

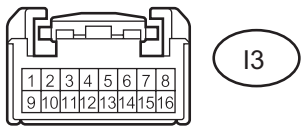
| Tester Connection | Condition                             | Specified Condition |
|-------------------|---------------------------------------|---------------------|
| H4-2 - H4-12      | Doors are unlocked by the transmitter | 10 to 14 V          |
| H4-2 - H4-12      | All doors are locked                  | Below 1 V           |

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

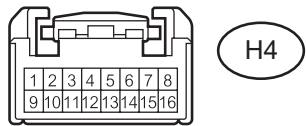


Component Side:

LH Side



RH Side



E133267E03

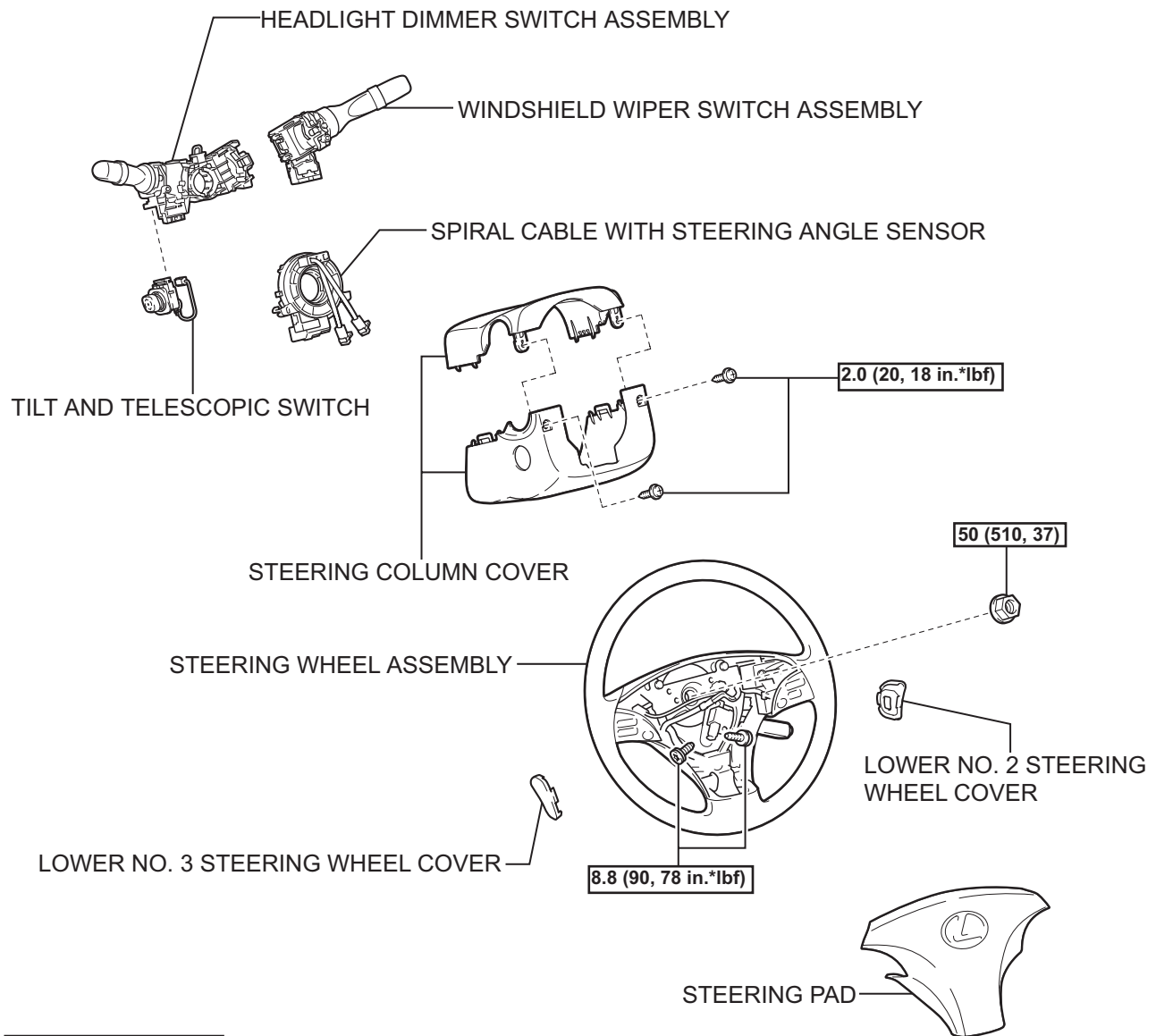
- (c) Apply battery voltage to the outer rear view mirror assembly connector.
  - (d) Check that the door mirror foot light comes on.
- OK**

| Measurement Condition                                                   | Specified Condition             |
|-------------------------------------------------------------------------|---------------------------------|
| Battery positive (+) → Terminal 2<br>Battery negative (-) → Terminal 12 | Door mirror foot light comes on |

If the result is not as specified, replace the outer rear view mirror assembly.

