

SECTION

EXL

EXTERIOR LIGHTING SYSTEM

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## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

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The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

#### Precautions for Removing Battery Terminal

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- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

#### **NOTE:**

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

#### **NOTE:**

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

#### **NOTE:**

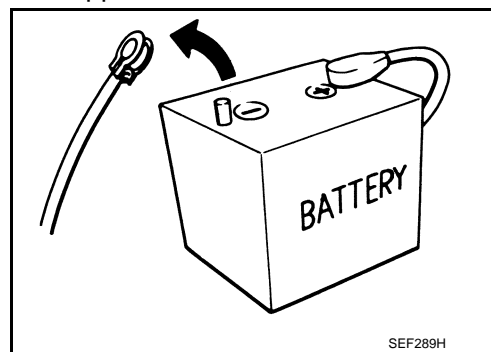
The removal of 12V battery may cause a DTC detection error.

#### HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.  
For vehicles parked by ignition switch OFF, refer to Instruction 2.

#### INSTRUCTION 1

1. Open the hood.



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## PRECAUTIONS

< PRECAUTION >

[LED HEADLAMP]

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

|            |              |
|------------|--------------|
| D4D engine | : 20 minutes |
| HRA2DDT    | : 12 minutes |
| K9K engine | : 4 minutes  |
| M9R engine | : 4 minutes  |
| R9M engine | : 4 minutes  |
| V9X engine | : 4 minutes  |

**CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

5. Remove 12V battery terminal.

**CAUTION:**

**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

### INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

**NOTE:**

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

**CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

6. Remove 12V battery terminal.

**CAUTION:**

**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

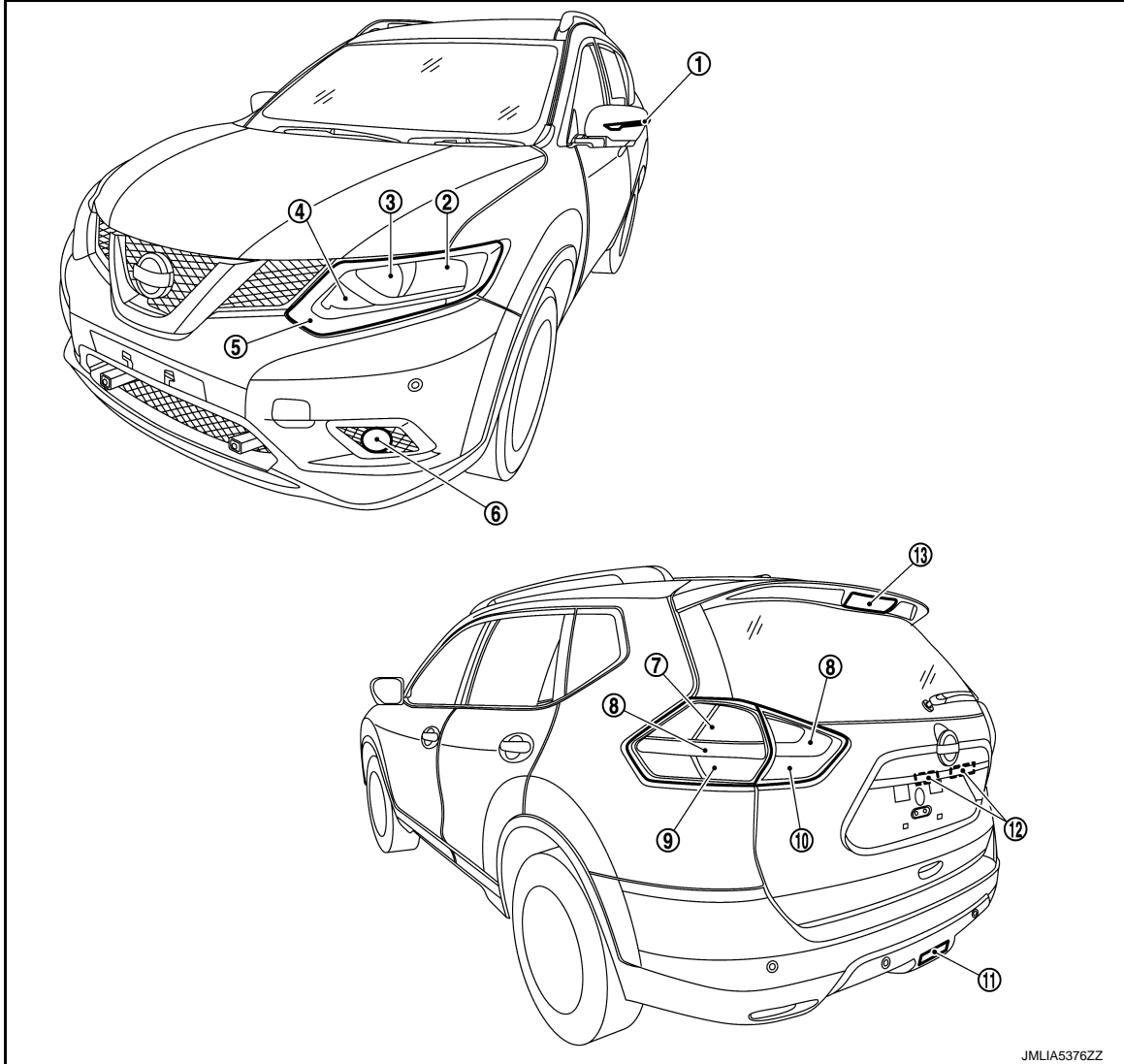
## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Exterior Lamp Appearance

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#### Exterior Lamp Appearance



- |                          |                                      |                         |
|--------------------------|--------------------------------------|-------------------------|
| ① Side turn signal lamp  | ② Headlamp (Lo)                      | ③ Headlamp (Hi)         |
| ④ Front turn signal lamp | ⑤ Parking lamp/daytime running light | ⑥ Front fog lamp        |
| ⑦ Stop lamp              | ⑧ Tail lamp                          | ⑨ Rear turn signal lamp |
| ⑩ Back-up lamp           | ⑪ Rear fog lamp (if equipped)        | ⑫ License plate lamp    |
| ⑬ High-mounted stop lamp |                                      |                         |

## COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

### Bulb Specifications

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| Item   |                                       | Type          | Wattage (W) |
|--|---------------------------------------|---------------|-------------|
| Front combination lamp                       | Headlamp (Hi)                         | LED           | —           |
|  | Headlamp (Lo)                         | LED           | —           |
|  | Parking lamp<br>daytime running light | LED           | —           |
|  | Front turn signal lamp                | WY21W (Amber) | 21          |
| Front fog lamp                               |                                       | H11           | 55          |
| Side turn signal lamp (built in door mirror) |                                       | LED           | —           |
| Rear combination lamp                        | Stop lamp                             | W21W          | 21          |
|  | Tail lamp                             | W5W           | 5           |
|  | Rear turn signal lamp                 | WY21W         | 21          |
|  | Back-up lamp                          | W16W          | 16          |
| Rear fog lamp                                |                                       | W21W          | 21          |
| License plate lamp                           |                                       | W5W           | 5           |
| High-mounted stop lamp                       |                                       | LED           | —           |

### Component Parts Location

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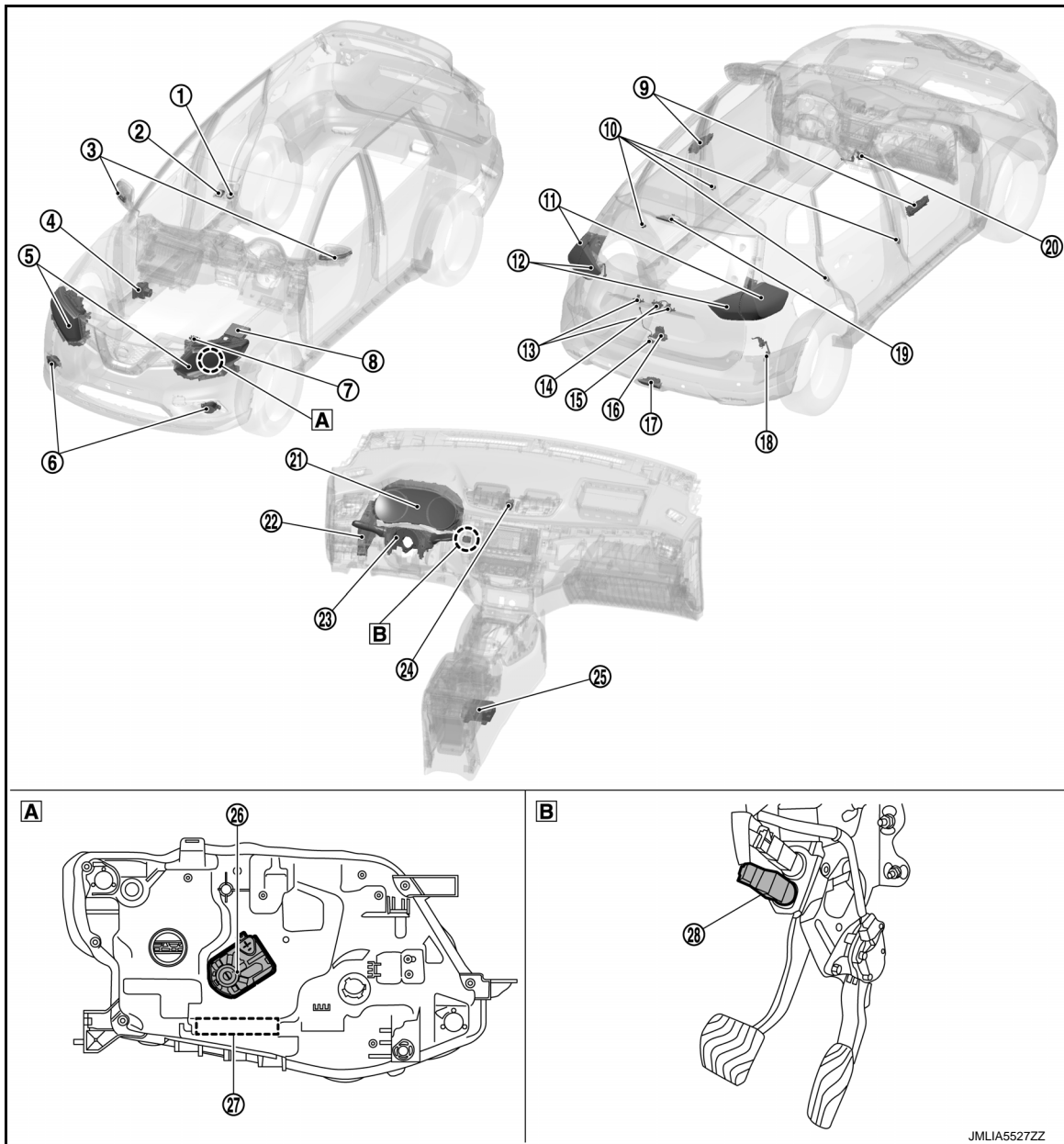
### LHD MODELS



# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]



**A** Front combination lamp (back)

**B** Brake pedal

| No. | Component                                       | Function   |
|-----|---|--|
| ①   | Light & rain sensor                             | Refer to <a href="#">EXL-20, "Light &amp; Rain Sensor"</a> .   |
| ②   | Front camera unit                               | <ul style="list-style-type: none"> <li>Judges the vehicle status from each signal in order to control the high beam assist control.</li> <li>Refer to <a href="#">DAS-10, "Component Parts Location"</a> for detailed installation location.</li> </ul>                                |
| ③   | Side turn signal lamp                           | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ④   | ABS actuator and electric unit (control unit)*1 | <ul style="list-style-type: none"> <li>When the forward emergency braking operates, a request is transmitted to BCM (CAN communication) to turn ON the stop lamp.</li> <li>Refer to <a href="#">BRC-228, "Component Parts Location"</a> for detailed installation location.</li> </ul> |

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| No. | Component                              |                                       | Function   |
|-----|--|---------------------------------------|--|
| ⑤   | Front combination lamp                 | Headlamp (HI) (LED headlamp)          | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> , <a href="#">EXL-12, "Bulb Specifications"</a> and <a href="#">EXL-18, "FRONT COMBINATION LAMP : LED Headlamp"</a> .  |
|     |  | Headlamp (LO) (LED headlamp)          |  |
|     |  | Parking lamp / Day-time running light | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
|     |  | Front turn signal lamp                |  |
| ⑥   | Front fog lamp                         |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑦   | ECM                                    |                                       | <ul style="list-style-type: none"> <li>ECM transmits engine status signal and Stop/Start status signal (with Stop/Start system) to BCM via CAN communication.</li> <li>Refer to <a href="#">EC-28, "ENGINE CONTROL SYSTEM : Component Parts Location"</a> (MR20DD), <a href="#">EC-440, "Component Parts Location"</a> (QR25DE) or <a href="#">EC-812, "Component Parts Location"</a> (R9M) for detailed installation location.</li> </ul>   |
| ⑧   | IPDM E/R                               |                                       | <ul style="list-style-type: none"> <li>Controls the integrated smart FET, and supplies voltage to the load according to the request from BCM via CAN communication.</li> <li>The headlamp warning signal is input from the LED headlamp control module, and the IPDM E/R requests the combination meter (CAN communication) to display the headlamp warning.</li> <li>Judges the vehicle status from each signal in order to control the headlamp aiming control.</li> <li>Refer to <a href="#">PCS-5, "Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ⑨   | Door request switch                    |                                       | Refer to <a href="#">DLK-341, "DOOR LOCK SYSTEM : Door Request Switch"</a> .   |
| ⑩   | Door switch                            |                                       | Refer to <a href="#">DLK-342, "DOOR LOCK SYSTEM : Door Switch"</a> .   |
| ⑪   | Rear combination lamp (body side)      | Tail lamp                             | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
|     |  | Stop lamp                             |  |
|     |  | Rear turn signal lamp                 |  |
| ⑫   | Rear combination lamp (back door side) | Tail lamp                             | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑬   | License plate lamp                     |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑭   | Hands free sensor*2                    |                                       | Refer to <a href="#">DLK-342, "DOOR LOCK SYSTEM : Hands Free Sensor"</a> .   |
| ⑮   | Back door opener switch assembly       | Back door opener switch               | Refer to <a href="#">DLK-340, "DOOR LOCK SYSTEM : Back Door Opener Switch Assembly"</a> .  |
|     |  | Back door request switch              |  |
| ⑯   | Back door lock assembly                | Back door switch                      | Refer to <a href="#">DLK-340, "DOOR LOCK SYSTEM : Back Door Lock Assembly"</a> .   |
| ⑰   | Rear fog lamp                          |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑱   | Rear height sensor                     |                                       | Refer to <a href="#">EXL-20, "Rear Height Sensor"</a> .  |
| ⑲   | High-mounted stop lamp                 |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑳   | Front height sensor*3                  |                                       | Refer to <a href="#">EXL-19, "Front Height Sensor"</a> .   |
| ㉑   | Combination meter                      |                                       | <ul style="list-style-type: none"> <li>Turns the indicator lamp and warning (information display/buzzer) ON/OFF according to the request from BCM via CAN communication.</li> <li>Turns the headlamp warning ON according to the request from IPDM E/R via CAN communication.</li> <li>Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM via CAN communication.</li> <li>Combination meter transmits vehicle speed signal to BCM and IPDM E/R via CAN communication.</li> </ul>             |

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| No.  | Component                     |                             | Function   |
|------|-------------------------------|-----------------------------|--|
| (22) | BCM                           |                             | <ul style="list-style-type: none"> <li>• Detects each switch condition by the combination switch reading function.</li> <li>• Exterior lamp ON/OFF is judged from each signal, and then a request is transmitted to IPDM E/R (CAN communication) to turn each smart FET ON/OFF.</li> <li>• It also transmits a request to the combination meter (CAN communication) to turn indicator lamp and warning (information display/buzzer) ON/OFF.</li> <li>• Blinks the turn signal lamp and hazard warning lamp according to the each switch condition.</li> <li>• Requests the turn signal indicator lamp blink to the combination meter via CAN communication.</li> <li>• Requests the turn signal operating sound ON to the combination meter via CAN communication.</li> <li>• Judges the vehicle status from each signal, and illuminates the stop lamp and high-mounted stop lamp.</li> <li>• Judges the vehicle status from each signal, and illuminates the rear fog lamp.</li> <li>• Refer to <a href="#">BCS-6, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.</li> </ul> |
| (23) | Combination switch            |                             | Refer to <a href="#">BCS-13, "COMBINATION SWITCH READING SYSTEM : System Description"</a> .  |
| (24) | Hazard switch                 |                             | Refer to <a href="#">EXL-20, "Hazard Switch"</a> .   |
| (25) | Air bag diagnosis sensor unit |                             | <ul style="list-style-type: none"> <li>• When the air bag operates, a request is transmitted to BCM (CAN communication) to blinks the hazard warning lamp.</li> <li>• Refer to <a href="#">SRC-6, "Component Parts Location"</a> for detailed installation location.</li> </ul>  |
| (26) | Front combination lamp        | Headlamp aiming motor       | Refer to <a href="#">EXL-19, "FRONT COMBINATION LAMP : Headlamp Aiming Motor"</a> .  |
| (27) |                               | LED headlamp control module | Refer to <a href="#">EXL-19, "FRONT COMBINATION LAMP : LED Headlamp Control Module"</a> .  |
| (28) | Stop lamp switch              |                             | Refer to <a href="#">EXL-20, "Stop Lamp Switch"</a> .  |

\*1: With forward emergency braking

\*2: With hands free sensor

\*3: 3-row seat models

RHD MODELS

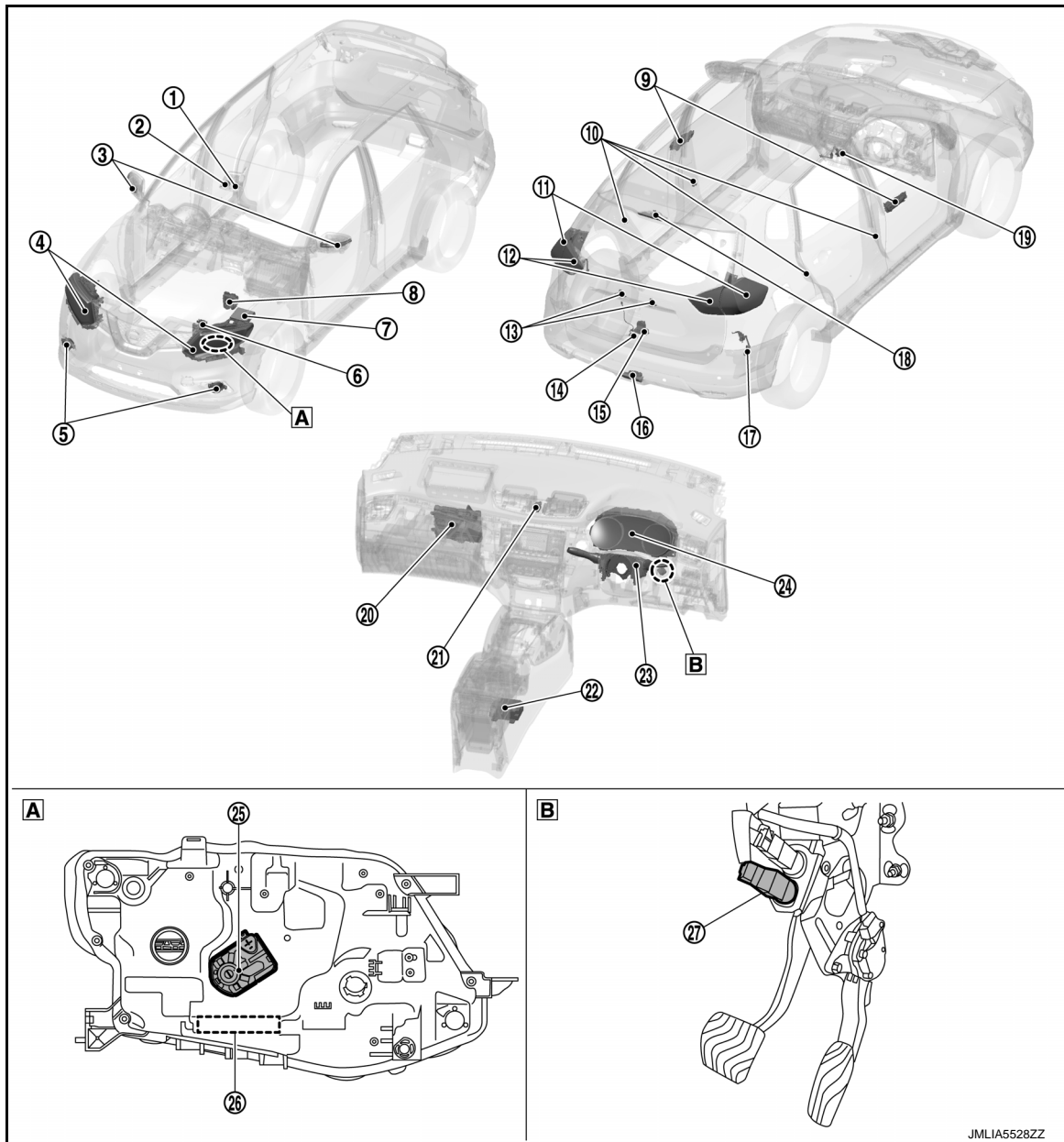
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# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]



**A** Front combination lamp (back)

**B** Brake pedal

| No. | Component             | Function  |
|-----|-----------------------|---|
| ①   | Light & rain sensor   | Refer to <a href="#">EXL-20, "Light &amp; Rain Sensor"</a> .  |
| ②   | Front camera unit     | <ul style="list-style-type: none"> <li>Judges the vehicle status from each signal in order to control the high beam assist control.</li> <li>Refer to <a href="#">DAS-10, "Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ③   | Side turn signal lamp | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .   |