# HEADLIGHT DIMMER SWITCH

## COMPONENTS



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

## REMOVAL

### 1. PRECAUTION

#### CAUTION:

Be sure to read "PRECAUTION" thoroughly before servicing (See page [RS-1](#)).

### 2. ALIGN FRONT WHEELS FACING STRAIGHT AHEAD

### 3. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

#### NOTICE:

Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

### 4. REMOVE LOWER NO. 2 STEERING WHEEL COVER (See page [RS-367](#))

### 5. REMOVE LOWER NO. 3 STEERING WHEEL COVER (See page [RS-367](#))

### 6. REMOVE STEERING PAD (See page [RS-367](#))

### 7. REMOVE STEERING WHEEL ASSEMBLY (See page [SR-80](#))

### 8. REMOVE STEERING COLUMN COVER (See page [SR-80](#))

### 9. REMOVE SPIRAL CABLE WITH STEERING ANGLE SENSOR (See page [RS-379](#))

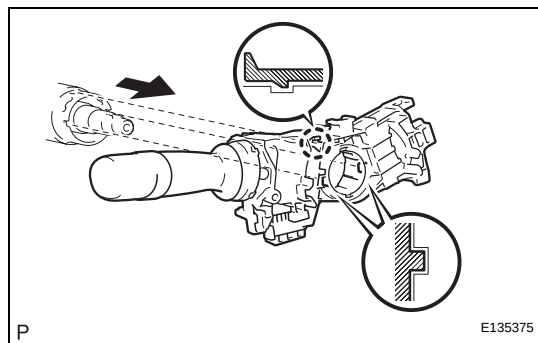
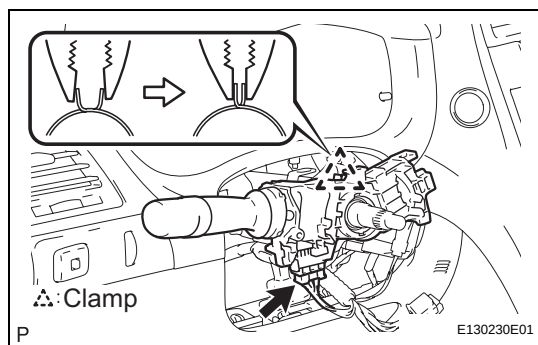
### 10. REMOVE WINDSHIELD WIPER SWITCH ASSEMBLY (See page [WW-54](#))

### 11. REMOVE TILT AND TELESCOPIC SWITCH (See page [SR-80](#))

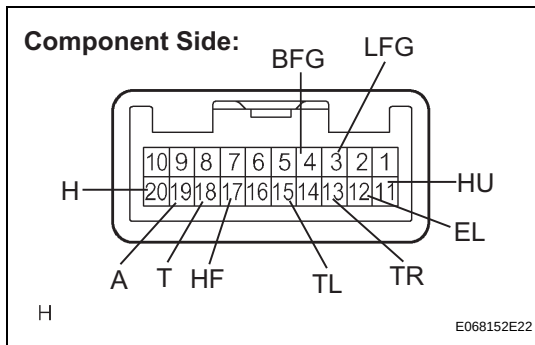
### 12. REMOVE HEADLIGHT DIMMER SWITCH ASSEMBLY

(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.



## 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 k $\Omega$ or higher |
| 12 (EL) - 18 (T)                   | TAIL             | Below 1 $\Omega$        |
| 12 (EL) - 20 (H) - 18 (T)          | HEAD             | Below 1 $\Omega$        |
| 12 (EL) - 19 (A)                   | AUTO             | Below 1 $\Omega$        |

**Dimmer switch**

| Tester Connection | Switch Condition | Specified Condition |
|-------------------|------------------|---------------------|
| 17 (HF) - 12 (EL) | FLASH            | Below 1 $\Omega$    |
| 11 (HU) - 12 (EL) | HIGH             | Below 1 $\Omega$    |

**Turn signal switch**

| Tester Connection           | Switch Condition | Specified Condition     |
|-----------------------------|------------------|-------------------------|
| 13 (TR) - 12 (EL) - 15 (TL) | OFF              | 10 k $\Omega$ or higher |
| 13 (TR) - 12 (EL)           | RH               | Below 1 $\Omega$        |
| 15 (TL) - 12 (EL)           | LH               | Below 1 $\Omega$        |