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| No. | Component                                     |                                       | Function   |
|-----|---|---------------------------------------|--|
| ④   | Front combination lamp                        | Headlamp (HI) (LED headlamp)          | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> , <a href="#">EXL-12, "Bulb Specifications"</a> and <a href="#">EXL-18, "FRONT COMBINATION LAMP : LED Headlamp"</a> .  |
|     |   | Headlamp (LO) (LED headlamp)          |  |
|     |   | Parking lamp / Day-time running light | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
|     |   | Front turn signal lamp                |  |
| ⑤   | Front fog lamp                                |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑥   | ECM   |                                       | <ul style="list-style-type: none"> <li>ECM transmits engine status signal and Stop/Start status signal to BCM via CAN communication.</li> <li>Refer to <a href="#">EC-812, "Component Parts Location"</a> for detailed installation location.</li> </ul>   |
| ⑦   | IPDM E/R                                      |                                       | <ul style="list-style-type: none"> <li>Controls the integrated smart FET, and supplies voltage to the load according to the request from BCM via CAN communication.</li> <li>The headlamp warning signal is input from the LED headlamp control module, and the IPDM E/R requests the combination meter (CAN communication) to display the headlamp warning.</li> <li>Judges the vehicle status from each signal in order to control the headlamp aiming control.</li> <li>Refer to <a href="#">PCS-5, "Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ⑧   | ABS actuator and electric unit (control unit) |                                       | <ul style="list-style-type: none"> <li>When the forward emergency braking operates, a request is transmitted to BCM (CAN communication) to turn ON the stop lamp.</li> <li>Refer to <a href="#">BRC-228, "Component Parts Location"</a> for detailed installation location.</li> </ul>   |
| ⑨   | Door request switch                           |                                       | Refer to <a href="#">DLK-32, "DOOR LOCK SYSTEM : Door Request Switch"</a> .  |
| ⑩   | Door switch                                   |                                       | Refer to <a href="#">DLK-32, "DOOR LOCK SYSTEM : Door Switch"</a> .  |
| ⑪   | Rear combination lamp (body side)             | Tail lamp                             | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
|     |   | Stop lamp                             |  |
|     |   | Rear turn signal lamp                 |  |
| ⑫   | Rear combination lamp (back door side)        | Tail lamp                             | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑬   | License plate lamp                            |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑭   | Back door opener switch assembly              | Back door opener switch               | Refer to <a href="#">DLK-30, "DOOR LOCK SYSTEM : Back Door Opener Switch Assembly"</a> .   |
|     |   | Back door request switch              |  |
| ⑮   | Back door lock assembly                       | Back door switch                      | Refer to <a href="#">DLK-30, "DOOR LOCK SYSTEM : Back Door Lock Assembly"</a> .  |
| ⑯   | Rear fog lamp                                 |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑰   | Rear height sensor                            |                                       | Refer to <a href="#">EXL-20, "Rear Height Sensor"</a> .  |
| ⑱   | High-mounted stop lamp                        |                                       | Refer to <a href="#">EXL-11, "Exterior Lamp Appearance"</a> and <a href="#">EXL-12, "Bulb Specifications"</a> .  |
| ⑲   | Front height sensor*                          |                                       | Refer to <a href="#">EXL-19, "Front Height Sensor"</a> .   |

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## COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| No. | Component                     |                             | Function   |
|-----|-------------------------------|-----------------------------|--|
| ⑳   | BCM                           |                             | <ul style="list-style-type: none"> <li>• Detects each switch condition by the combination switch reading function.</li> <li>• Exterior lamp ON/OFF is judged from each signal, and then a request is transmitted to IPDM E/R (CAN communication) to turn each smart FET ON/OFF.</li> <li>• It also transmits a request to the combination meter (CAN communication) to turn indicator lamp and warning (information display/buzzer) ON/OFF.</li> <li>• Blinks the turn signal lamp and hazard warning lamp according to the each switch condition.</li> <li>• Requests the turn signal indicator lamp blink to the combination meter via CAN communication.</li> <li>• Requests the turn signal operating sound ON to the combination meter via CAN communication.</li> <li>• Judges the vehicle status from each signal, and illuminates the stop lamp and high-mounted stop lamp.</li> <li>• Judges the vehicle status from each signal, and illuminates the rear fog lamp.</li> <li>• Refer to <a href="#">BCS-6, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ㉑   | Hazard switch                 |                             | Refer to <a href="#">EXL-20, "Hazard Switch"</a> .   |
| ㉒   | Air bag diagnosis sensor unit |                             | <ul style="list-style-type: none"> <li>• When the air bag operates, a request is transmitted to BCM (CAN communication) to blinks the hazard warning lamp.</li> <li>• Refer to <a href="#">SRC-6, "Component Parts Location"</a> for detailed installation location.</li> </ul>  |
| ㉓   | Combination switch            |                             | Refer to <a href="#">BCS-13, "COMBINATION SWITCH READING SYSTEM : System Description"</a> .  |
| ㉔   | Combination meter             |                             | <ul style="list-style-type: none"> <li>• Turns the indicator lamp and warning (information display/buzzer) ON/OFF according to the request from BCM via CAN communication.</li> <li>• Turns the headlamp warning ON according to the request from IPDM E/R via CAN communication.</li> <li>• Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM via CAN communication.</li> <li>• Combination meter transmits vehicle speed signal to BCM and IPDM E/R via CAN communication.</li> </ul>   |
| ㉕   | Front combination lamp        | Headlamp aiming motor       | Refer to <a href="#">EXL-19, "FRONT COMBINATION LAMP : Headlamp Aiming Motor"</a> .  |
| ㉖   |                               | LED headlamp control module | Refer to <a href="#">EXL-19, "FRONT COMBINATION LAMP : LED Headlamp Control Module"</a> .  |
| ㉗   | Stop lamp switch              |                             | Refer to <a href="#">EXL-20, "Stop Lamp Switch"</a> .  |

\*: 3-row seat models

### FRONT COMBINATION LAMP

#### FRONT COMBINATION LAMP : LED Headlamp

INFOID:0000000010788740

#### OUTLINE

- Semiconductor device (Light emitting diode: LED), which is illuminated when forward bias electric voltage is applied, is adopted as the source of light instead of halogen bulb or xenon bulb.
- Comparing to halogen headlamp or xenon headlamp, LED headlamp is electrically power saving, durable, and is illuminated in the similar color to the sunlight. Bright, natural, and eye-friendly visibility can be obtained.

#### PRECAUTIONS FOR TROUBLE DIAGNOSIS

Representative malfunction examples are; "Light does not turn ON", "Light blinks", and "Brightness is inadequate." Such malfunctions, however, occasionally occur LED control module malfunction or lamp case malfunction. Specify the malfunctioning part with diagnosis procedure.

#### CAUTION:

- **Never touch the harness, LED headlamp control module, the inside and metal part of lamp when turning the headlamp ON or operating the lighting switch, for preventing electrical shock.**
- **Never work with wet hands, for preventing electrical shock.**
- **Never perform LED headlamp control module circuit diagnosis with a circuit tester or an equivalent.**
- **Temporarily install the headlamps on the vehicle. Always connect power supply to the connector (vehicle side) when checking ON/OFF status.**

## COMPONENT PARTS

### < SYSTEM DESCRIPTION >

### [LED HEADLAMP]

- Disconnect the battery negative terminal before disconnecting the lamp socket connector or the harness connector.
- Check for fusing of the fusible link(s), open around connector, short, disconnection if the symptom is caused by electric error.
- Always check for deformation or hole of headlamp housing and engagement of bulb cover. Otherwise, water may enter into headlamp because of damage of headlamp housing and contact to LED headlamp control module connector. The normal operation may be inhibited when short circuit to power supply is detected.

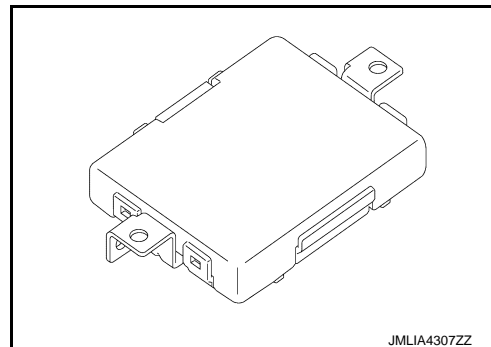
#### NOTE:

Turn the switch OFF once before turning ON, if the ON/OFF is inoperative.

### FRONT COMBINATION LAMP : LED Headlamp Control Module

INFOID:0000000010788741

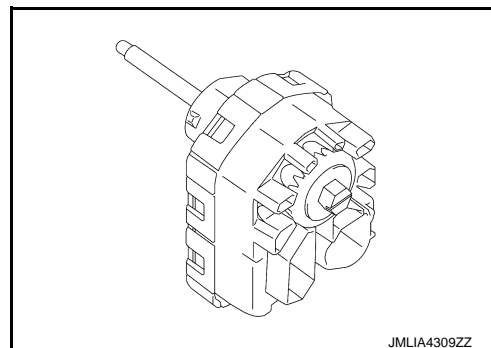
- LED headlamp control module is integrated in the front combination lamp and turns the LED headlamp ON according to the request from IPDM E/R.
- Outputs the headlamp warning signal to the IPDM E/R.



### FRONT COMBINATION LAMP : Headlamp Aiming Motor

INFOID:0000000010788742

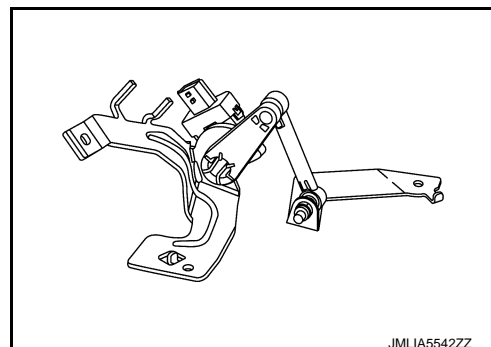
- Headlamp aiming motor is integrated in the front combination lamp.
- Headlamp aiming motor adjusts the headlamp light axis upward and downward according to input drive signal from IPDM E/R.



### Front Height Sensor

INFOID:0000000011008901

- Front height sensor is installed in transverse link.
- Front height sensor detects the vehicle front height deviation with sensor lever, and transmits the detected value as a front height sensor signal to IPDM E/R.

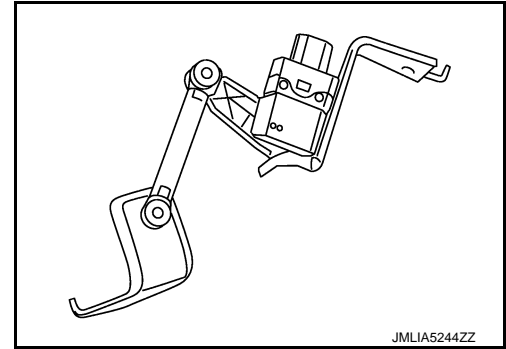




### Rear Height Sensor

INFOID:000000010788743

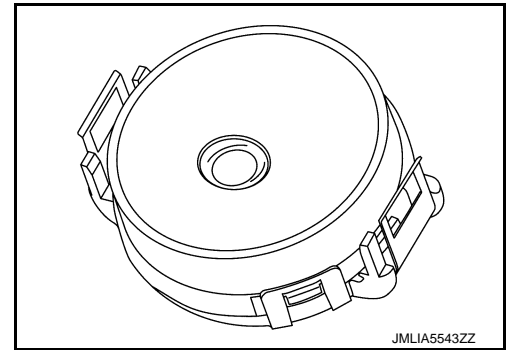
- Rear height sensor is installed in lower link.
- Rear height sensor detects the vehicle rear height deviation with sensor lever, and transmits the detected value as a rear height sensor signal to IPDM E/R.



### Light & Rain Sensor

INFOID:000000011008902

- The light & rain sensor detects the outside ambient light level, forward light level and sensor conditions.
- Based on ambient light level (day/night detection), forward light level (tunnel detection) and sensor conditions it judges ON/OFF condition for exterior lamps.
- And it transmits exterior lamp ON/OFF request to the BCM by the light & rain sensor serial link.
- BCM controls each function depending on the signals. And it detects the light & rain sensor serial link error and the light & rain sensor malfunction.



### Hazard Switch

INFOID:000000010788745

Inputs the hazard switch ON/OFF signal to BCM.

|  |   | Switch                      | OFF | ON |
|--|---|-----------------------------|-----|----|
|  | 1 | Ground                      |     |    |
|  | 2 | Hazard switch ON/OFF signal |     |    |
|  | 3 | Illumination +              |     |    |
|  | 4 | Illumination -              |     |    |

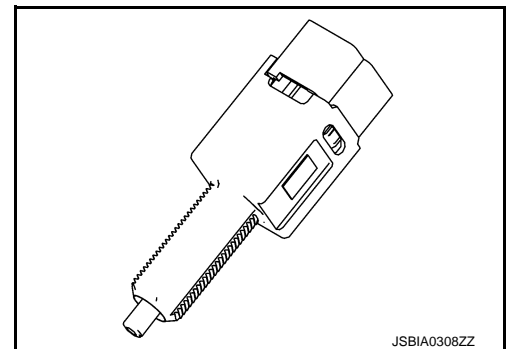
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### Stop Lamp Switch

INFOID:000000010788746

- Stop lamp switch is installed to brake pedal bracket.
- BCM detects the brake pedal status from the ON/OFF signal that is input from the switch.

| Brake pedal | Stop lamp switch |
|-------------|------------------|
| Released    | OFF              |
| Depressed   | ON               |





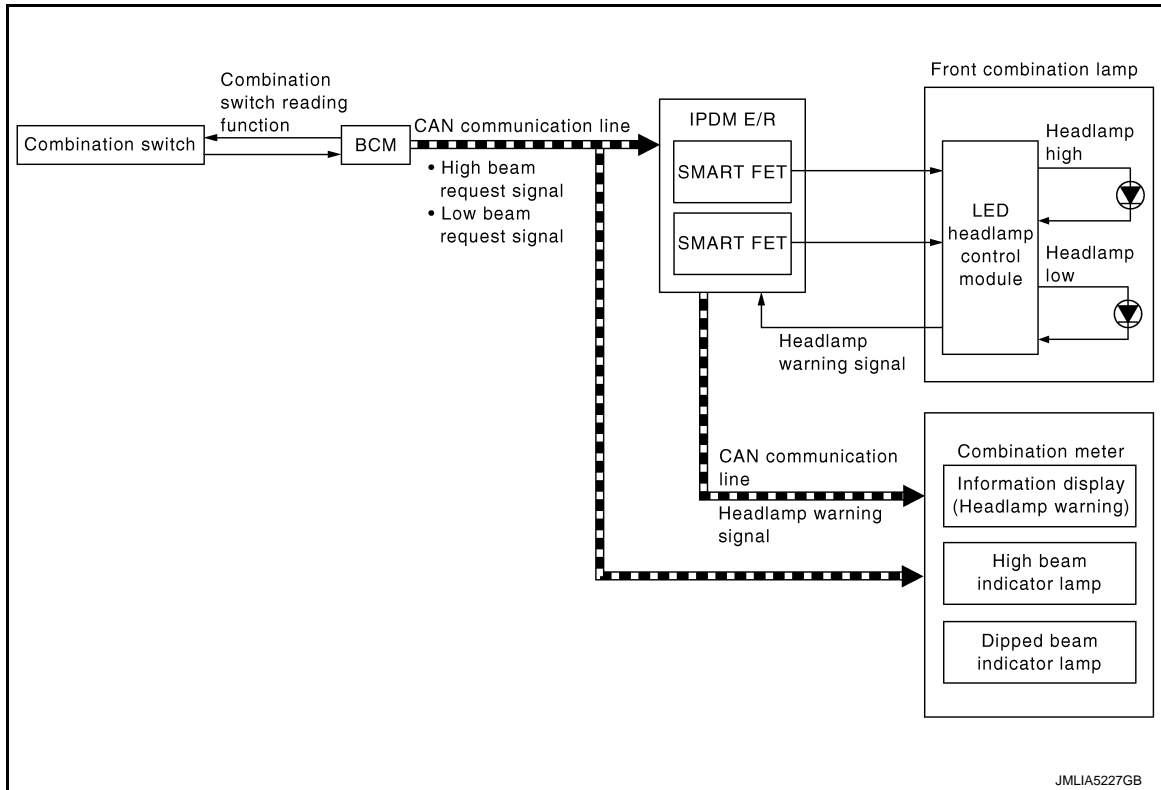
## SYSTEM

## HEADLAMP SYSTEM

## HEADLAMP SYSTEM : System Description

INFOID:0000000010788747

## SYSTEM DIAGRAM



## OUTLINE

Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and smart FET control function of IPDM E/R.

## HEADLAMP (LO) OPERATION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM transmits the low beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (LO) ON condition.

Headlamp (LO) ON condition (When any of the following conditions are satisfied)

- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-24, "AUTO LIGHT SYSTEM : System Description".](#))
- Lighting switch PASS
- IPDM E/R turns the integrated smart FET ON according to low beam request signal and supplies power supply to LED headlamp control module.
- LED headlamp control module turns the headlamp (LO) ON according to the power supply from IPDM E/R.
- Combination meter turns the dipped beam indicator lamp ON according to the low beam request signal.

## HEADLAMP (HI) OPERATION

- BCM transmits the high beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (HI) ON condition.

Headlamp (HI) ON condition (When any of the following conditions are satisfied)

- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO (Only when the illumination judgment by auto light system is ON and the illumination judgment by high beam assist system is ON. For details, refer to [EXL-24, "AUTO LIGHT SYSTEM : System Description".](#))
- Lighting switch PASS

- IPDM E/R turns the integrated headlamp high smart FET ON according to high beam request signal and supplies power supply to LED headlamp control module.
- LED headlamp control module turns the headlamp (HI) ON according to the power supply from IPDM E/R.
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.

### HEADLAMP WARNING OPERATION

Headlamp warning warns the driver that there is a malfunction in LED headlamp system. Refer to [EXL-49, "INFORMATION DISPLAY \(COMBINATION METER\) : Headlamp Warning"](#).

### FOLLOW ME HOME FUNCTION

When the driver is moving to the house entrance from the own vehicle, headlamp is kept still ON by the follow me home function of BCM.

- When BCM detects the input of lighting switch PASS while all of the following conditions are satisfied, it transmits the low beam request signal for a period of time to IPDM E/R and the combination meter through CAN communication.

Follow me home ON condition (When all of the following conditions are satisfied)

- Ignition switch OFF
- Lighting switch OFF or AUTO
- IPDM E/R turns the integrated smart FET ON according to low beam request signal and supplies power supply to LED headlamp control module.
- LED headlamp control module turns the headlamp (LO) ON according to the power supply from IPDM E/R.
- Combination meter turns the dipped beam indicator lamp ON according to the low beam request signal.
- When in any of following conditions, follow me home function can be cancelled while follow me home function is operating.

Follow me home OFF condition (When any of the following conditions are satisfied)

- Ignition switch other than OFF
- Lighting switch other than OFF or AUTO
- Follow me home operating time is expired

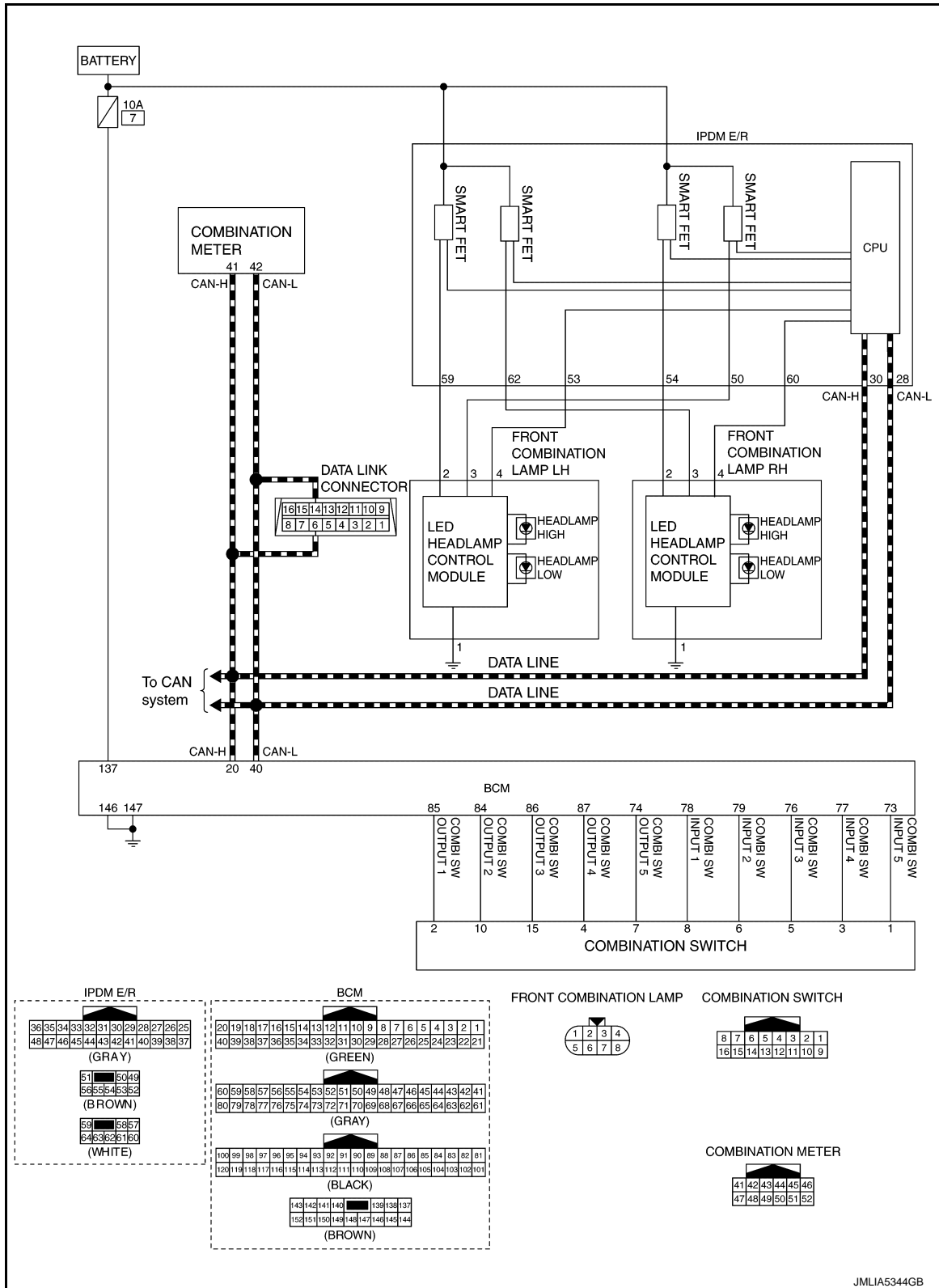
### NOTE:

- Flash-to-pass operation illumination time for 1 time can be extended to approximately 30 seconds during operation of follow me home function.
- Flash-to-pass operation can be illuminated continuously for approximately 60 seconds (flash-to-pass operation, 2 times), approximately 90 seconds (flash-to-pass operation, 3 times), and a maximum of approximately 120 seconds (flash-to-pass operation, 4 times).