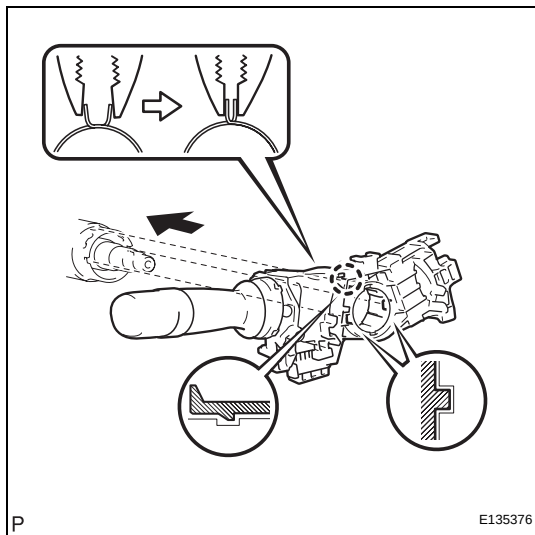
**Fog light switch**

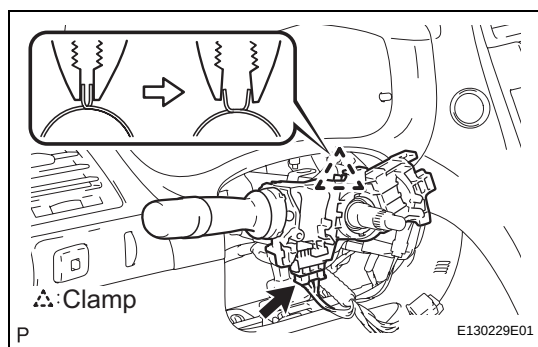
| Tester Connection | Switch Condition | Specified Condition     |
|-------------------|------------------|-------------------------|
| 3 (LFG) - 4 (BFG) | OFF              | 10 k $\Omega$ or higher |
| 3 (LFG) - 4 (BFG) | ON               | Below 1 $\Omega$        |

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.



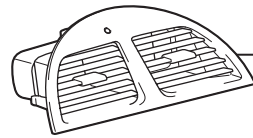


- (b) Install the headlight dimmer switch assembly with the clamp.
- (c) Connect the connector.

2. **INSTALL TILT AND TELESCOPIC SWITCH** (See page [SR-86](#))
3. **INSTALL WINDSHIELD WIPER SWITCH ASSEMBLY** (See page [WW-56](#))
4. **INSTALL SPIRAL CABLE WITH STEERING ANGLE SENSOR** (See page [RS-382](#))
5. **INSTALL STEERING COLUMN COVER** (See page [SR-87](#))
6. **ADJUST SPIRAL CABLE** (See page [RS-382](#))
7. **INSTALL STEERING WHEEL ASSEMBLY** (See page [SR-87](#))
8. **INSPECT STEERING WHEEL CENTER POINT**
9. **INSTALL STEERING PAD** (See page [RS-368](#))
10. **INSTALL LOWER NO. 3 STEERING WHEEL COVER** (See page [RS-369](#))
11. **INSTALL LOWER NO. 2 STEERING WHEEL COVER** (See page [RS-369](#))
12. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
13. **INSPECT STEERING PAD** (See page [RS-369](#))
14. **INSPECT SRS WARNING LIGHT** (See page [RS-37](#))
15. **PERFORM INITIALIZATION**  
**NOTICE:**  
 Some systems need initialization after reconnecting the cable to the negative battery terminal (See page [IN-33](#)).

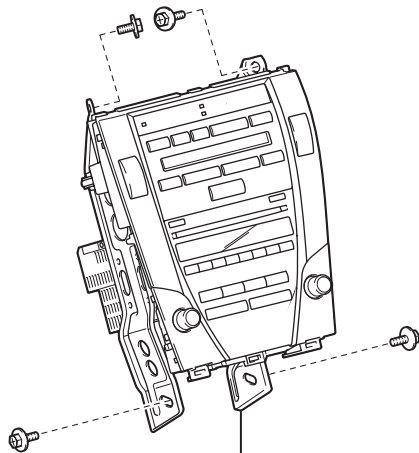
# HAZARD WARNING SWITCH

## COMPONENTS



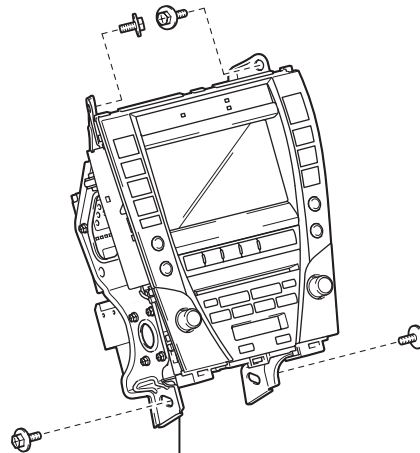
NO. 2 INSTRUMENT PANEL  
REGISTER ASSEMBLY