&lt; SYSTEM DESCRIPTION &gt;

## HEADLAMP SYSTEM : Circuit Diagram

INFOID:000000010788748



## HEADLAMP SYSTEM : Fail-safe

INFOID:000000010788749

## FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| DTC   | CONSULT display description |                            | Fail-safe  |
|-------|-----------------------------|----------------------------|--|
| B20CE | HL (HI) LH PWR SPLY CIRC    | [CIRC SHORT TO GRND]       | Shuts off the power supply to the headlamp (HI) LH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied.   |
| B20CF | HL (HI) RH PWR SPLY CIRC    | [CIRC SHORT TO GRND]       | Shuts off the power supply to the headlamp (HI) RH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied.   |
| B20D0 | HL (LO) LH PWR SPLY CIRC    | [CIRC SHORT TO GRND]       | Shuts off the power supply to the headlamp (LO) LH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied.   |
| B20D1 | HL (LO) RH PWR SPLY CIRC    | [CIRC SHORT TO GRND]       | Shuts off the power supply to the headlamp (LO) RH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied.   |
| B20E2 | LED HEADLAMP RH             | [CMPNENT INTERNAL MLFNCTN] | Transmits the headlamp warning signal (CAN communication) to the combination meter when the headlamp (LO) ON conditions are satisfied. (When the ignition switch turns ON, the headlamp warning is displayed on the information display of the combination meter.) |
| B20E3 | LED HEADLAMP LH             | [CMPNENT INTERNAL MLFNCTN] | Transmits the headlamp warning signal (CAN communication) to the combination meter when the headlamp (LO) ON conditions are satisfied. (When the ignition switch turns ON, the headlamp warning is displayed on the information display of the combination meter.) |

### CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

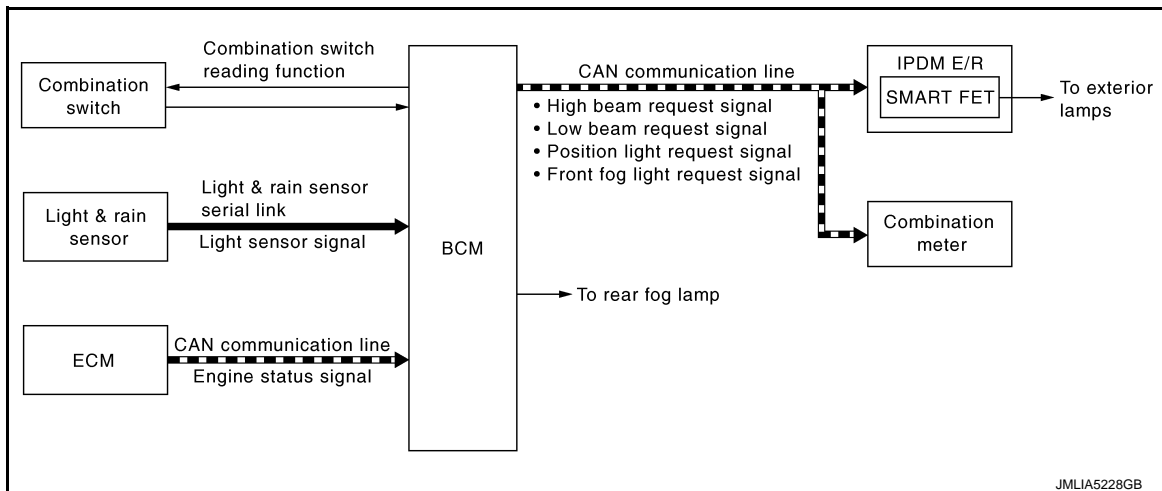
| Control part | Fail-safe operation  |
|--------------|--|
| Headlamp     | <ul style="list-style-type: none"> <li>• Turns ON the headlamp (LO) when the ignition switch is turned ON.</li> <li>• Turns OFF the headlamp (LO) when the ignition switch is turned OFF.</li> <li>• Headlamp (HI): OFF</li> </ul> |

## AUTO LIGHT SYSTEM

### AUTO LIGHT SYSTEM : System Description

INFOID:0000000011008903

### SYSTEM DIAGRAM



### OUTLINE

- Auto light system is controlled by each function of BCM and IPDM E/R.

## &lt; SYSTEM DESCRIPTION &gt;

Control by BCM

- Combination switch reading function
- Auto light function
- Fog override function

Control by IPDM E/R

- Smart FET control function
- Auto light system has the auto light function and fog override function.
- Auto light function automatically turns ON/OFF the exterior lamps\*, depending on the outside brightness.
- Fog override function turns ON the exterior lamps regardless of outside brightness, when front fog lamp switch is turned from OFF to ON or rear fog lamp switch is turned from OFF to ON while ignition switch is in ON position and lighting switch is in AUTO position.

\*: Headlamp (LO/HI), front fog lamp, rear fog lamp, parking lamp, license plate lamp and tail lamp.

**NOTE:**

- Headlamp (HI) depend on the combination switch condition and the illumination judgment of high beam assist system. For details, refer to [EXL-27, "HIGH BEAM ASSIST SYSTEM : System Description"](#).
- Front fog lamp does not turn ON automatically, but automatically turns OFF (only when the fog override function setting is OFF).
- Rear fog lamp does not turn ON automatically, but automatically turns OFF (only when the fog override function setting is OFF).

**AUTO LIGHT FUNCTION**

- BCM detects the combination switch condition with the combination switch reading function.
- BCM detects the engine condition by the engine status signal received from ECM via CAN communication.
- BCM receives exterior lamp ON/OFF requests from the light & rain sensor by light & rain sensor serial link.
- BCM judges the ON/OFF status of the exterior lamp according to ON/OFF requests from light & rain sensor and the vehicle condition.
- BCM transmits each request signal to IPDM E/R via CAN communication according to ON/OFF condition by the auto light function.

**NOTE:**

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to [EXL-55, "HEADLAMP : CONSULT Function \(BCM - HEAD LAMP\) \(LED Headlamp\)"](#).

**FOG OVERRIDE FUNCTION**

When front fog lamp switch is turned from OFF to ON or rear fog lamp switch is turned from OFF to ON while ignition switch is in ON position and lighting switch is in AUTO position, BCM turns ON exterior lamps\* regardless of outside brightness.

\*: Headlamp (LO/HI), front fog lamp, rear fog lamp, parking lamp, license plate lamp and tail lamp.

**NOTE:**

- Headlamp (HI) depend on the combination switch condition and the illumination judgment of high beam assist system. For details, refer to [EXL-27, "HIGH BEAM ASSIST SYSTEM : System Description"](#).
- Front fog lamp and rear fog lamp depend on the each fog lamp switch operation.
- ON/OFF of fog override function can be changed using CONSULT. Refer to [INL-21, "INT LAMP : CONSULT Function \(BCM - INT LAMP\)"](#).

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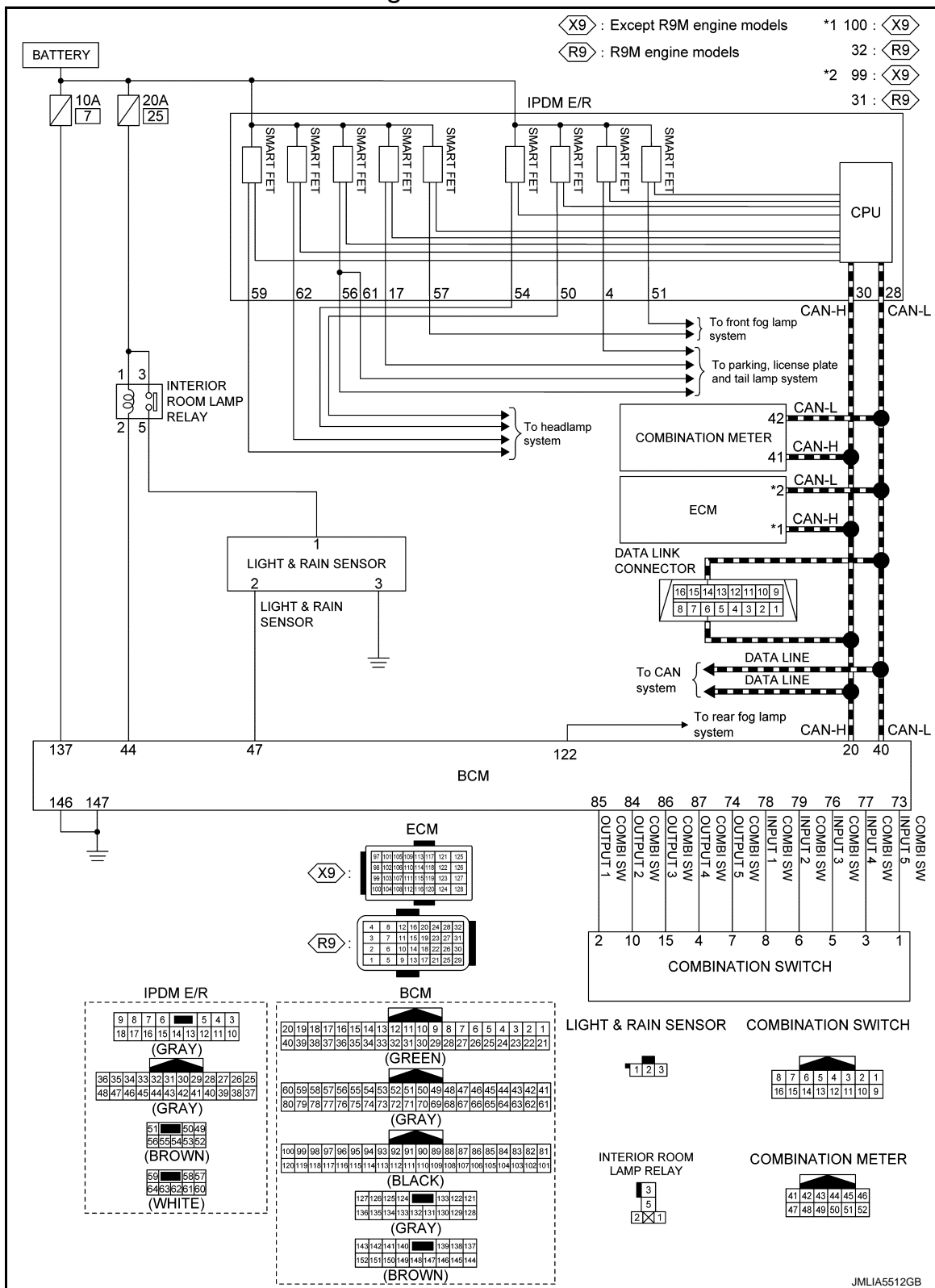
# SYSTEM

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

## AUTO LIGHT SYSTEM : Circuit Diagram

INFOID:000000010788751



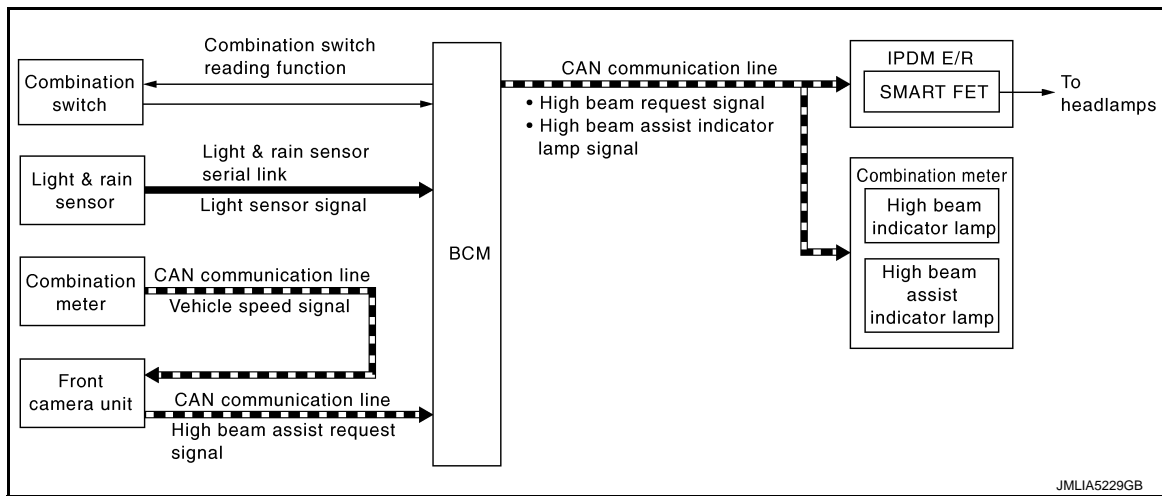
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HIGH BEAM ASSIST SYSTEM

## HIGH BEAM ASSIST SYSTEM : System Description

INFOID:0000000011008904

### SYSTEM DIAGRAM



### OUTLINE

- High beam assist system is a system that can reduce the driver's switch operation load. The system automatically switches the headlamp to the low beam mode when a vehicle ahead or an oncoming vehicle appears, while driving the vehicle with the headlamps in high beam mode at night.
- When the high beam assist system operation permission conditions are satisfied, the high beam assist indicator lamp in the combination meter turns ON and informs that the high beam assist is in operation.
- High beam assist system is controlled by each function of BCM, front camera unit and IPDM E/R.

#### Control by BCM

- Combination switch reading function
- Auto light function
- High beam assist control function
- Headlamp control function

#### Control by IPDM E/R

- Smart FET control function

#### Control by Front camera unit

- High beam assist control function

### OPERATION DESCRIPTION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM transmits the high beam assist indicator lamp signal to the combination meter via CAN communication, when the high beam assist system operation permission conditions are satisfied.

#### High beam assist system operation permission conditions

- Lighting switch HI with the lighting switch AUTO and ignition switch ON (Only when the illuminating judgment by auto light function is ON. For details, refer to [EXL-24, "AUTO LIGHT SYSTEM : System Description"](#).)
- Combination meter turns the high beam assist indicator lamp ON according to the high beam assist indicator lamp signal.
- Front camera unit detects the vehicle status and ambient status that are required for high beam assist control with the following signals.
  - Vehicle speed signal (received from combination meter via CAN communication)
  - Ambient light signal (detect from front camera unit)
  - Image sensor signal (detect from front camera unit)
- Front camera unit judges the current recommended beam according to the vehicle status and ambient condition, and transmits the high beam assist request signal (headlamp HI operation / headlamp LO operation) to BCM via CAN communication.
- BCM switches the headlamp LO operation / headlamp HI operation according to high beam assist request signal, while the high beam assist system operation permission conditions are satisfied. For headlamp operation, refer to [EXL-21, "HEADLAMP SYSTEM : System Description"](#).

### RECOMMENDED BEAM JUDGMENT BY FRONT CAMERA UNIT

### Headlamp HI Operation Request

Front camera unit requests the headlamp HI operation to BCM when all of following conditions are satisfied.

- Detects the vehicle speed is approx. 40 km/h or more.
- Recognizes the ambient condition is dark.
- Recognizes there is no oncoming vehicle or no vehicle ahead in front of the vehicle.

### Headlamp LO Operation Request

Front camera unit requests the headlamp LO operation to BCM when either of following conditions is satisfied.

- Detects the vehicle speed is approx. 30 km/h or less.
- Recognizes the ambient condition is bright.
- Recognizes there is oncoming vehicle or vehicle ahead in front of the vehicle.



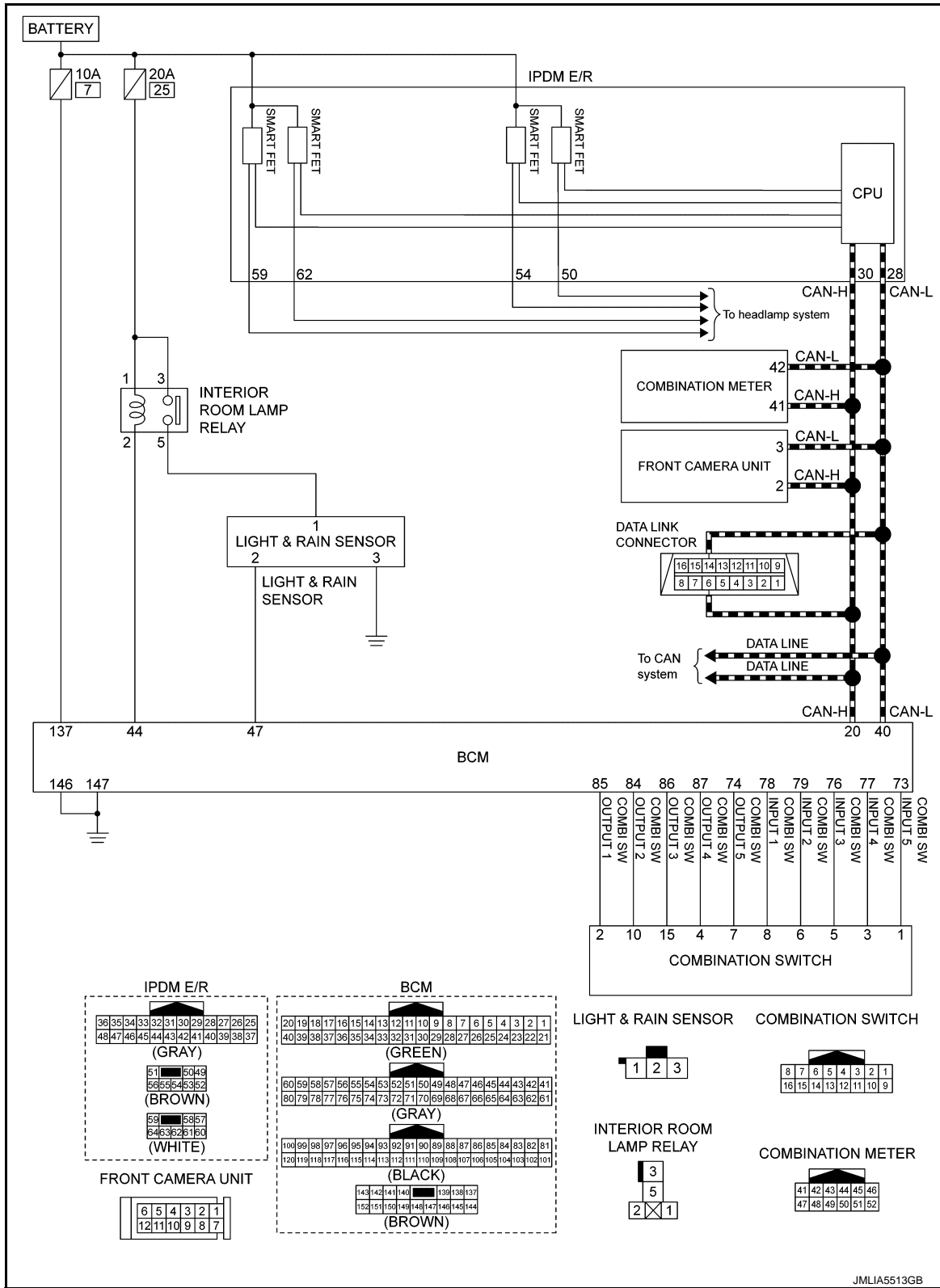
# SYSTEM

## < SYSTEM DESCRIPTION >

**[LED HEADLAMP]**

### HIGH BEAM ASSIST SYSTEM : Circuit Diagram

INFOID:0000000011008905



## HIGH BEAM ASSIST SYSTEM : Fail-safe

INFOID:0000000011008906

## FRONT CAMERA UNIT TEMPORARY OPERATION CANCELLATION

- Temporary disabled status at high temperature
- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the system malfunction in information display.

### < SYSTEM DESCRIPTION >

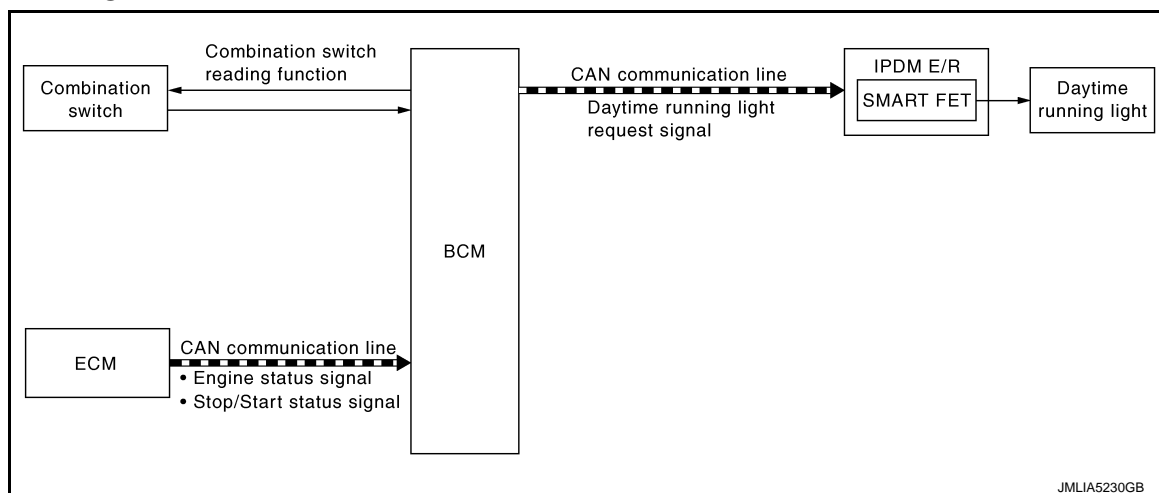
- When interior temperature is reduced, the system will resume operation automatically.
- When vehicle front identification is difficult
- When vehicle front identification is difficult due to soiling of windshield glass and strong light shining from the front, operation may be canceled temporarily. At this time, a warning is displayed on the vehicle information display in the combination meter.
- Normal operation recovers when conditions improve.

### DAYTIME RUNNING LIGHT SYSTEM

### DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:000000010788752

### SYSTEM DIAGRAM



### OUTLINE

Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and smart FET control function of IPDM E/R.

### DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the engine status signal and Stop/Start status signal\* (received from ECM via CAN communication).
- BCM transmits the daytime running light request signal to IPDM E/R via CAN communication according to the daytime running light ON condition.

#### Daytime running light ON condition

- Engine running and any following conditions are satisfied.
- Lighting switch OFF
- Lighting switch AUTO (Only when the illumination judgment by auto light system is OFF. For details, refer to [EXL-24, "AUTO LIGHT SYSTEM : System Description"](#).)
- IPDM E/R turns the integrated smart FET ON, and turns the daytime running light ON according to the daytime running light request signal.

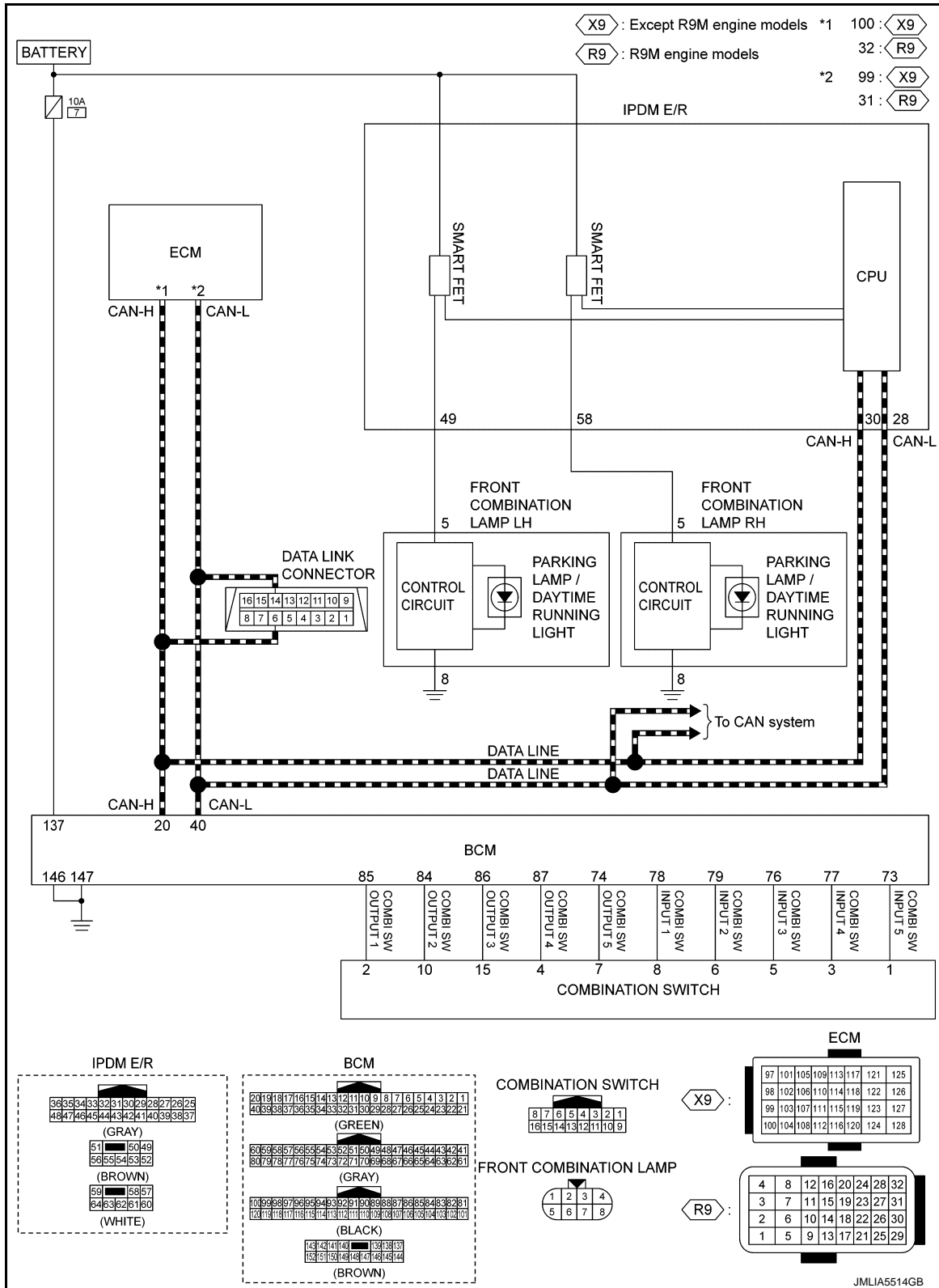
#### NOTE:

When the engine is stopped by the Stop/Start system, the operation of daytime running light system is not canceled.\*

\*: With Stop/Start system

## DAYTIME RUNNING LIGHT SYSTEM : Circuit Diagram

INFOID:000000010788753



## DAYTIME RUNNING LIGHT SYSTEM : Fail-safe

INFOID:000000010788754

### FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

| DTC   | CONSULT display description |                      | Fail-safe  |
|-------|-----------------------------|----------------------|--|
| B1231 | DTRL RH PWR SPLY CIRC       | [CIRC SHORT TO GRND] | Shuts off the power supply to the daytime running light RH power supply circuit until the daytime running light ON conditions are no longer satisfied. |
| B20CB | DTRL LH PWR SPLY CIRC       | [CIRC SHORT TO GRND] | Shuts off the power supply to the daytime running light LH power supply circuit until the daytime running light ON conditions are no longer satisfied. |

### CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

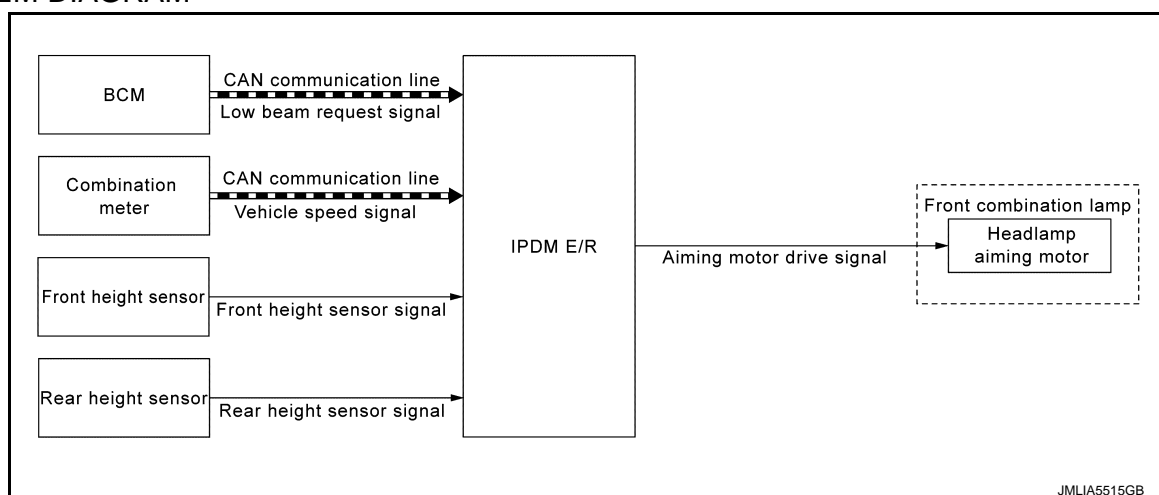
| Control part          | Fail-safe operation        |
|-----------------------|----------------------------|
| Daytime running light | Daytime running light: OFF |

## HEADLAMP AIMING CONTROL SYSTEM (AUTO)

### HEADLAMP AIMING CONTROL SYSTEM (AUTO) : System Description

INFOID:0000000010788755

### SYSTEM DIAGRAM



### OUTLINE

- Headlamp aiming control system is controlled by IPDM E/R.
- IPDM E/R controls the headlamp light axis height appropriately depending on the vehicle front height (3-row seat models) and vehicle rear height.
- IPDM E/R detects the vehicle condition necessary for the headlamp aiming motor control with the following signals.
  - Front height sensor signal [inputted from front height sensor (3-row seat models)]
  - Rear height sensor signal (inputted from rear height sensor)
  - Low beam request signal (received from BCM via CAN communication)
  - Vehicle speed signal (received from combination meter via CAN communication)

### HEADLAMP AUTO AIMING OPERATION

- IPDM E/R calculates vehicle pitch angle from front height sensor (3-row seat models) and rear height sensor signal and determines the necessary correction to compensate the deviation from standard light axis position.
- IPDM E/R outputs aiming motor drive signal when operating conditions are satisfied.

Operating condition (when all of the following conditions are satisfied)

- Ignition switch ON
- Headlamp (LO) ON
- IPDM E/R changes the aiming motor drive signal when any of the correcting condition is detected. Output is maintained if other condition is detected.

Correcting condition (when any of the following conditions are satisfied)

- Ignition switch ON
- Headlamp (LO) is turned ON.
- Vehicle posture becomes stable after the vehicle posture change is detected with the headlamp (LO) ON and the vehicle stopped.
- Vehicle speed is maintained with the headlamp (LO) ON and the vehicle driven.

NOTE:

Adjusted axis position may differ from the preset position although the headlamp auto aiming activates properly when the suspension is replaced or worn.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

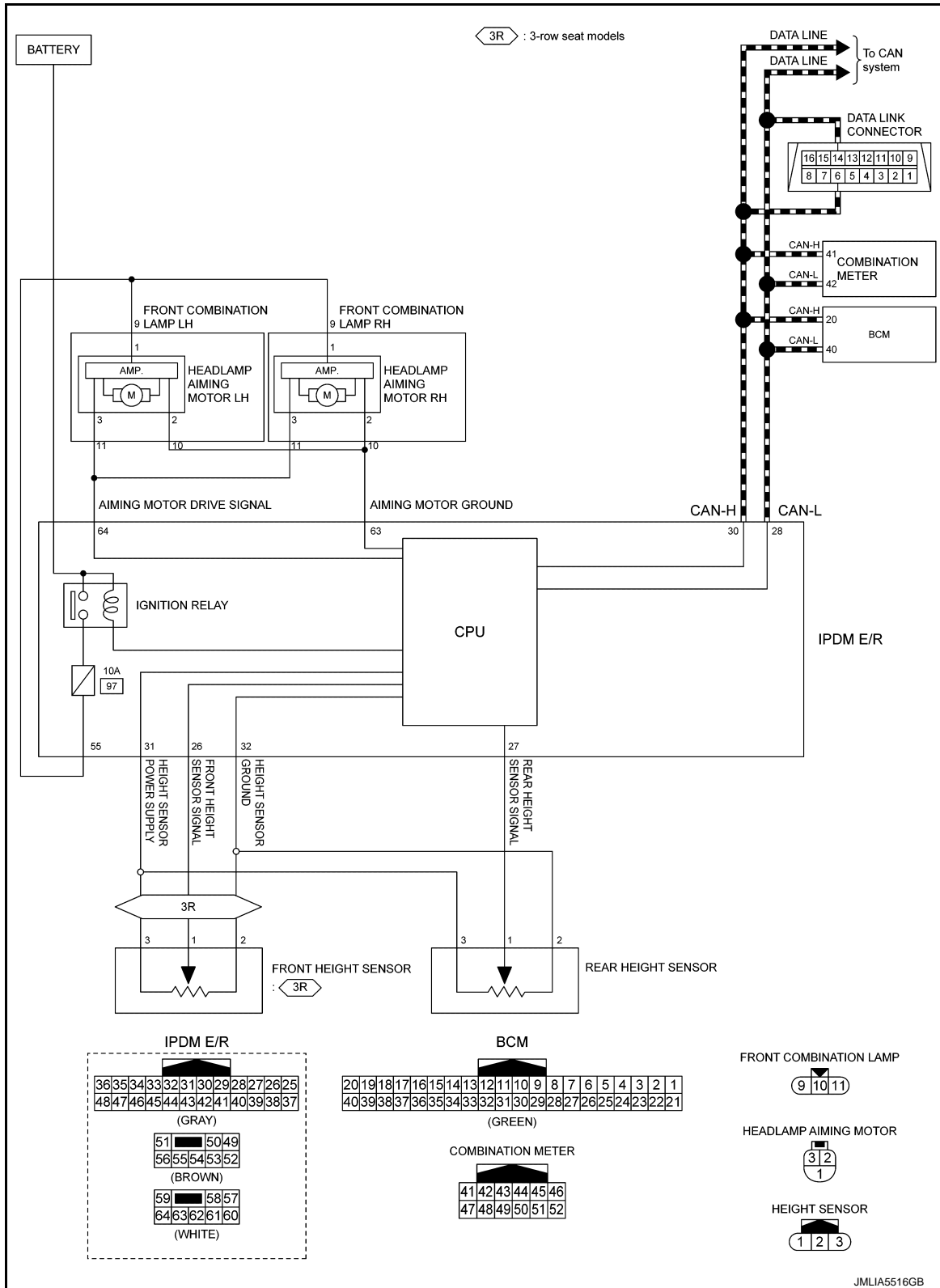
# SYSTEM

## < SYSTEM DESCRIPTION >

**[LED HEADLAMP]**

### HEADLAMP AIMING CONTROL SYSTEM (AUTO) : Circuit Diagram

INFOID:0000000010788756



## HEADLAMP AIMING CONTROL SYSTEM (AUTO) : Fail-safe

INFOID:0000000010788757

## FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

# SYSTEM

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

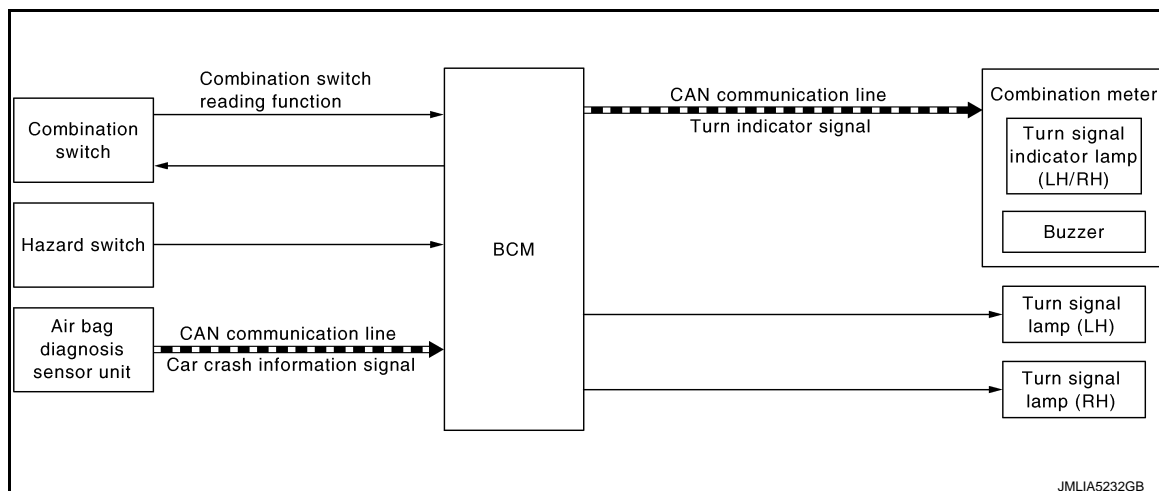
| DTC   | CONSULT display description     |                                | Fail-safe  |     |
|-------|---------------------------------|--------------------------------|--|-----|
| B1C00 | HEIGHT SENSOR PWR SPLY CIRC     | [CIRC SHORT TO GRND]           | Right and left headlamp aiming motors stop at the position when DTC is detected. | A   |
|       |                                 | [CIRC SHORT TO BATTERY]        |  | B   |
| B1C01 | FR HEIGHT SENSOR SIGNAL         | [CIRC SHORT TO BATTERY]        | Right and left headlamp aiming motors stop at the position when DTC is detected. | C   |
|       |                                 | [CIRC SHORT TO GROUND OR OPEN] |  | D   |
|       |                                 | [CIRC VOLTAGE OUT OF RANGE]    |  | E   |
| B1C02 | RR HEIGHT SENSOR SIGNAL         | [CIRC SHORT TO BATTERY]        | Right and left headlamp aiming motors stop at the position when DTC is detected. | F   |
|       |                                 | [CIRC SHORT TO GROUND OR OPEN] |  | G   |
|       |                                 | [CIRC VOLTAGE OUT OF RANGE]    |  | H   |
| B1C07 | AIMING MOTOR DRIVE SIGNAL       | [CIRC SHORT TO GRND]           | Right and left headlamp aiming motors stop at the position when DTC is detected. | I   |
|       |                                 | [CIRC SHORT TO BATTERY]        |  | J   |
|       |                                 | [SIGNAL COMPARE FAILURE]       |  | K   |
| B1C11 | FR HEIGHT SENSOR SIGNAL         | [SIG PRTCTN CLCLTN IN-CRCT]    | Right and left headlamp aiming motors stop at the position when DTC is detected. | EXL |
| B1C12 | RR HEIGHT SENSOR SIGNAL         | [SIG PRTCTN CLCLTN IN-CRCT]    | Right and left headlamp aiming motors stop at the position when DTC is detected. | M   |
| B20DB | HEIGHT SENS INITIALIZE NOT DONE | [MISSING CALIBRATION]          | Right and left headlamp aiming motors fix at the initial aiming position.        | N   |
|       |                                 | [NOT CONFIGURED]               |  | O   |

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000010788758

## SYSTEM DIAGRAM



## OUTLINE

Turn signal lamp and hazard warning lamp is controlled by combination switch reading function and the flasher control function of BCM.

## TURN SIGNAL LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM supplies voltage to the right (left) turn signal lamp circuit when the ignition switch is ON and the turn signal switch is in the right (left) position. BCM blinks the turn signal lamp.

## HAZARD WARNING LAMP OPERATION

BCM supplies voltage to both turn signal lamp circuits when the hazard switch is ON. BCM blinks the hazard warning lamp.

## TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION

- BCM transmits the turn indicator signal to the combination meter using CAN communication while the turn signal lamp and the hazard warning lamp are operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn indicator signal.

## 3-TIME FLASHER FUNCTION

- By a short touch of the turn signal lever, BCM blinks the turn signal lamps 3 times in the selected direction.
- Cancels the operation when short touch of the turn signal lever in the reverse direction during the 3-time flasher function operation.

**NOTE:**

ON/OFF of 3-time flasher function can be changed using CONSULT. Refer to [EXL-57, "FLASHER : CONSULT Function \(BCM - FLASHER\) \(LED Headlamp\)"](#).

## HIGH FLASHER OPERATION

- BCM detects the turn signal lamp circuit status from the current value.
- BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

**NOTE:**

The blinking speed is normal while operating the hazard warning lamp.

## AUTO HAZARD FUNCTION

- Air bag diagnosis sensor unit transmits car crash information signal to BCM via CAN communication, when air bag diagnosis sensor unit detects strong impact to the vehicle body while ignition switch is ON.
- When car crash information signal received from air bag diagnosis sensor unit is detected, BCM supplies voltage to each turn signal lamp system and hazard lamp blinks.