**without Navigation System:**



INTEGRATION CONTROL PANEL WITH  
RADIO RECEIVER ASSEMBLY

**with Navigation System:**

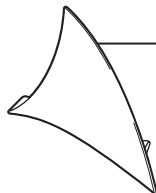


MULTI-DISPLAY WITH RADIO  
RECEIVER ASSEMBLY

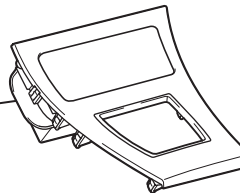
INSTRUMENT PANEL  
FINISH PANEL END RH



INSTRUMENT PANEL  
FINISH PANEL END LH



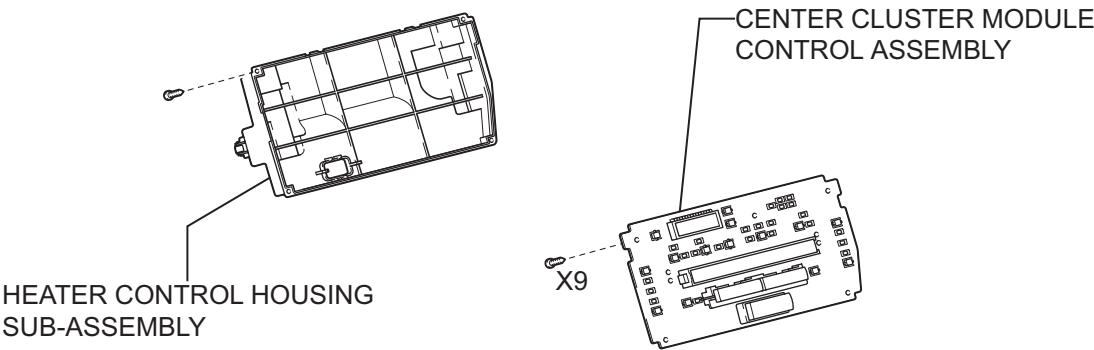
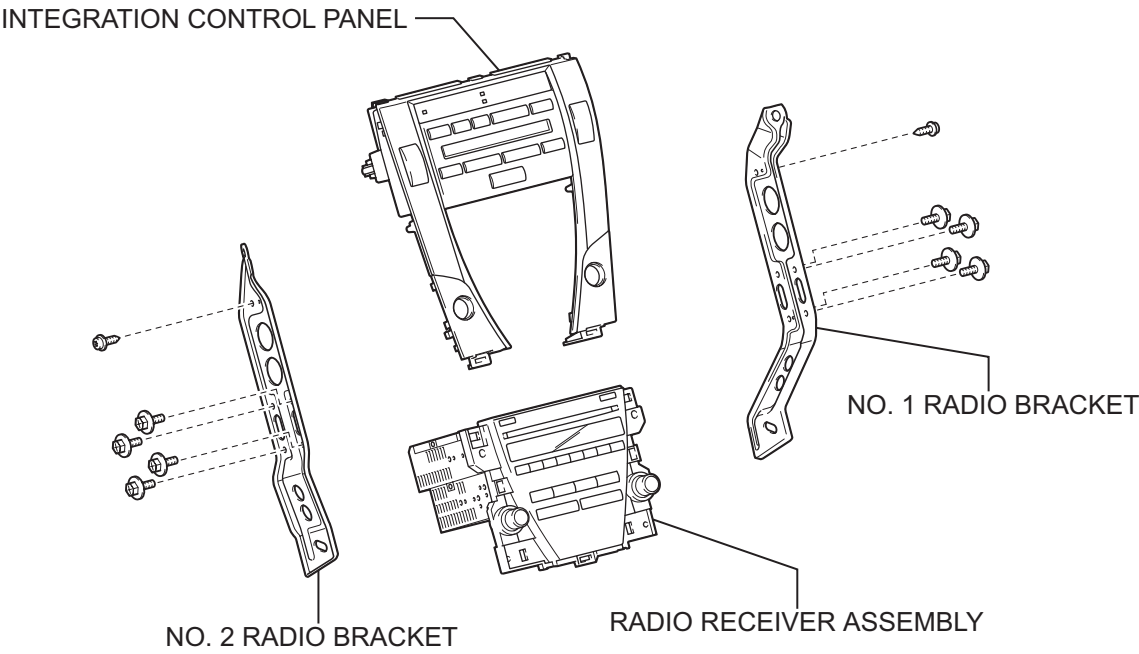
UPPER CONSOLE PANEL ASSEMBLY  
WITH FRONT ASH RECEPTACLE