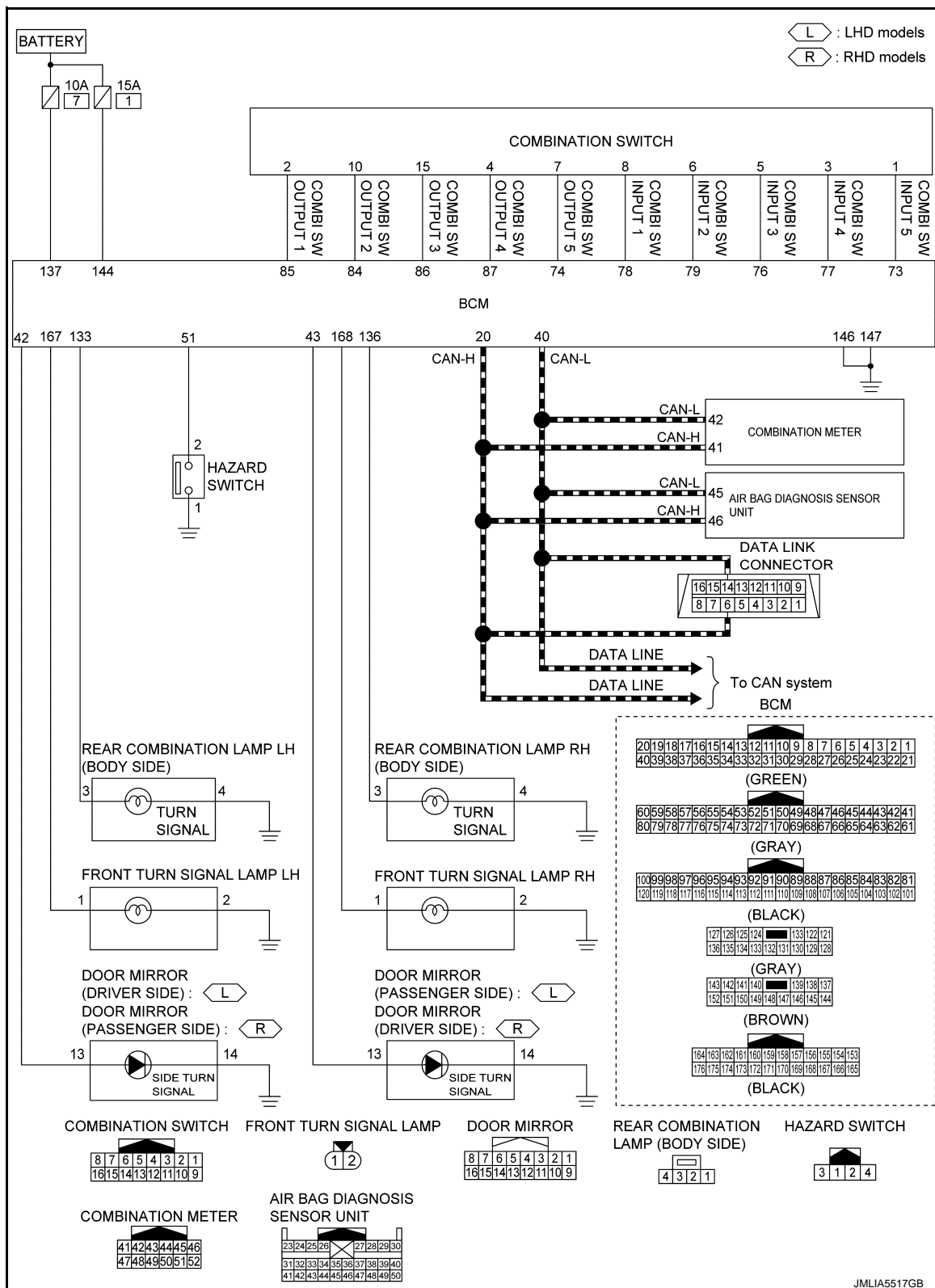
# SYSTEM

## < SYSTEM DESCRIPTION >

**[LED HEADLAMP]**

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : Circuit Diagram

INFOID:0000000010788759



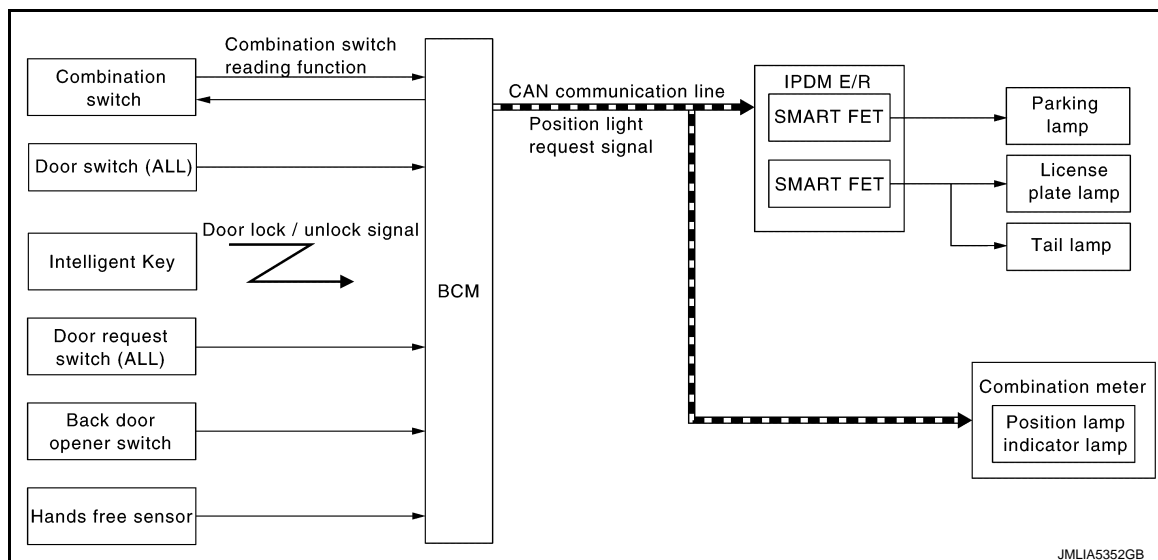
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## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM

## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : System Description

INFOID:0000000010788760

### SYSTEM DIAGRAM



### OUTLINE

Parking, license plate and tail lamps are controlled by combination switch reading function and parking, license plate and tail lamps control function of BCM, and smart FET control function of IPDM E/R.

### PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the position light request signal to IPDM E/R and the combination meter via CAN communication according to the parking, license plate and tail lamps ON condition.

Parking, license plate and tail lamps ON condition (when any of the following conditions are satisfied)

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-24, "AUTO LIGHT SYSTEM : System Description"](#).)
- IPDM E/R turns the integrated smart FET ON and turns the parking, license plate and tail lamps ON according to the position light request signal.
- Combination meter turns the position lamp indicator lamp ON according to the position light request signal.

#### NOTE:

Parking lamp and daytime running light use a common light source. When the parking, license plate and tail lamps are turned ON while daytime running light is ON, the parking lamp/daytime running light is dimmed.

### FOLLOW ME HOME FUNCTION

When the driver is moving to the house entrance from the own vehicle, parking, license plate and tail lamps are kept still ON by the follow me home function of BCM.

- When BCM detects the input of lighting switch PASS while all of the following conditions are satisfied, it transmits the position light request signal for a period of time to IPDM E/R and the combination meter through CAN communication.

Follow me home ON condition (When all of the following conditions are satisfied)

- Ignition switch OFF
- Lighting switch OFF or AUTO
- IPDM E/R turns the integrated smart FET ON and turns the parking, license plate and tail lamps ON according to the position light request signal.
- Combination meter turns the position lamp indicator lamp ON according to the position light request signal.
- When in any of following conditions, follow me home function can be cancelled while follow me home function is operating.

Follow me home OFF condition (When any of the following conditions are satisfied)

- Ignition switch other than OFF
- Lighting switch other than OFF or AUTO

- Follow me home operating time is expired

**NOTE:**

- Flash-to-pass operation illumination time for 1 time can be extended to approximately 30 seconds during operation of follow me home function.
- Flash-to-pass operation can be illuminated continuously for approximately 60 seconds (flash-to-pass operation, 2 times), approximately 90 seconds (flash-to-pass operation, 3 times), and a maximum of approximately 120 seconds (flash-to-pass operation, 4 times).

**SIGNATURE LIGHT FUNCTION****Description**

The signature light function is a function that turns ON the parking lamp, license plate lamp, and tail lamp for a set period of time when the doors are locked or unlocked from outside the vehicle.

**Operation Description**

BCM transmits the position light request signal to IPDM E/R and the combination meter via CAN communication according to the signature light function ON condition.

Signature light function ON condition (Operation when doors are unlocked)

- When all of the following conditions are satisfied, the signature light function operates when door unlock operation is performed from outside the vehicle (Intelligent Key, door request switch, back door opener switch, hands free function).
  - Ignition switch: OFF
  - Door open/close status: All door close
  - Door lock status: All door lock
- When any of the following conditions is satisfied while the signature light function is operating, the signature light function stops.
  - Ignition switch: ON
  - Door lock status: All door lock (This only occurs when door lock operation is performed using the door lock and unlock switch, etc. When door lock operation is performed with the Intelligent Key or door request switch, the system changes to operation when doors are locked.)
- Since signature light function ON, 30 seconds are passed.

Signature light function ON condition (Operation when doors are locked)

- When all of the following conditions are satisfied, the signature light function operates when door lock operation is performed from outside the vehicle (Intelligent Key or door request switch).
  - Ignition switch: OFF
  - Door open/close status: All door close
- When any of the following conditions is satisfied while the signature light function is operating, the signature light function stops.
  - Ignition switch: ON
  - Door open/close status: Any door open
  - Door lock status: Any door unlock or all door unlock (This only occurs when door unlock operation is performed using the door lock and unlock switch etc. When door unlock operation is performed with the Intelligent Key, door request switch, back door opener switch or hands free function, the system changes to operation when doors are unlocked.)
- Door open/close status: All door close
- Since signature light function ON, 10 seconds are passed.

**NOTE:**

ON/OFF of signature light function can be changed using CONSULT. Refer to [DLK-75. "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\) \(With Super Lock\)"](#) or [DLK-385. "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\) \(Without Super Lock\)"](#).

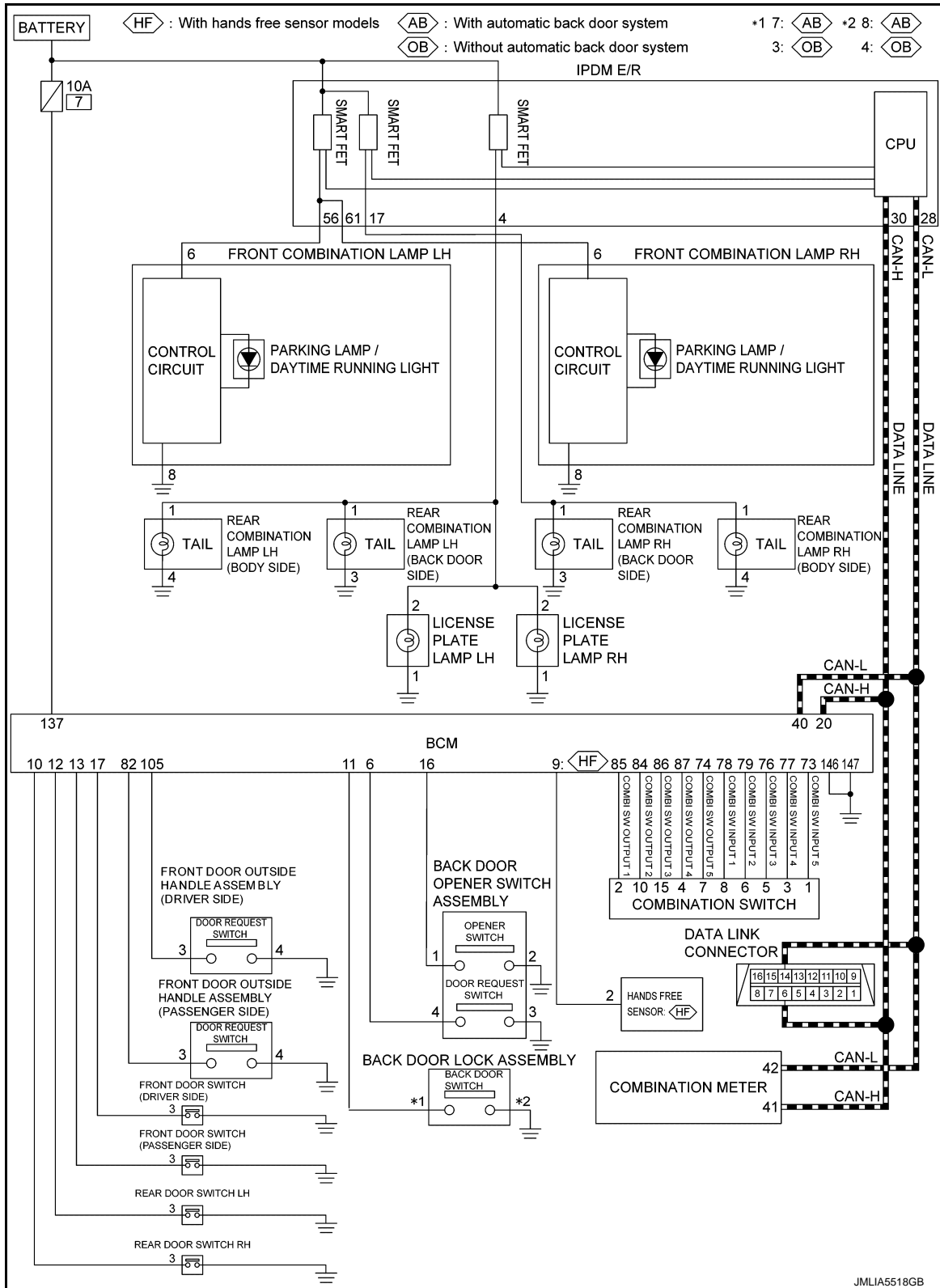
# SYSTEM

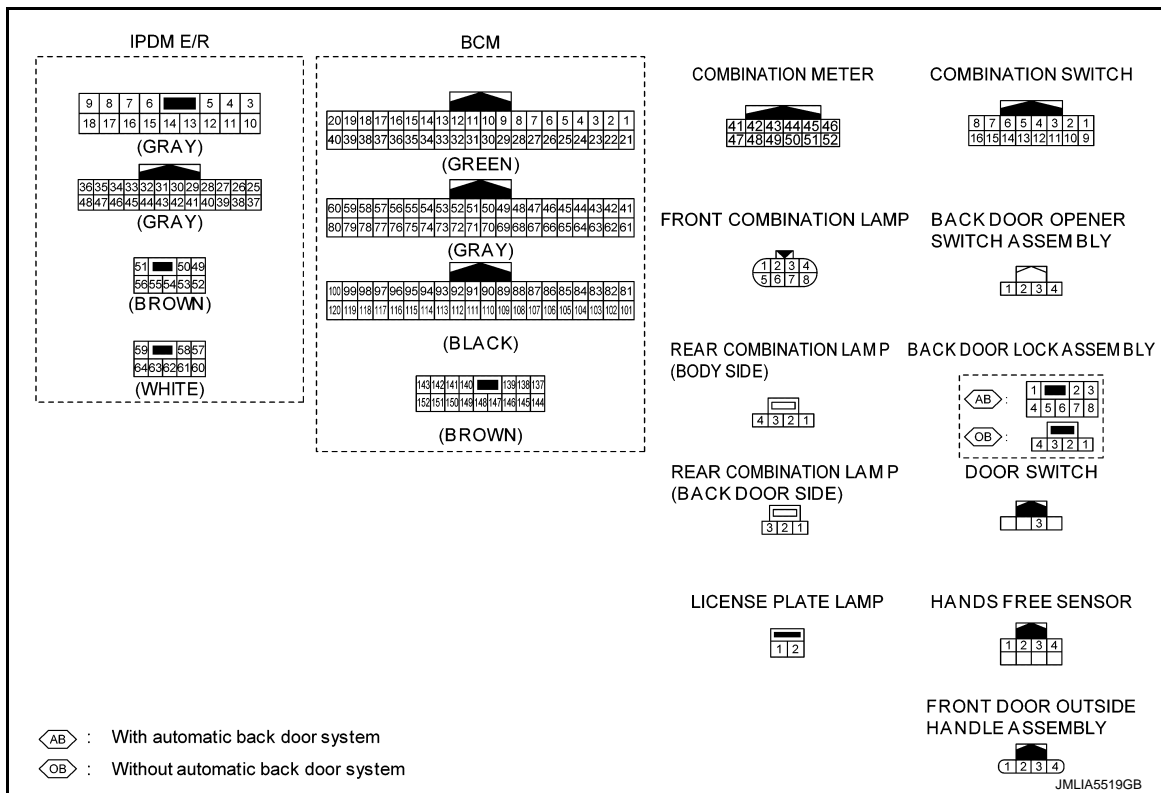
< SYSTEM DESCRIPTION >

[LED HEADLAMP]

## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : Circuit Diagram

INFOID:000000010788761





## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : Fail-safe

INFOID:0000000010788762

## FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

| DTC   | CONSULT display description | Fail-safe   |
|-------|-----------------------------|---|
| B20D2 | PARKING LAMP PWR SPLY CIRC  | [CIRC SHORT TO GRND]<br>Shuts off the power supply to the parking lamp (LH/RH) power supply circuit until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.  |
| B20D4 | TAIL LAMP LH PWR SPLY CIRC  | [CIRC SHORT TO GRND]<br>Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.<br>• Tail lamp LH (body side)<br>• Tail lamp LH (back door side)<br>• License plate lamp LH<br>• License plate lamp RH |
| B20D5 | TAIL LAMP RH PWR SPLY CIRC  | [CIRC SHORT TO GRND]<br>Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.<br>• Tail lamp RH (body side)<br>• Tail lamp RH (back door side)   |

## CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

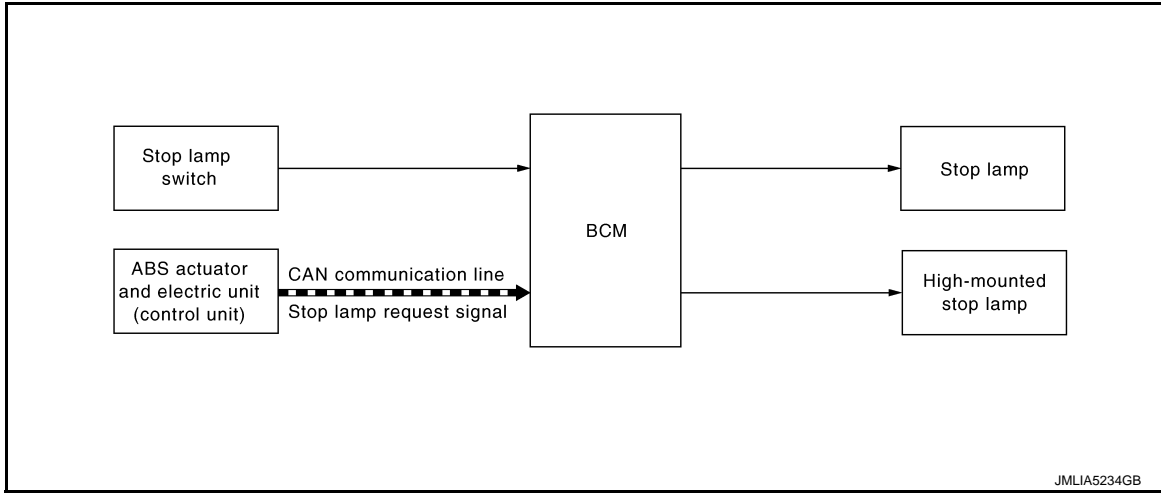
| Control part  | Fail-safe operation  |
|---|--|
| <ul style="list-style-type: none"> <li>Parking lamp</li> <li>License plate lamp</li> <li>Tail lamp</li> </ul> | <ul style="list-style-type: none"> <li>Turns ON the tail lamp, parking lamp and license plate lamp when the ignition switch is turned ON.</li> <li>Turns OFF the tail lamp, parking lamp and license plate lamp when the ignition switch is turned OFF.</li> </ul> |

## STOP LAMP SYSTEM

## STOP LAMP SYSTEM : System Description

INFOID:0000000010788763

### SYSTEM DIAGRAM



### OUTLINE

Stop lamp and high-mounted stop lamp is controlled by combination switch reading function and the stop lamp and high-mounted stop lamp control function of BCM, and forward emergency braking function of ABS actuator and electric unit (control unit).

### STOP LAMP AND HIGH-MOUNTED STOP LAMP OPERATION

- BCM detects the brake pedal position status from stop lamp switch.
- BCM supplies voltage to stop lamp and high-mounted stop lamp according to the stop lamp and high-mounted stop lamp ON condition.

Stop lamp and high-mounted stop lamp ON condition

- Brake pedal is depressed

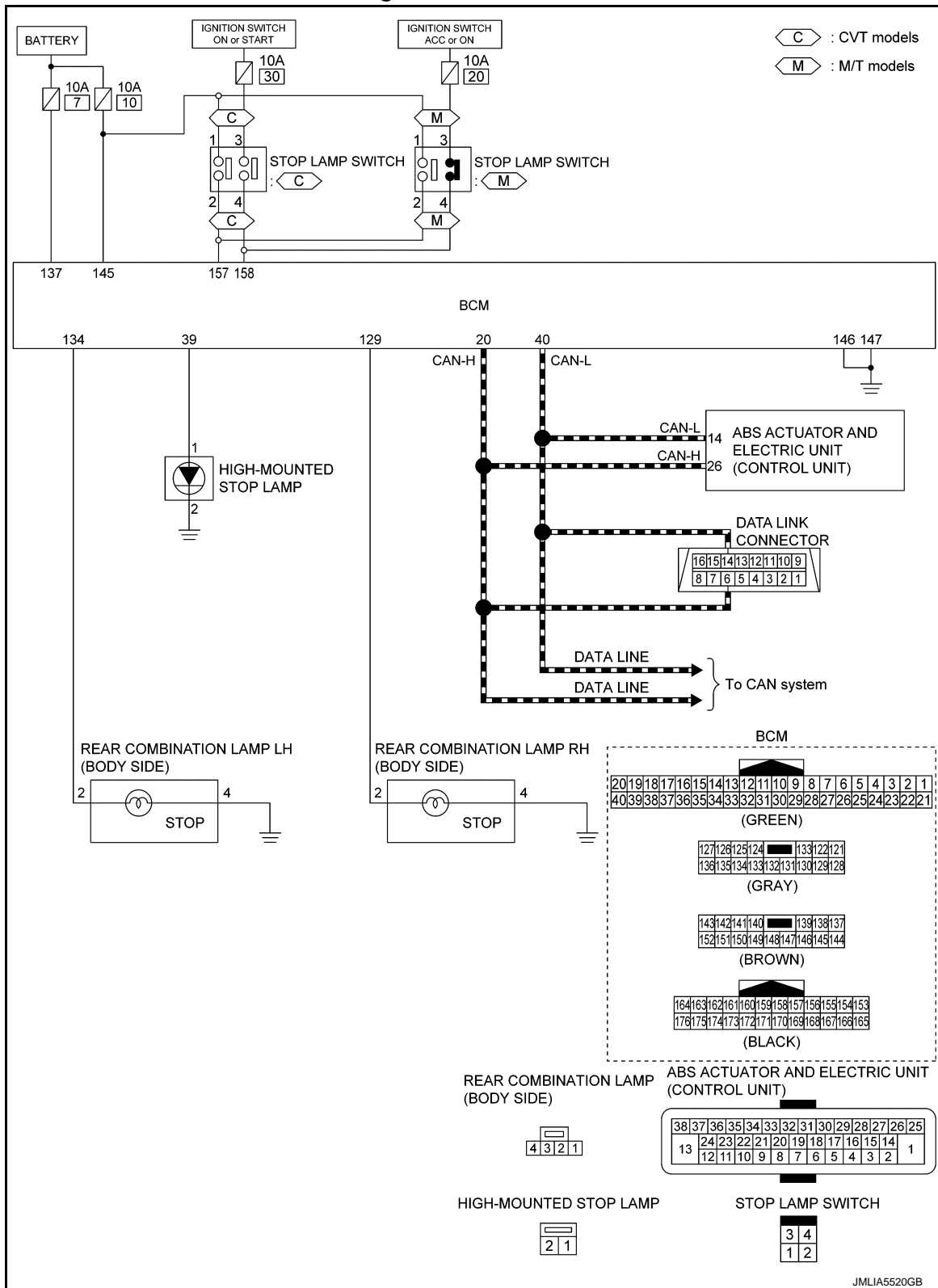
### FORWARD EMERGENCY BRAKING FUNCTION

- When the forward emergency braking operates, the ABS actuator and electric unit (control unit) transmits the stop lamp request signal to BCM via CAN communication. (For details about the forward emergency braking, refer to [BRC-232, "System Description"](#).)
- When BCM receives the stop lamp request signal from the ABS actuator and electric unit (control unit), it supplies power to the stop lamp and high-mounted stop lamp systems, turning ON the stop lamp and high-mounted stop lamp.

&lt; SYSTEM DESCRIPTION &gt;

## STOP LAMP SYSTEM : Circuit Diagram

INFOID:000000010788764

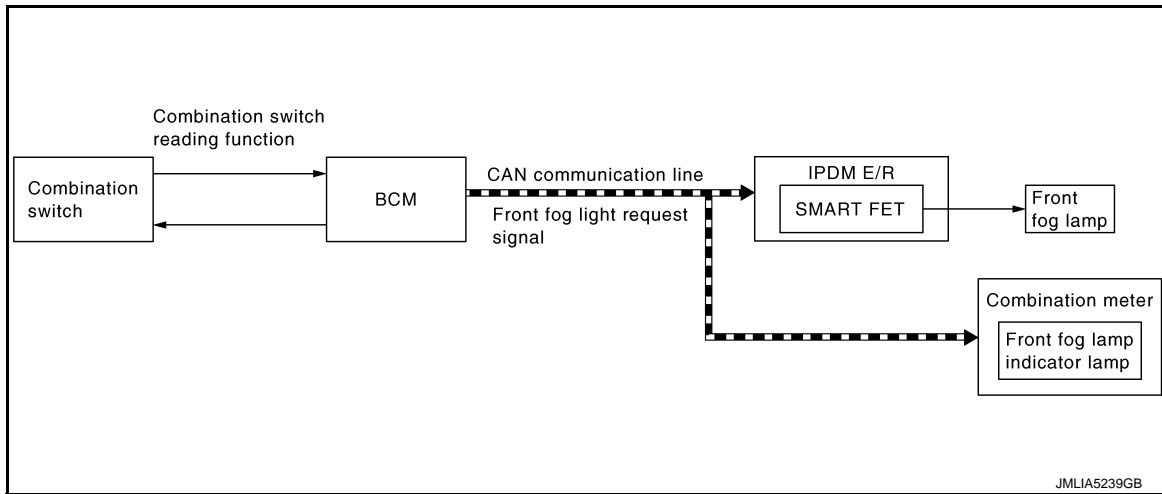


FRONT FOG LAMP SYSTEM

## FRONT FOG LAMP SYSTEM : System Description

INFOID:000000010788765

### SYSTEM DIAGRAM



### OUTLINE

Front fog lamp is controlled by combination switch reading function and front fog lamp control function of BCM, and smart FET control function of IPDM E/R.

### FRONT FOG LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the front fog light request signal to IPDM E/R and the combination meter via CAN communication according to the front fog lamp ON condition.

Front fog lamp ON condition

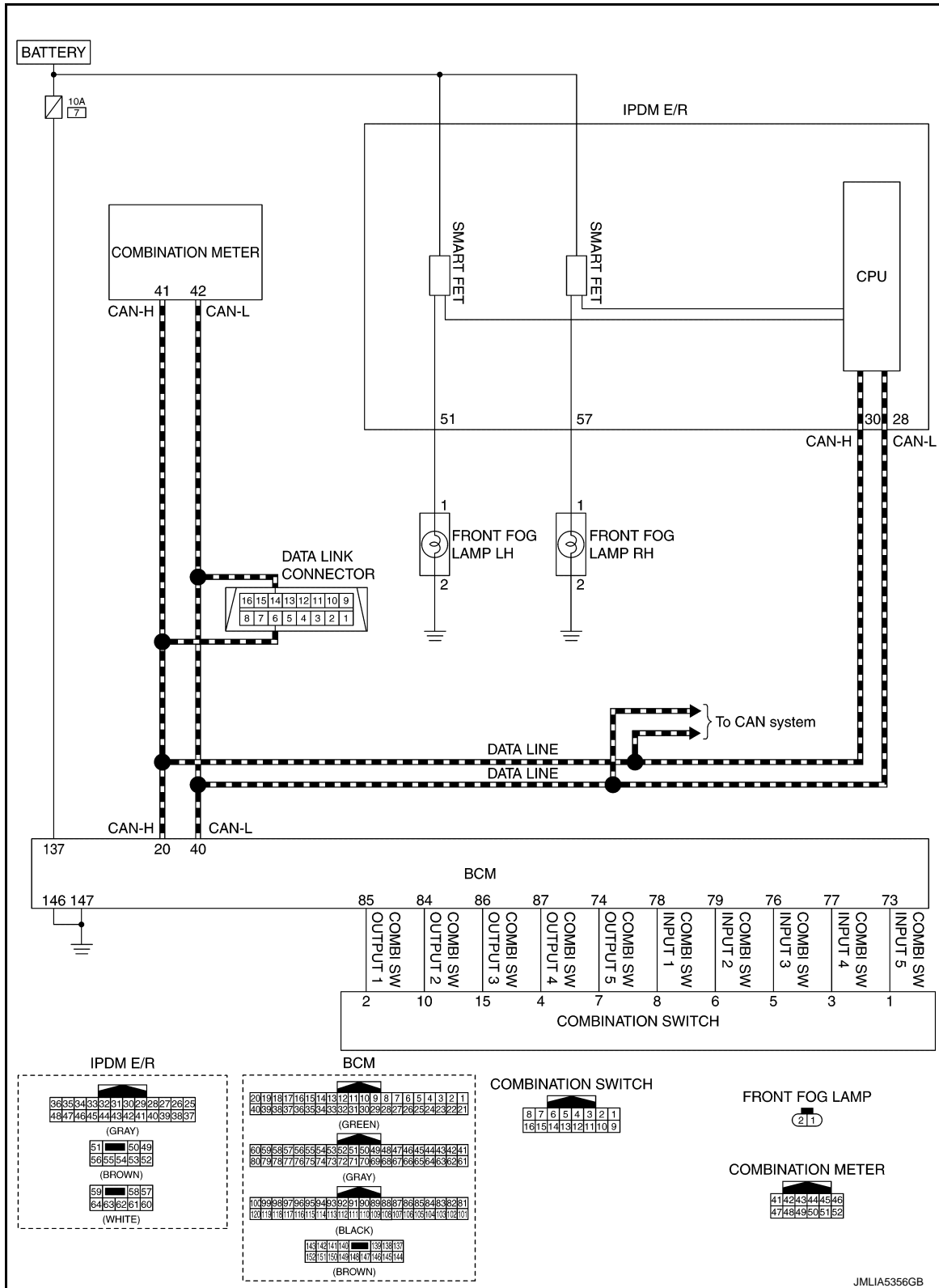
- Front fog lamp switch is turned from OFF to ON, and any of the following conditions are satisfied.
  - Lighting switch 1ST
  - Lighting switch 2ND
  - Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-24. "AUTO LIGHT SYSTEM : System Description"](#).)
- IPDM E/R turns the integrated smart FET ON, and turns the front fog lamp ON according to the front fog light request signal.
- Combination meter turns the front fog lamp indicator lamp ON according to the front fog light request signal.



&lt; SYSTEM DESCRIPTION &gt;

## FRONT FOG LAMP SYSTEM : Circuit Diagram

INFOID:000000010788766



## FRONT FOG LAMP SYSTEM : Fail-safe

INFOID:000000010788767

## FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| DTC   | CONSULT display description  |                      | Fail-safe  |
|-------|------------------------------|----------------------|--|
| B121A | FR FOG LAMP LH PWR SPLY CIRC | [CIRC SHORT TO GRND] | Shuts off the power supply to the front fog lamp LH power supply circuit until the front fog lamp ON conditions are no longer satisfied. |
| B1256 | FR FOG LAMP RH PWR SPLY CIRC | [CIRC SHORT TO GRND] | Shuts off the power supply to the front fog lamp RH power supply circuit until the front fog lamp ON conditions are no longer satisfied. |

### CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

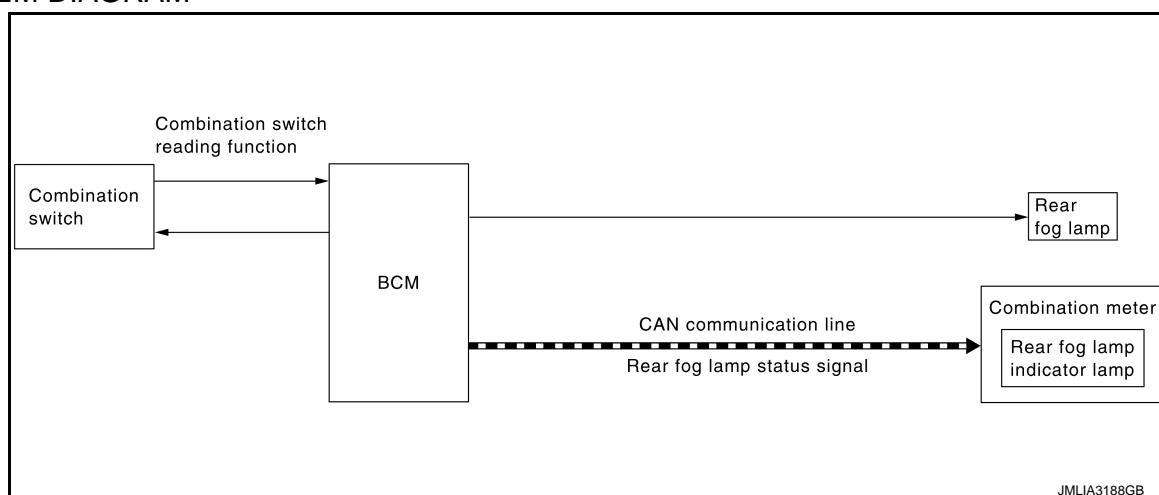
| Control part   | Fail-safe operation |
|----------------|---------------------|
| Front fog lamp | Front fog lamp: OFF |

## REAR FOG LAMP SYSTEM

### REAR FOG LAMP SYSTEM : System Description

INFOID:0000000010788768

### SYSTEM DIAGRAM



### OUTLINE

Rear fog lamp is controlled with the combination switch reading function and the rear fog lamp control function of BCM.

### REAR FOG LAMP OPERATION

- BCM detects the condition of the combination switch by the combination switch reading function.
- BCM supplies voltage to rear fog lamp according to the rear fog lamp ON condition.

Rear fog lamp ON condition

- Rear fog lamp switch is turned from OFF to ON, and any of the following conditions are satisfied.
  - Headlamp ON
  - Front fog lamp ON
  - Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-24, "AUTO LIGHT SYSTEM : System Description".](#))
- BCM transmits the rear fog lamp status signal to the combination meter using CAN communication.
- Combination meter turns the rear fog lamp indicator lamp ON according to the rear fog lamp status signal.

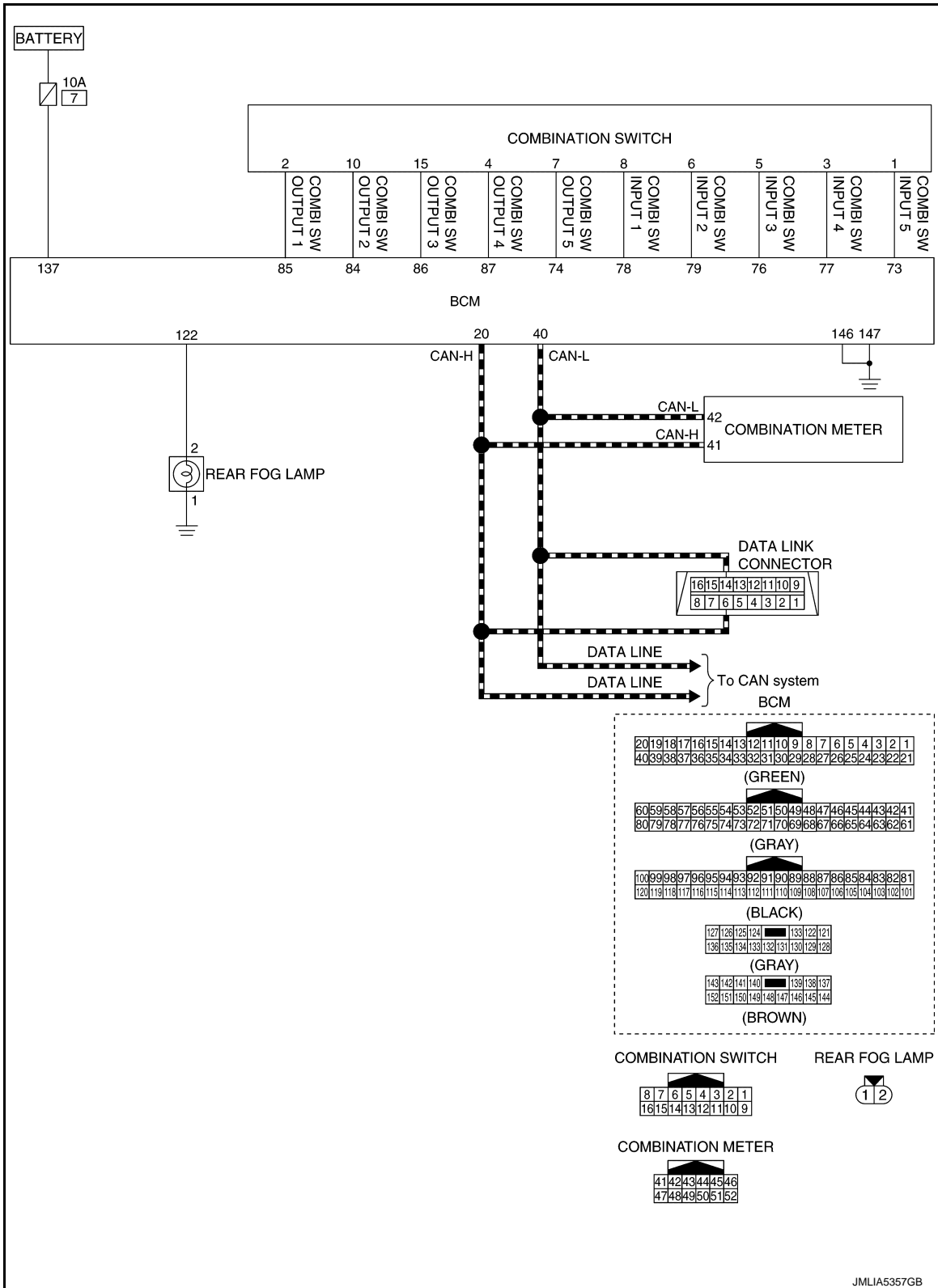
# SYSTEM

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

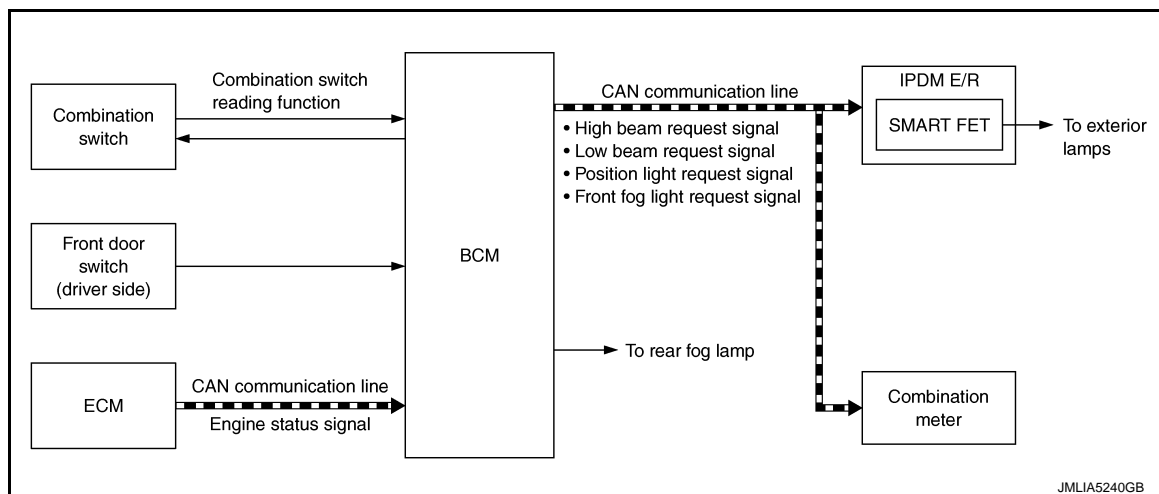
## REAR FOG LAMP SYSTEM : Circuit Diagram

INFOID:000000010788769



## EXTERIOR LAMP BATTERY SAVER SYSTEM

#### SYSTEM DIAGRAM



#### OUTLINE

- Exterior lamp battery saver system is controlled by combination switch reading function and exterior lamp battery saver function of BCM, and smart FET control function of IPDM E/R.
- BCM turns the exterior lamp\* OFF, according to the vehicle status when ignition switch is turned OFF while exterior lamp is ON, for preventing battery discharge.

\*: Headlamp (LO/HI), front fog lamp, rear fog lamp, parking lamp, license plate lamp and tail lamp

#### EXTERIOR LAMP BATTERY SAVER ACTIVATION

- BCM turns the exterior lamps OFF (battery saver is activated) when all of the following conditions are satisfied.
  - Exterior lamp: ON
  - Engine status: Running→Stop (ignition switch is turned OFF)
  - Front door switch (driver side): OFF→ON

#### NOTE:

When in any of following conditions (after the exterior lamp battery saver is activated), exterior lamps (except front fog lamp and rear fog lamp) can be turned ON.

- Lighting switch: 1ST or 2ND→OFF or AUTO→1ST or 2ND
- Engine status: Stop→Running

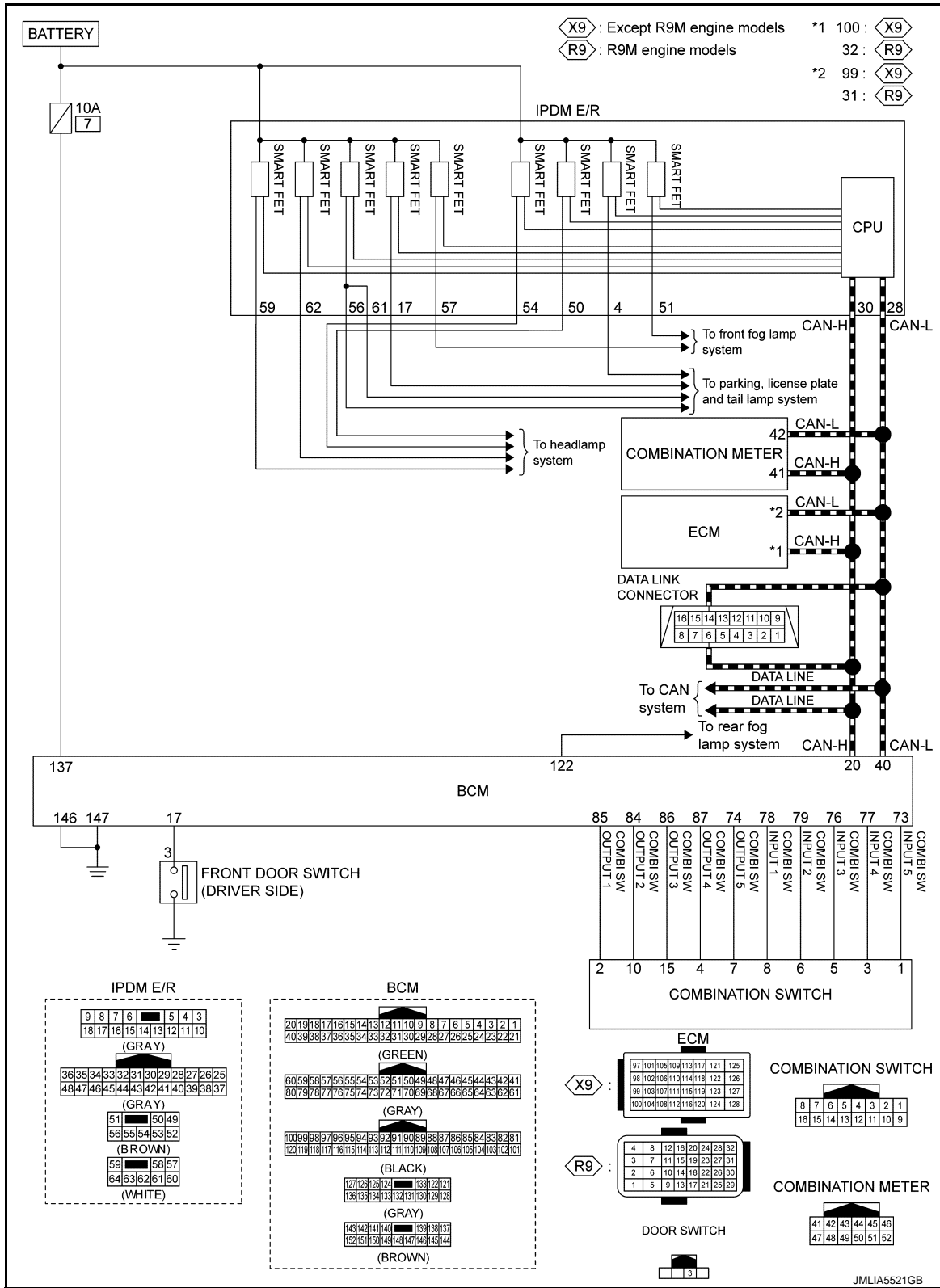
# SYSTEM

## < SYSTEM DESCRIPTION >

**[LED HEADLAMP]**

### EXTERIOR LAMP BATTERY SAVER SYSTEM : Circuit Diagram

INFOID:0000000010788771



## INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER) : Headlamp Warning

INFOID:0000000010788772

## DESIGN/PURPOSE

Headlamp warning warns the driver that there is a malfunction in LED headlamp system.