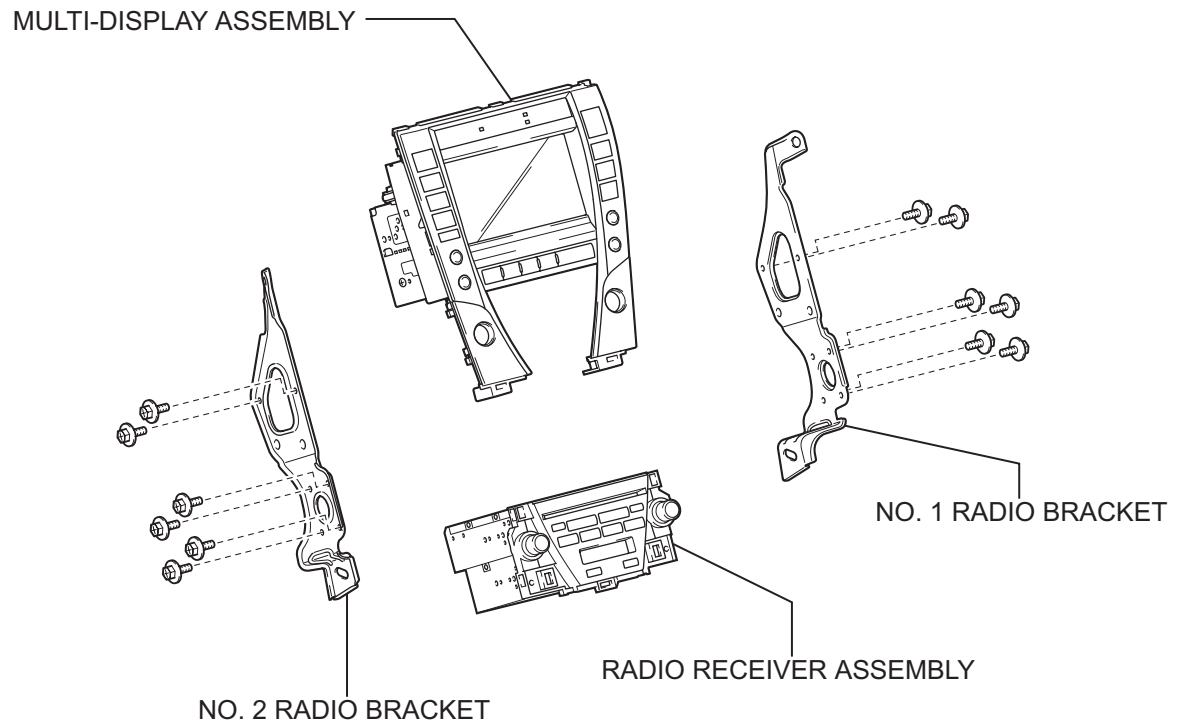
SHIFT LEVER KNOB SUB-ASSEMBLY



without Navigation System:



with Navigation System:



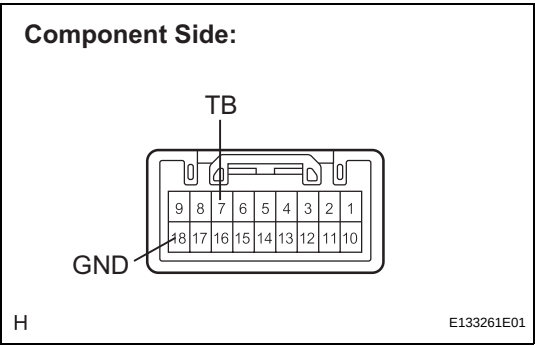
REMOVAL

- 1. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (See page IP-16)
- 2. REMOVE NO. 2 INSTRUMENT PANEL REGISTER ASSEMBLY (See page IP-17)
- 3. REMOVE UPPER CONSOLE PANEL ASSEMBLY WITH FRONT ASH RECEPTACLE (See page IP-16)
- 4. REMOVE INSTRUMENT PANEL FINISH PANEL END LH (See page IP-13)
- 5. REMOVE INSTRUMENT PANEL FINISH PANEL END RH (See page IP-15)
- 6. REMOVE INTEGRATION CONTROL PANEL WITH RADIO RECEIVER ASSEMBLY (w/o Navigation System) (See page AV-168)
- 7. REMOVE NO. 1 RADIO BRACKET (w/o Navigation System) (See page AV-168)
- 8. REMOVE NO. 2 RADIO BRACKET (w/o Navigation System) (See page AV-169)
- 9. REMOVE RADIO RECEIVER ASSEMBLY (w/o Navigation System) (See page AV-169)
- 10. REMOVE HEATER CONTROL HOUSING SUB-ASSEMBLY (w/o Navigation System) (See page AC-227)
- 11. REMOVE CENTER CLUSTER MODULE CONTROL ASSEMBLY (w/o Navigation System) (See page AC-227)
- 12. REMOVE MULTI-DISPLAY WITH RADIO RECEIVER ASSEMBLY (w/ Navigation System) (See page AV-170)
- 13. REMOVE NO. 1 RADIO BRACKET (w/ Navigation System) (See page AV-170)
- 14. REMOVE NO. 2 RADIO BRACKET (w/ Navigation System) (See page AV-170)
- 15. REMOVE MULTI-DISPLAY ASSEMBLY (w/ Navigation System) (See page NS-234)