## &lt; SYSTEM DESCRIPTION &gt;

| Symbol | Message                |
|--------|------------------------|
| —      | Headlight system fault |

## SYNCHRONIZATION WITH MASTER WARNING LAMP

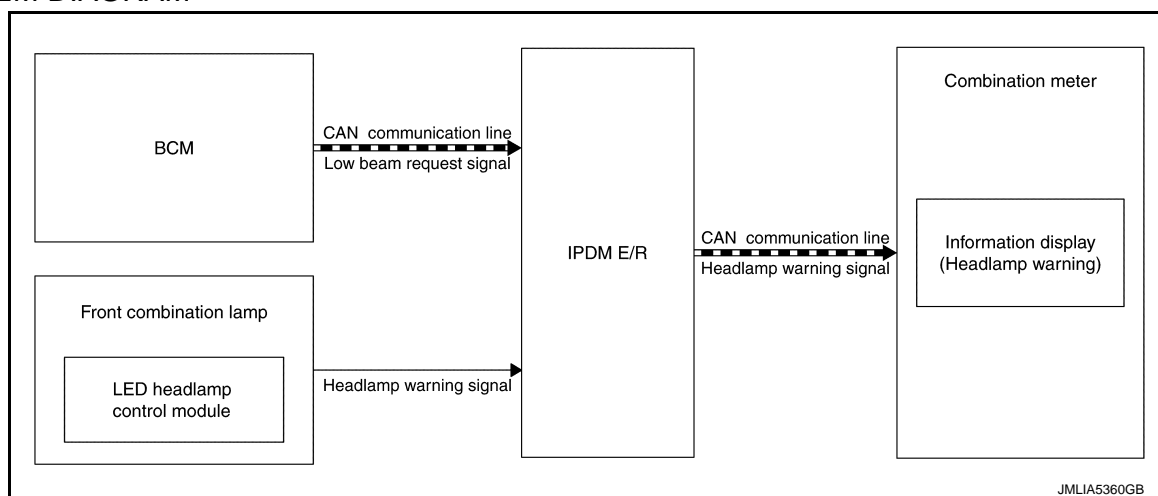
Synchronization is applied.

For master warning lamp, refer to [MWI-47, "WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp"](#).

## OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to [MWI-19, "METER SYSTEM : Fail-Safe"](#).

## SYSTEM DIAGRAM



## SIGNAL PATH

- BCM transmits the low beam request signal to IPDM E/R with CAN communication when headlamp (LO) ON judgment.
- When LED headlamp control module detects a malfunction of headlamp (LO) circuit, headlamp warning signal is output to IPDM E/R.
- When the IPDM E/R receives the low beam request signal and the headlamp warning signal is input, it transmits the headlamp warning signal (CAN communication) to the combination meter.
- When the ignition switch is ON and the combination meter receives the headlamp warning signal, the combination meter displays the headlamp warning on the information display.

## WARNING/INDICATOR OPERATING CONDITION

When all of the following conditions are satisfied.

- Ignition switch ON
- Headlamp warning signal (CAN communication) is ON (IPDM E/R receives the low beam request signal and inputs the headlamp warning signal).

**NOTE:**

When the headlamp warning signal is received, the most likely cause is a malfunction of the following.

- Headlamp (LO) power supply/ground circuit
- Headlamp warning signal circuit
- Front combination lamp internal circuit
  - LED [Headlamp (LO)]
  - LED headlamp control module
  - Harness

## WARNING/INDICATOR CANCEL CONDITION

When any of the following conditions are satisfied.

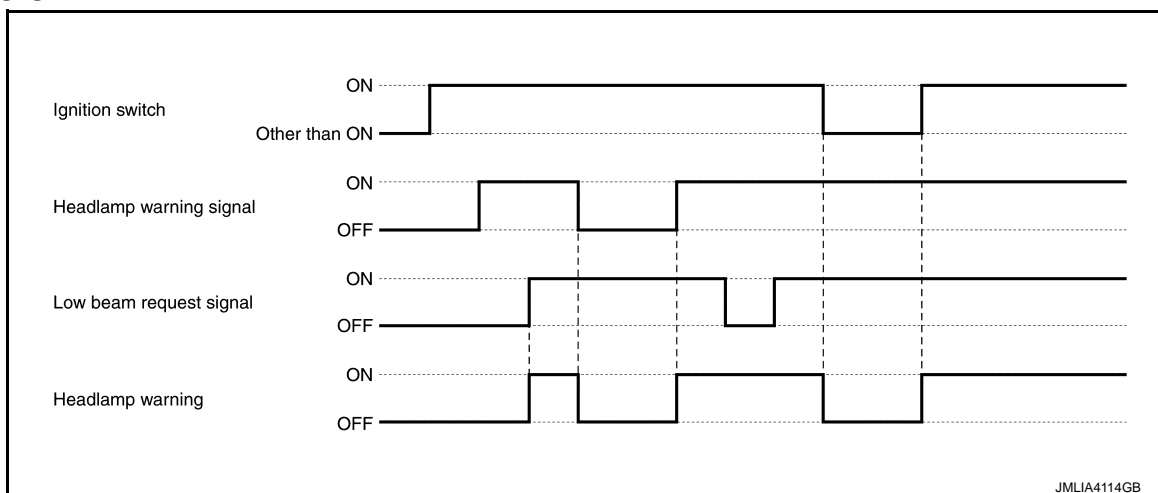
- Ignition switch OFF
- Headlamp warning signal (CAN communication) is OFF (IPDM E/R receives the low beam request signal and does not input the headlamp warning signal).

## SYSTEM

## < SYSTEM DESCRIPTION >

**[LED HEADLAMP]**

## TIMING CHART

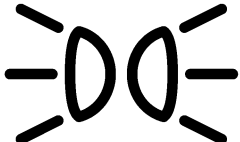


INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)

INFOID:0000000010788773

## DESIGN/PURPOSE

When the driver is exiting the vehicle while ignition is in any position other than ON and lamps are ON, the light reminder warning (information display) displays a warning in the information display to alert the driver.

| Symbol   | Message             |
|--|---------------------|
|  <p>JPNIA1880ZZ</p> | Turn off headlights |

## SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

## SYNCHRONIZATION WITH WARNING CHIME

Synchronization is applied.

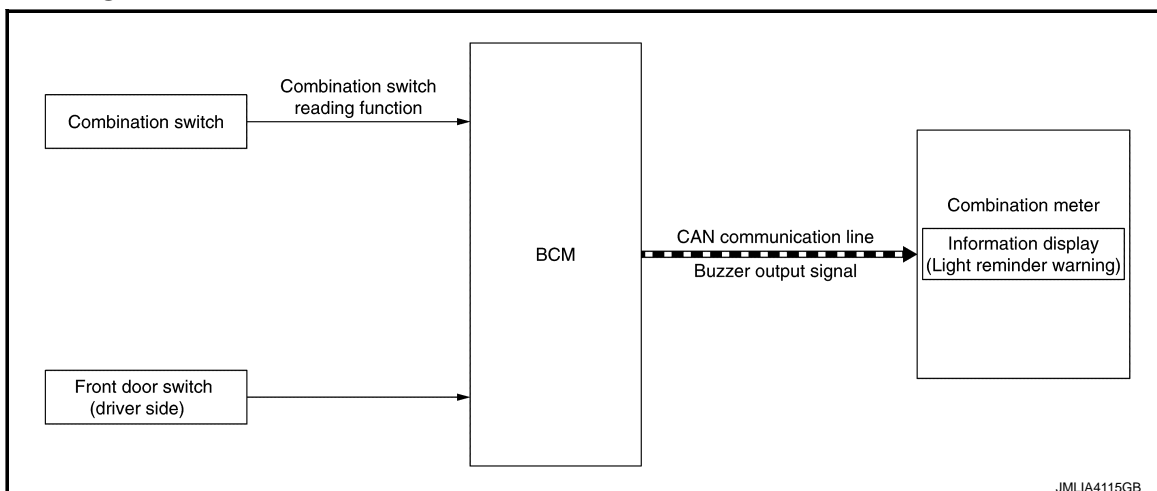
For warning chime, refer to [WCS-12, "WARNING CHIME : Light Reminder Warning \(Buzzer\)"](#).

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to [MWI-19, "METER SYSTEM: Fail-Safe"](#).

### < SYSTEM DESCRIPTION >

#### SYSTEM DIAGRAM



#### SIGNAL PATH

- BCM reads status of combination switch.
- BCM judges light reminder warning (information display) by lighting switch signal and driver door switch (driver side) signal. BCM transmits buzzer output signal to combination meter via CAN communication.
- When combination meter receives the buzzer output signal, “Light reminder warning” pop-up screen appears in the information display.

#### WARNING/INDICATOR OPERATING CONDITION

When all of the following conditions are satisfied.

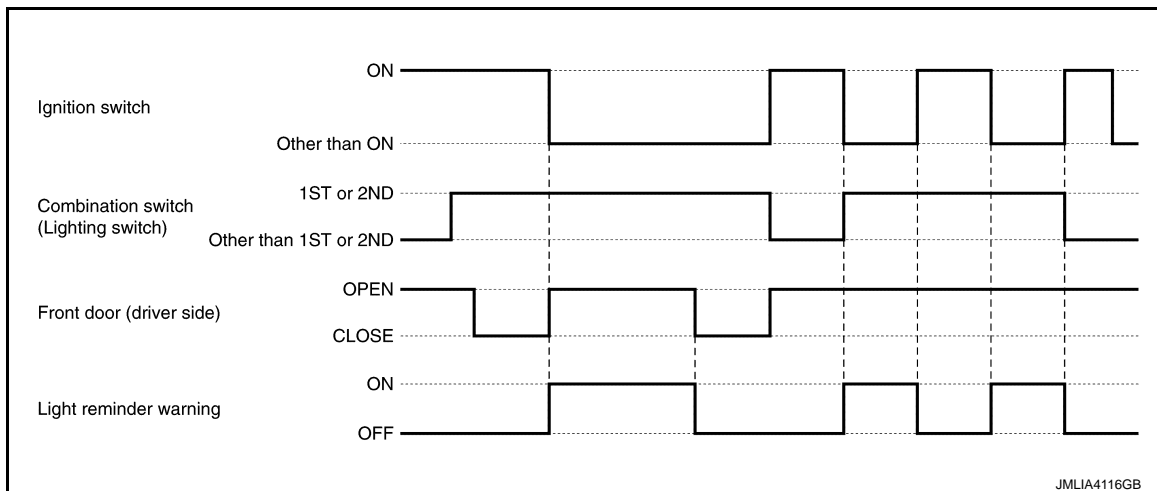
- Ignition other than ON
- Lighting switch 1ST or 2ND
- Front door (driver side) OPEN [front door switch (driver side) ON]

#### WARNING/INDICATOR CANCEL CONDITION

When any of the following conditions are satisfied.

- Ignition ON
- Lighting switch other than 1ST or 2ND
- Front door (driver side) CLOSE [front door switch (driver side) OFF]

#### TIMING CHART



#### WARNING/INDICATOR/CHIME LIST










# SYSTEM

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

## WARNING/INDICATOR/CHIME LIST : Warning Lamp/Indicator Lamp

INFOID:0000000010788774

| Item                            | Design   | Reference  |
|---------------------------------|--|--|
| Dipped beam indicator lamp      |   | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-32, "WARNING LAMPS/INDICATOR LAMPS : Dipped Beam Indicator Lamp"</a> .      |
| Front fog lamp indicator lamp   |   | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-38, "WARNING LAMPS/INDICATOR LAMPS : Front Fog Lamp Indicator Lamp"</a> .   |
| High beam assist indicator lamp |   | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-40, "WARNING LAMPS/INDICATOR LAMPS : High Beam Assist Indicator Lamp"</a> . |
| High beam indicator lamp        |   | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-41, "WARNING LAMPS/INDICATOR LAMPS : High Beam Indicator Lamp"</a> .        |
| Position lamp indicator lamp    |   | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-52, "WARNING LAMPS/INDICATOR LAMPS : Position Lamp Indicator Lamp"</a> .    |
| Rear fog lamp indicator lamp    |   | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-53, "WARNING LAMPS/INDICATOR LAMPS : Rear Fog Lamp Indicator Lamp"</a> .    |
| Turn signal indicator lamp      |  | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-59, "WARNING LAMPS/INDICATOR LAMPS : Turn Signal Indicator Lamp"</a> .      |

## WARNING/INDICATOR/CHIME LIST : Warning Chime

INFOID:0000000010788775

| Item                                | Reference  |
|-------------------------------------|--|
| Light reminder warning (buzzer)     | Refer to <a href="#">WCS-12, "WARNING CHIME : Light Reminder Warning (Buzzer)"</a> .                 |
| Turn signal operation sound warning | Refer to <a href="#">EXL-36, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description"</a> . |

## WARNING/INDICATOR/CHIME LIST : Warning/Indicator (Information Display)

INFOID:0000000010788776

| Item   | Reference   |
|--|---|
| Headlamp warning                             | Refer to <a href="#">EXL-49, "INFORMATION DISPLAY (COMBINATION METER) : Headlamp Warning"</a> .                             |
| Light reminder warning (information display) | Refer to <a href="#">EXL-51, "INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)"</a> . |

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

### COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011008908

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

| Diagnosis mode           | Function Description  |
|--------------------------|---|
| Work Support             | Changes the setting for each system function.   |
| Self Diagnostic Result   | Displays the diagnosis results judged by BCM.   |
| CAN Diag Support Monitor | Monitors the reception status of CAN communication viewed from BCM.   |
| Data Monitor             | The BCM input/output signals are displayed.   |
| Active Test              | The signals used to activate each device are forcibly supplied from BCM.  |
| Ecu Identification       | The BCM part number is displayed.   |
| Configuration            | <ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul> |

### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

| System                               | Sub system selection item | Diagnosis mode |              |             |
|--------------------------------------|---------------------------|----------------|--------------|-------------|
|                                      |                           | Work Support   | Data Monitor | Active Test |
| Door lock                            | DOOR LOCK                 | ×              | ×            |             |
| Rear window defogger                 | REAR DEFOGGER             |                | ×            | ×           |
| Warning chime                        | BUZZER                    |                | ×            | ×           |
| Exterior lamp                        | HEAD LAMP                 | ×              | ×            | ×           |
| Interior room lamp control           | INT LAMP                  |                | ×            |             |
| Wiper and washer                     | WIPER                     | ×              | ×            | ×           |
| Turn signal and hazard warning lamps | FLASHER                   | ×              | ×            |             |
| —                                    | AIR CONDITONER*           |                | ×            | ×           |
| Intelligent Key system               | INTELLIGENT KEY           | ×              | ×            | ×           |
| Combination switch                   | COMB SW                   |                | ×            |             |
| Body control system                  | BCM                       | ×              |              |             |
| NVIS - NATS                          | IMMU                      |                | ×            |             |
| Interior room lamp battery saver     | BATTERY SAVER             |                | ×            |             |
| Back door open                       | TRUNK                     |                | ×            |             |
| Vehicle security                     | THEFT ALM                 | ×              | ×            |             |
| RAP                                  | RETAINED PWR              |                | ×            |             |
| Remote keyless entry system          | MULTI REMOTE ENT          | ×              | ×            |             |
| Signal buffer system                 | SIGNAL BUFFER             |                | ×            | ×           |

#### NOTE:

\*: This item is displayed, but not used.

### FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| CONSULT screen item  | Indication/Unit | Description  |
|----------------------|-----------------|--|
| BATTERY VOLTAGE      | V               | Battery voltage of the moment a particular DTC is detected.                        |
| VEHICLE SPEED        | km/h            | Vehicle speed of the moment a particular DTC is detected.                          |
| EXTERNAL TEMP        | °C              | External temperature of the moment a particular DTC is detected                    |
| VEHICLE COND         | —               | <b>NOTE:</b><br>This item is displayed, but cannot be use this item.               |
| DOOR LOCK STATUS     | —               | <b>NOTE:</b><br>This item is displayed, but cannot be use this item.               |
| POWER SUPPLY COUNTER | min             | Displays the cumulative time from the time that the battery terminal is connected. |

## HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (LED Headlamp) INFOID:0000000010788778

## WORK SUPPORT

| Service item           | Setting item | Setting   |
|------------------------|--------------|---|
| CUSTOM A/LIGHT SETTING | MODE1*       | Normal  |
|                        | MODE2        | More sensitive setting than normal setting (Turns ON earlier than normal operation) |
|                        | MODE3        | More sensitive setting than MODE2 (Turns ON earlier than MODE2)                     |
|                        | MODE4        | Less sensitive setting than normal setting (Turns ON later than normal operation)   |
| TWILIGHT On            | MODE1        | <b>NOTE:</b><br>This item is displayed, but cannot be used                          |
|                        | MODE2        |   |
| WIPER LINK             | MODE1        | <b>NOTE:</b><br>This item is displayed, but cannot be used                          |
|                        | MODE2        |   |
|                        | MODE3        |   |
|                        | MODE4        |   |

\*: Factory setting

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor item<br>[Unit]                 | Description   |
|--|---|
| PUSH SW<br>[On/Off]                    | Indicates [On/Off] condition of push-button ignition switch               |
| ENGINE STATE<br>[STOP/STALL/CRANK/RUN] | Indicates [STOP/STALL/CRANK/RUN] condition of engine states               |
| VEH SPEED 1<br>[km/h]                  | Indicates [km/h] condition of vehicle speed signal from combination meter |

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| Monitor item<br>[Unit]        | Description  |
|-------------------------------|--|
| TURN SIGNAL R<br>[On/Off]     | Each switch status that BCM judges from the combination switch reading function. |
| TURN SIGNAL L<br>[On/Off]     |  |
| TAIL LAMP SW<br>[On/Off]      |  |
| HI BEAM SW<br>[On/Off]        |  |
| HEADLAMP SW<br>[On/Off]       |  |
| LIGHT OFF SW<br>[On/Off]      |  |
| PASSING SW<br>[On/Off]        |  |
| AUTO LIGHT SW<br>[On/Off]     |  |
| FR FOG SW<br>[On/Off]         |  |
| RR FOG SW<br>[On/Off]         |  |
| DOOR SW-DR<br>[On/Off]        | Indicated [On/Off] condition of front door switch (driver side)                  |
| DOOR SW-AS<br>[On/Off]        | Indicated [On/Off] condition of front door switch (passenger side)               |
| DOOR SW-RR<br>[On/Off]        | Indicated [On/Off] condition of rear door switch RH                              |
| DOOR SW-RL<br>[On/Off]        | Indicated [On/Off] condition of rear door switch LH                              |
| DOOR SW-BK<br>[On/Off]        | Indicated [On/Off] condition of back door switch                                 |
| OPTI SEN (DTCT)<br>[V]        | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                  |
| OPTI SEN (FILT)<br>[V]        | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                  |
| OPTICAL SENSOR<br>[On/Off/NG] | The sensor condition received from light & rain sensor                           |

## ACTIVE TEST

| Test item   | Operation | Description  |
|-------------|-----------|--|
| FR FOG LAMP | On        | <ul style="list-style-type: none"> <li>Transmits the front fog light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON</li> <li>Transmits the front fog light request signal to combination meter via CAN communication to turn the front fog lamp indicator lamp ON</li> </ul> |
|             | Off       | Stops the front fog light request signal transmission  |
| RR FOG LAMP | On        | <ul style="list-style-type: none"> <li>Outputs voltage to turn the rear fog lamp ON</li> <li>Transmits the rear fog lamp status signal to combination meter via CAN communication to turn the rear fog lamp indicator lamp ON</li> </ul>   |
|             | Off       | <ul style="list-style-type: none"> <li>Stops the voltage to turn the rear fog lamp OFF</li> <li>Stops the rear fog lamp status signal transmission</li> </ul>  |
| STOP LAMP 1 | On        | Outputs voltage to turn the stop lamp RH ON  |
|             | Off       | Stops the voltage to turn the stop lamp RH OFF   |

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| Test item             | Operation | Description   |
|-----------------------|-----------|---|
| STOP LAMP 2           | On        | Outputs voltage to turn the stop lamp LH ON   |
|                       | Off       | Stops the voltage to turn the stop lamp LH OFF  |
| STOP LAMP 3           | On        | Outputs voltage to turn the high-mounted stop lamp ON   |
|                       | Off       | Stops the voltage to turn the high-mounted stop lamp OFF  |
| DAYTIME RUNNING LIGHT | On        | Transmits the daytime running light request signal to IPDM E/R using CAN communication to turn the daytime running light ON |
|                       | Off       | Stops the daytime running light request signal transmission   |
| ILL DIM SIGNAL*       | On        | Transmits the dimmer signal to NAVI control unit and dims display   |
|                       | Off       | Stops the dimmer signal transmission  |

\*: For models without navigation, this item is displayed, but cannot be tested.