INSPECTION

- 1. INSPECT AIR CONDITION PANEL SUB-ASSEMBLY (w/o Navigation System)
    - (a) Measure the resistance according to the value(s) in the table below.
- Standard resistance

| Tester Connection | Condition                 | Specified Condition |
|-------------------|---------------------------|---------------------|
| 7 (TB) - 18 (GND) | Hazard warning switch OFF | 10 kΩ or higher     |
| 7 (TB) - 18 (GND) | Hazard warning switch ON  | Below 1 Ω           |



If the result is not as specified, replace the air condition panel sub-assembly.

2. **INSPECT MULTI-DISPLAY WITH RADIO RECEIVER ASSEMBLY (w/ Navigation System)**

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

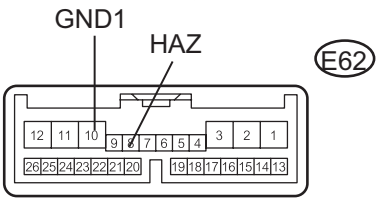
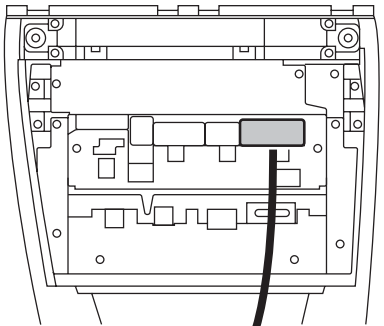
**Standard resistance**

| Tester Connection           | Condition                 | Specified Condition     |
|-----------------------------|---------------------------|-------------------------|
| E62-8 (HAZ) - E62-10 (GND1) | Hazard warning switch OFF | 10 k $\Omega$ or higher |
| E62-8 (HAZ) - E62-10 (GND1) | Hazard warning switch ON  | Below 1 $\Omega$        |

If the result is not as specified, replace the multi-display with radio receiver assembly.



Component Side:

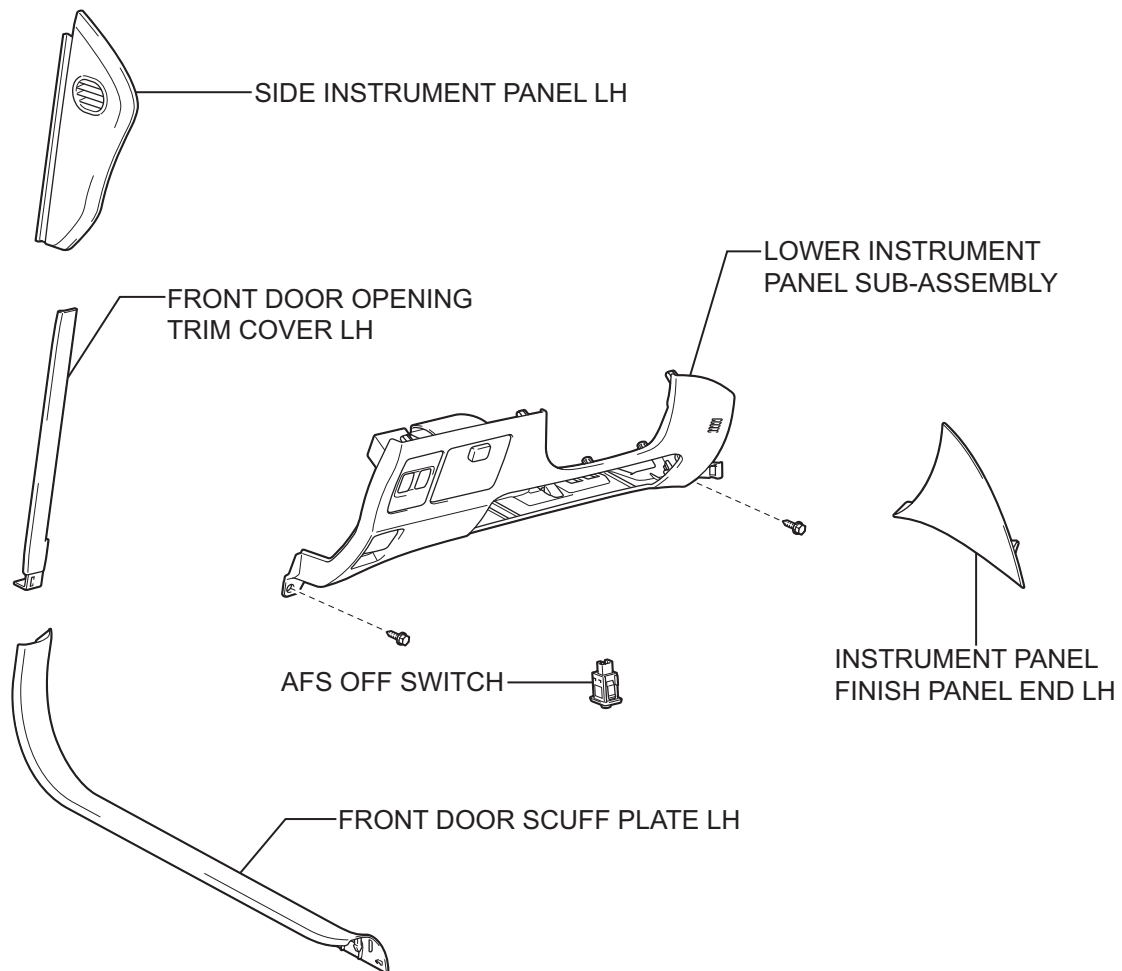


H

E133260E02

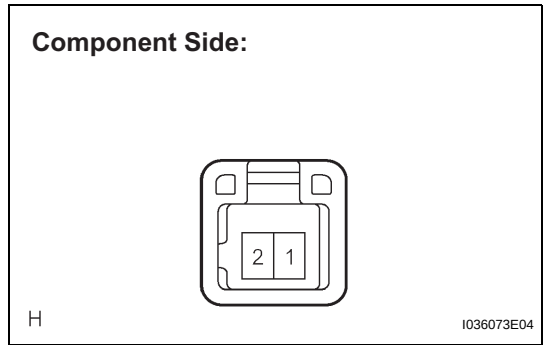
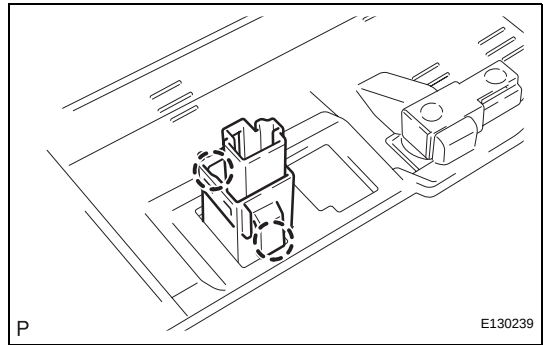
# AFS OFF SWITCH

## COMPONENTS



REMOVAL

- 1. REMOVE FRONT DOOR SCUFF PLATE LH (See page IR-39)
- 2. REMOVE FRONT DOOR OPENING TRIM COVER LH (See page IR-39)
- 3. REMOVE SIDE INSTRUMENT PANEL LH (See page IP-12)
- 4. REMOVE INSTRUMENT PANEL FINISH PANEL END LH (See page IP-13)
- 5. REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-13)
- 6. REMOVE AFS OFF SWITCH
  - (a) Disengage the 2 claws and remove the AFS OFF switch.



INSPECTION

- 1. INSPECT AFS OFF SWITCH
  - (a) Measure the resistance according to the value(s) in the table below.

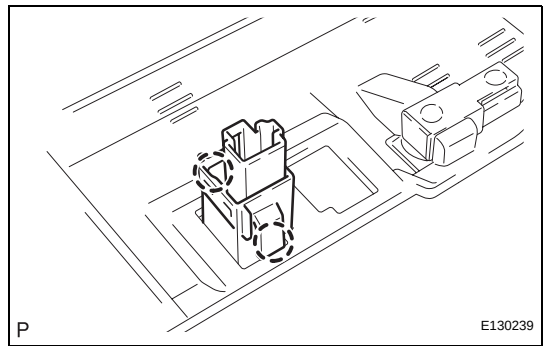
Standard resistance

| Tester Connection | Switch Condition | Specified Condition |
|-------------------|------------------|---------------------|
| 1 - 2             | Not pushed (OFF) | 10 kΩ or higher     |
|                   | Pushed (ON)      | Below 1 Ω           |

If the result is not specified, replace the AFS OFF switch

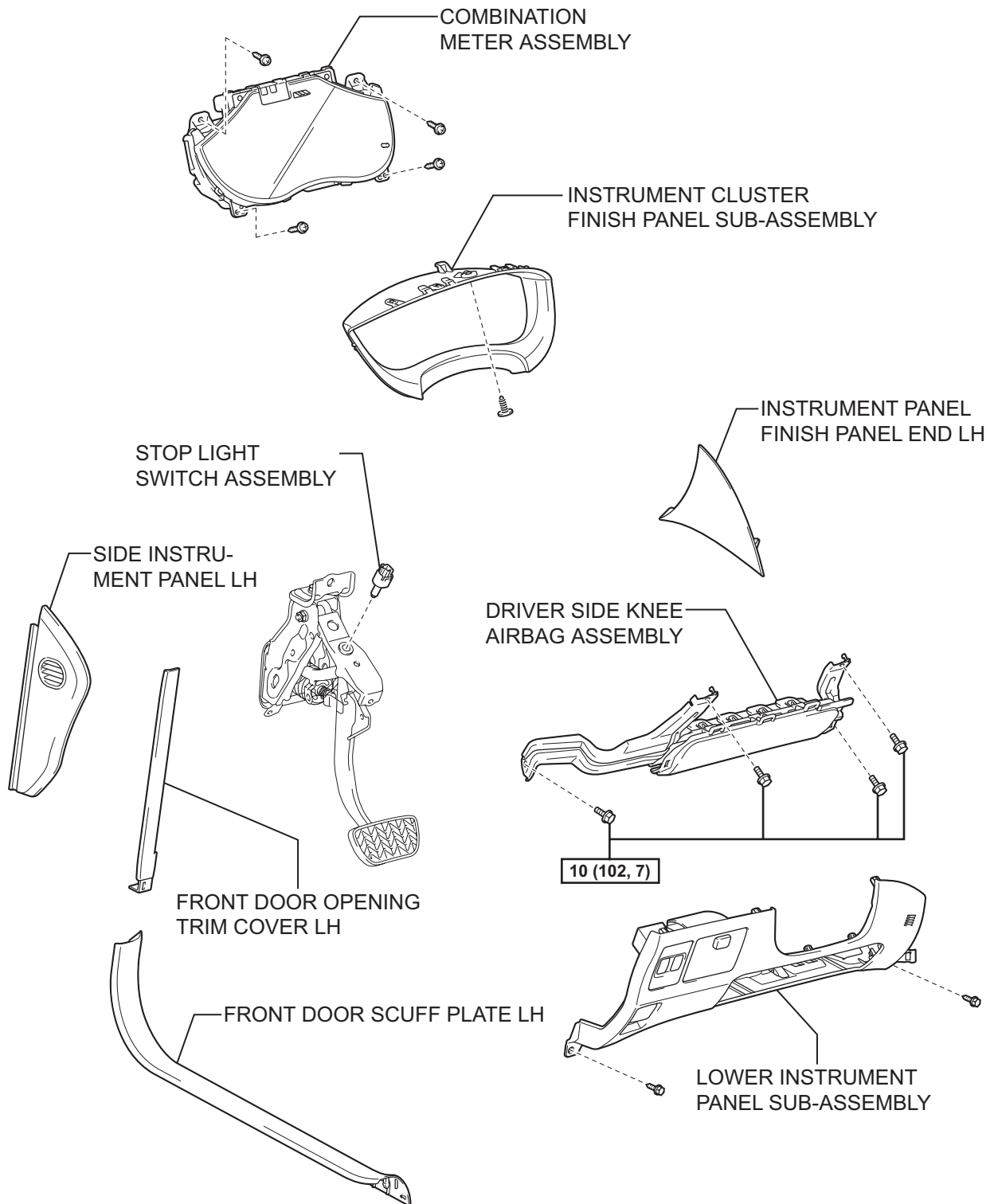
INSTALLATION

- 1. INSTALL AFS OFF SWITCH
  - (a) Engage the 2 claws and install the AFS OFF switch.
- 2. INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-46)
- 3. INSTALL INSTRUMENT PANEL FINISH PANEL END LH (See page IP-46)
- 4. INSTALL SIDE INSTRUMENT PANEL LH (See page IP-47)
- 5. INSTALL FRONT DOOR OPENING TRIM COVER LH (See page IR-64)
- 6. INSTALL FRONT DOOR SCUFF PLATE LH (See page IR-65)



# STOP LIGHT SWITCH

## COMPONENTS



$\boxed{\text{N}\cdot\text{m (kgf}\cdot\text{cm, ft.}\cdot\text{lbf)}}$ : Specified torque



REMOVAL

- 1. PRECAUTION  
CAUTION:  
Be sure to read "PRECAUTION" thoroughly before servicing (See page RS-1).
- 2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL  
NOTICE:  
Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.
- 3. REMOVE FRONT DOOR SCUFF PLATE LH (See page IR-39)
- 4. REMOVE FRONT DOOR OPENING TRIM COVER LH (See page IR-39)
- 5. REMOVE SIDE INSTRUMENT PANEL LH (See page IP-12)
- 6. REMOVE INSTRUMENT PANEL FINISH PANEL END LH (See page IP-13)
- 7. REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-13)
- 8. REMOVE DRIVER SIDE KNEE AIRBAG ASSEMBLY (See page RS-386)
- 9. REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page ME-68)
- 10. REMOVE COMBINATION METER ASSEMBLY (See page ME-69)
- 11. REMOVE STOP LIGHT SWITCH ASSEMBLY (See page BR-59)

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.