## FLASHER

## FLASHER : CONSULT Function (BCM - FLASHER) (LED Headlamp)

INFOID:0000000010788779

## WORK SUPPORT

| Service item           | Setting item | Setting                         |
|------------------------|--------------|---------------------------------|
| 3-TIME FLASHER SETTING | On*          | With 3-time flasher function    |
|                        | Off          | Without 3-time flasher function |

\*: Factory setting

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor item<br>[Unit]    | Description  |
|---------------------------|--|
| REQ SW -DR<br>[On/Off]    | Indicated [On/Off] condition of door request switch (driver side)                |
| REQ SW -AS<br>[On/Off]    | Indicated [On/Off] condition of door request switch (passenger side)             |
| PUSH SW<br>[On/Off]       | Indicates [On/Off] condition of push-button ignition switch                      |
| TURN SIGNAL R<br>[On/Off] | Each switch status that BCM detects from the combination switch reading function |
| TURN SIGNAL L<br>[On/Off] |  |
| HAZARD SW<br>[On/Off]     | The switch status input from the hazard switch                                   |
| RKE-LOCK<br>[On/Off]      | Indicates [On/Off] condition of LOCK signal from Intelligent Key                 |
| RKE-UNLOCK<br>[On/Off]    | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key               |
| RKE-PANIC<br>[On/Off]     | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                  |

## INT LAMP

## INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000011008909

## WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| Service item           | Setting item | Setting                                   |
|------------------------|--------------|---|
| SET I/L D-UNLCK INTCON | On*          | With interior room lamp timer function    |
|                        | Off          | Without interior room lamp timer function |
| FOG LAMP OVERRIDE      | On*          | With fog override function                |
|                        | Off          | Without fog override function             |

\*: Factory setting

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor item<br>[Unit]    | Description  |
|---------------------------|--|
| REQ SW-DR<br>[On/Off]     | Indicated [On/Off] condition of door request switch (driver side)              |
| REQ SW-AS<br>[On/Off]     | Indicated [On/Off] condition of door request switch (passenger side)           |
| PUSH SW<br>[On/Off]       | Indicates [On/Off] condition of push-button ignition switch                    |
| DOOR SW-DR<br>[On/Off]    | Indicated [On/Off] condition of front door switch (driver side)                |
| DOOR SW-AS<br>[On/Off]    | Indicated [On/Off] condition of front door switch (passenger side)             |
| DOOR SW-RR<br>[On/Off]    | Indicated [On/Off] condition of rear door switch RH                            |
| DOOR SW-RL<br>[On/Off]    | Indicated [On/Off] condition of rear door switch LH                            |
| DOOR SW-BK<br>[On/Off]    | Indicated [On/Off] condition of back door switch                               |
| CDL LOCK SW<br>[On/Off]   | Indicated [On/Off] condition of lock signal from door lock and unlock switch   |
| CDL UNLOCK SW<br>[On/Off] | Indicated [On/Off] condition of unlock signal from door lock and unlock switch |
| KEY CYL LK-SW<br>[On/Off] | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                |
| KEY CYL UN-SW<br>[On/Off] | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                |
| RKE-LOCK<br>[On/Off]      | Indicates [On/Off] condition of LOCK signal from Intelligent Key or keyfob     |
| RKE-UNLOCK<br>[On/Off]    | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key or keyfob   |
| KEY SW<br>[On/Off]        | Indicates [On/Off] condition of key switch                                     |

## ACTIVE TEST

| Test item | Operation | Description                                |
|-----------|-----------|--|
| INT LAMP  | On        | Outputs interior room lamp control signal. |
|           | Off       | Stops interior room lamp control signal.   |

## DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) (With Intelligent Key System

## &lt; SYSTEM DESCRIPTION &gt;

INFOID:0000000011008910

## and Super Lock)

## BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

## WORK SUPPORT

| Monitor item            | Description  |
|-------------------------|--|
| DOOR LOCK-UNLOCK SET    | Anti-hijack function mode can be changed to operation with this mode <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul> |
| AUTO UNLOCK TYPE        | <b>NOTE:</b><br>This item is displayed, but cannot be used   |
| SIGNATURE LIGHT SETTING | Signature light function can be changed to operation with this mode <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>  |

## DATA MONITOR

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item  | Contents   |
|---------------|--|
| REQ SW-DR     | Indicated [On/Off] condition of door request switch (driver side)          |
| REQ SW-AS     | Indicated [On/Off] condition of door request switch (passenger side)       |
| REQ SW-BD/TR  | Indicated [On/Off] condition of back door request switch                   |
| DOOR SW-DR    | Indicated [On/Off] condition of front door switch (driver side)            |
| DOOR SW-AS    | Indicated [On/Off] condition of front door switch (passenger side)         |
| DOOR SW-RR    | Indicated [On/Off] condition of rear door switch RH                        |
| DOOR SW-RL    | Indicated [On/Off] condition of rear door switch LH                        |
| DOOR SW-BK    | Indicated [On/Off] condition of back door switch                           |
| CDL LOCK SW   | Indicated [On/Off] condition of lock signal from door lock unlock switch   |
| CDL UNLOCK SW | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY CYL UN-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| SHOCK SENSOR  | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY SW        | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |

## ACTIVE TEST

| Test item     | Description  |
|---------------|--|
| DOOR LOCK     | This test is able to check door lock/unlock operation <ul style="list-style-type: none"> <li>The all door lock actuators are locked when "ALL LOCK" on CONSULT screen is touched</li> <li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li> </ul> |
| SUPER LOCK    | This test is able to check super lock actuator operation <ul style="list-style-type: none"> <li>The all door lock actuators are set when "LOCK" on CONSULT screen is touched</li> <li>The all door lock actuators are released when "UNLOCK" on CONSULT screen is touched</li> </ul>       |
| DOOR LOCK IND | This test is able to check door lock status indicator operation <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>  |

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

## DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) (With Intelligent Key System, Without Super Lock)

INFOID:0000000011008911

### BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

### WORK SUPPORT

| Monitor item            | Description   |
|-------------------------|---|
| DOOR LOCK-UNLOCK SET    | Anti-hijack function mode can be changed to operation with this mode <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul> |
| AUTO UNLOCK TYPE        | <b>NOTE:</b><br>This item is displayed, but cannot be used  |
| SIGNATURE LIGHT SETTING | Signature light function can be changed to operation with this mode <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul>  |

### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item  | Contents   |
|---------------|--|
| REQ SW-DR     | Indicated [On/Off] condition of door request switch (driver side)          |
| REQ SW-AS     | Indicated [On/Off] condition of door request switch (passenger side)       |
| REQ SW-BD/TR  | Indicated [On/Off] condition of back door request switch                   |
| DOOR SW-DR    | Indicated [On/Off] condition of front door switch (driver side)            |
| DOOR SW-AS    | Indicated [On/Off] condition of front door switch (passenger side)         |
| DOOR SW-RR    | Indicated [On/Off] condition of rear door switch RH                        |
| DOOR SW-RL    | Indicated [On/Off] condition of rear door switch LH                        |
| DOOR SW-BK    | Indicated [On/Off] condition of back door switch                           |
| CDL LOCK SW   | Indicated [On/Off] condition of lock signal from door lock unlock switch   |
| CDL UNLOCK SW | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY CYL UN-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| SHOCK SENSOR  | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY SW        | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |

### ACTIVE TEST

| Test item     | Description   |
|---------------|---|
| DOOR LOCK     | This test is able to check door lock/unlock operation <ul style="list-style-type: none"><li>The all door lock actuators are locked when "ALL LOCK" on CONSULT screen is touched</li><li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li></ul> |
| SUPER LOCK    | <b>NOTE:</b><br>This item is displayed, but cannot be used  |
| DOOR LOCK IND | <b>NOTE:</b><br>This item is displayed, but cannot be used  |



## DIAGNOSIS SYSTEM (IPDM E/R)

## CONSULT Function (IPDM E/R)

INFOID:0000000011008912

## APPLICATION ITEM

CONSULT performs the following functions via CAN communication with IPDM E/R.

| Diagnosis mode           | Description  |
|--------------------------|--|
| Self Diagnostic Result   | Displays the diagnosis results judged by IPDM E/R.   |
| Data Monitor             | Displays the real-time input/output data from IPDM E/R input/output data.  |
| Work Support             | Changes the setting for each system function.  |
| Active Test              | IPDM E/R can provide a drive signal to electronic components to check their operations.  |
| Ecu Identification       | Allows confirmation of IPDM E/R part number.   |
| Configuration            | <ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>White the vehicle specification when replacing IPDM E/R.</li> </ul> |
| CAN Diag Support Monitor | The results of transmit/receive diagnosis of CAN communication can be read.  |

## SELF DIAGNOSTIC RESULT

Refer to [PCS-38, "DTC Index"](#).

## Freeze Frame Data (FFD)

The IPDM E/R records the vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

## DATA MONITOR

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item<br>[Unit]            | Description  |
|-----------------------------------|--|
| REVERSE SIGNAL<br>[Open/Close]    | Displays the status of reverse position signal judged by IPDM E/R.   |
| IGN RELAY<br>[Open/Close]         | Displays the status of the ignition relay judged by IPDM E/R.  |
| PUSH SW<br>[Open/Close]           | Displays the status of the push-button ignition switch judged by IPDM E/R.   |
| NEUTRAL SW<br>[Open/Close]        | Displays the status of the neutral position signal (M/T) judged by IPDM E/R.   |
| INTERLOCK/PNP SW<br>[Open/Close]  | Displays the status of the transmission range switch (CVT) judged by IPDM E/R.   |
| OIL PRESSURE SW<br>[Open/Close]   | Displays the status of the oil pressure switch judged by IPDM E/R.   |
| LED H/L RH STATUS<br>[Open/Close] | Displays the LED headlamp (right) ON/OFF status judged by IPDM E/R.<br><b>NOTE:</b><br>This item is monitored only on the vehicle with LED headlamp. |
| LED H/L LH STATUS<br>[Open/Close] | Displays the LED headlamp (left) ON/OFF status judged by IPDM E/R.<br><b>NOTE:</b><br>This item is monitored only on the vehicle with LED headlamp.  |
| HOOD SW<br>[Open/Close]           | Displays the status of the hood switch judged by IPDM E/R.   |
| COMPRESSOR<br>[Off/On]            | Displays the compressor drive status judged by IPDM E/R.   |
| H/L WASHER PUMP<br>[Off/On]       | Displays the status of the headlamp washer relay judged by IPDM E/R.   |

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| Monitor Item<br>[Unit]              | Description   |
|-------------------------------------|---|
| HORN RELAY<br>[Off/On]              | Displays the status of the horn relay judged by IPDM E/R.   |
| COOLING FAN<br>[Off/On]             | Displays the cooling fan relay-4 drive status judged by IPDM E/R.   |
| FRONT WIPER HI/LO RELAY<br>[Off/On] | Displays the front wiper HI/LO relay drive status judged by IPDM E/R.   |
| FRONT WIPER RELAY<br>[Off/On]       | Displays the front wiper relay drive status judged by IPDM E/R.   |
| IGN RELAY OFF STATUS<br>[Off/On]    | Displays the status of the ignition relay OFF circuit judged by IPDM E/R.   |
| IGN RELAY ON STATUS<br>[Off/On]     | Displays the status of the ignition relay ON circuit judged by IPDM E/R.  |
| STEERING LOCK PWR SPLY<br>[Off/On]  | Displays the power supply status from IPDM E/R to the steering lock unit.<br><b>NOTE:</b><br>This item is monitored only on the vehicle with Intelligent Key system |
| HEIGHT SENSOR PWR SPLY<br>[Off/On]  | Displays the power supply status from IPDM E/R to the height sensor.  |
| COOLING FAN RELAY 1<br>[Off/On]     | Displays the status of the cooling fan relay-1 judged by IPDM E/R.  |
| STARTER RELAY<br>[Off/On]           | Displays the status of the starter relay judged by IPDM E/R.  |
| COMP ECV DUTY<br>[%]                | Displays the compressor control signal (PWM) status of IPDM E/R.  |
| COOLING FAN RELAY 2<br>[%]          | Displays the status of the cooling fan relay-5 judged by IPDM E/R.  |
| FR FOG LAMP LH<br>[%]               | Displays the front fog lamp (left) output (PWM) status of IPDM E/R.   |
| FR FOG LAMP RH<br>[%]               | Displays the front fog lamp (right) output (PWM) status of IPDM E/R.  |
| LEVELIZER OUTPUT<br>[%]             | Displays the aiming motor drive signal (PWM) status of IPDM E/R.  |
| PARKING LAMP<br>[%]                 | Displays the parking lamp output (PWM) status of IPDM E/R.  |
| TAIL LAMP LH<br>[%]                 | Displays the tail lamp (left) output (PWM) status of IPDM E/R.  |
| TAIL LAMP RH<br>[%]                 | Displays the tail lamp (right) output (PWM) status of IPDM E/R.   |
| DAYTIME RUNNING LIGHT LH<br>[%]     | Displays the daytime running light (left) output status of IPDM E/R.  |
| DAYTIME RUNNING LIGHT RH<br>[%]     | Displays the daytime running light (right) output status of IPDM E/R.   |
| HEADLAMP (HI) LH<br>[%]             | Displays the headlamp (HI) (left) output (PWM) status of IPDM E/R.  |
| HEADLAMP (HI) RH<br>[%]             | Displays the headlamp (HI) (right) output (PWM) status of IPDM E/R.   |
| HEADLAMP (LO) LH<br>[%]             | Displays the headlamp (LO) (left) output (PWM) status of IPDM E/R.  |
| HEADLAMP (LO) RH<br>[%]             | Displays the headlamp (LO) (right) output (PWM) status of IPDM E/R.   |
| A/C RELAY STUCK<br>[OK/NG]          | Displays the ON stuck status of the A/C relay judged by IPDM E/R.   |

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| Monitor Item<br>[Unit]                           | Description  |
|--|--|
| A/C RELAY<br>[Off/On]                            | Displays the status of the A/C relay judged by IPDM E/R.   |
| COMP ECV STATUS<br>[OK/NG]                       | Displays the compressor malfunction diagnosis status judged by IPDM E/R.                                     |
| VEHICLE SECURITY HORN<br>[Off/On]                | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| BATTERY CURRENT SENSOR<br>[OK/NG]                | Displays the battery current sensor malfunction diagnosis status judged by IPDM E/R.                         |
| FRONT FOG LAMP<br>[Off/On]                       | Displays the fog lamp illumination control status of IPDM E/R.   |
| COMP ECV CURRENT<br>[A]                          | Displays the electric current output to compressor judged by IPDM E/R.                                       |
| BATTERY VOLTAGE<br>[V]                           | Displays the status of the battery voltage judged by IPDM E/R.   |
| COOLING FAN DUTY<br>[%]                          | Displays the cooling fan output signal status of IPDM E/R.   |
| HOOD SW (CAN)<br>[Open/Close/NG]                 | Displays the status of the hood switch judged by IPDM E/R.   |
| FRONT WIPER<br>[STOP/HIGH/LOW/NG]                | Displays the front wiper motor drive control status of IPDM E/R.   |
| FR WIPER STOP POSITION<br>[ACTIVE P/STOP P]      | Displays the status of the front wiper position status judged by IPDM E/R.                                   |
| HEADLAMP (HI)<br>[Off/On]                        | Displays the headlamp (HI) illumination control status of IPDM E/R.  |
| HEADLAMP (LO)<br>[Off/On]                        | Displays the headlamp (LO) illumination control status of IPDM E/R.  |
| IGNITION RELAY STATUS<br>[Off/On]                | Displays the ignition relay output status of IPDM E/R.   |
| IGN RELAY MONITOR<br>[Off/On]                    | Displays the status of the ignition relay judged by IPDM E/R.  |
| IGNITION POWER SUPPLY<br>[Off/On]                | Displays the status of the ignition power supply judged by IPDM E/R.   |
| INTERLOCK/PNP SW (CAN)<br>[Off/On]               | Displays the status of the transmission range switch signal that IPDM transmits via CAN communication.       |
| NEUTRAL SWITCH (CAN)<br>[Off/On/NG]              | Displays the status of the neutral position switch (M/T) signal that IPDM transmits via CAN communication.   |
| PUSH-BUTTON IGN SW (CAN)<br>[Off/On]             | Displays the status of the ignition switch signal that IPDM transmits via CAN communication.                 |
| TAIL LAMP<br>[Off/On]                            | Displays the tail lamp illumination control status of IPDM E/R.  |
| REVERSE SIGNAL (CAN)<br>[Off/On/NG]              | Displays the status of the reverse switch (M/T) signal that IPDM transmits via CAN communication.            |
| ST&ST CONT RELAY STATUS<br>[Off/Off, ON/ST R On] | Displays the status of the start control relay and start motor relay status judged by IPDM E/R.              |
| STARTER MOTOR STATUS<br>[Off/On/L-TIME]          | Displays the status of the starter motor judged by IPDM E/R.   |
| STARTER RELAY (CAN)<br>[LOW/HIGH/NG]             | Displays the status of the IPDM E/R transmits the starter control relay status signal via CAN communication. |
| IPDM NOT SLEEP<br>[NO RDY/READY]                 | Displays the status of the IPDM E/R transmits the not sleep signal via CAN communication.                    |

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# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| Monitor Item<br>[Unit]  | Description  |
|---|--|
| AFTER COOLING TIME<br>[No request/0.5min/1.0min/1.5min/<br>2.0min/2.5min/3.0min/3.5min/4min/5min/<br>6min/8min/10min/12min/14min/16min] | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| AFTER COOLING SPEED<br>[0%/25%/40%/55%/70%/78%/85%/100%]  | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| COOLING FAN TYPE<br>[RENAULT/NISSAN]  | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| COMPRESSOR REQ 1<br>[Off/On]  | Displays the status of the A/C compressor request signal received from ECM via CAN communication.                                      |
| VHCL SECURTY HORN REQ<br>[Off/On]   | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| DTRL REQ<br>[Off/On]  | Displays the status of the daytime running light request signal received from BCM via CAN communication.                               |
| SLEEP/WAKE UP<br>[SLEEP/WAKEUP]   | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| CLUTCH INTERLOCK SW<br>[Off/On/NG]  | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| CRANKING ENABLE-TCM<br>[OK/NG]  | Displays the status of the cranking enable signal received from TCM via CAN communication.   |
| CRANKING ENABLE-ECM<br>[OK/NG/STOP/No request]  | Displays the status of the cranking enable signal received from ECM via CAN communication.   |
| CAN DIAGNOSIS<br>[OK/NG]  | Displays the status of the CAN diagnosis signal received from BCM via CAN communication.   |
| FRONT FOG LAMP REQ<br>[Off/On]  | Displays the status of the front fog light request signal received from BCM via CAN communication.                                     |
| H/L WASHER REQ<br>[Off/On]  | Displays the status of the headlamp washer request signal received from BCM via CAN communication.                                     |
| PASSING REQ<br>[Off/On]   | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| HIGH BEAM REQ<br>[Off/On]   | Displays the status of the high beam request signal received from BCM via CAN communication.   |
| HORN CHIRP<br>[Off/On]  | Displays the status of the horn reminder signal received from BCM via CAN communication.   |
| COOLING FAN REQ<br>[%]  | Displays the status of the cooling fan speed request signal received from ECM via CAN communication.                                   |
| ENGINE STATUS<br>[STOP/IDLING/RUN]  | Displays the status of the engine status signal received from ECM via CAN communication.   |
| TURN SIGNAL REQ<br>[Off/LH/RH]  | Displays the status of the turn indicator signal received from BCM via CAN communication.  |
| FR WIPER REQ<br>[RETURN/STOP/NG/LOW/HIGH]   | Displays the status of the front wiper request signal received from BCM via CAN communication.   |
| SHIFT POSITION<br>[OFF/P/R/N/D/S/L/B/1/2/3/4/5/6/7]   | Displays the status of the shift position signal received from TCM via CAN communication.  |
| LOW BEAM REQ<br>[Off/On]  | Displays the status of the low beam request signal received from BCM via CAN communication.  |
| POSITION LIGHT REQ<br>[Off/On]  | Displays the status of the position light request signal received from BCM via CAN communication.                                      |
| COMPRESSOR REQ 2<br>[Off/On]  | Displays the status of the A/C ON signal received from A/C auto amp. via CAN communication.  |
| IGNITION SW<br>[Off/On/START/No request]  | Displays the status of the ignition switch ON signal and starter control relay request signal received from BCM via CAN communication. |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| Monitor Item<br>[Unit]              | Description  |
|-------------------------------------|--|
| VEHICLE SPEED (METER)<br>[km/h]     | Displays the status of the A/C ON signal received from A/C auto amp. via CAN communication.  |
| BAT DISCHARGE COUNT<br>[—]          | Monitor the cumulative discharge value of the battery.<br><b>NOTE:</b><br>When 65,000 or more is counted, replace the battery.   |
| P LAMP CIRC MALFUNCTN<br>[0 – 1]    | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the parking lamp circuit.<br><b>NOTE:</b><br>When the number of parking lamp circuit retries count is 20, this item counts 1.  |
| NMB P LAMP CIRC RETRY<br>[0 – 20]   | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the parking lamp circuit.<br><b>NOTE:</b><br>When the number of short circuits in the parking lamp circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.                                   |
| NMB P LAMP CIRC SHORT<br>[0 – 5]    | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the parking lamp circuit.   |
| DTRL LH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (left) circuit.<br><b>NOTE:</b><br>When the number of daytime running light (left) circuit retries count is 20, this item counts 1.  |
| NMB DTRL LH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the daytime running light (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.   |
| NMB DTRL LH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (left) circuit.   |
| DTRL RH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (right) circuit.<br><b>NOTE:</b><br>When the number of daytime running light (right) circuit retries count is 20, this item counts 1.  |
| NMB DTRL RH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the daytime running light (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1. |
| NMB DTRL RH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (right) circuit.  |
| F FOG LH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the front fog lamp (left) circuit.<br><b>NOTE:</b><br>When the number of front fog lamp (left) circuit retries count is 20, this item counts 1.  |
| NMB F FOG LH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the front fog lamp (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the front fog lamp (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.                 |
| NMB F FOG LH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the front fog lamp (left) circuit.  |
| F FOG RH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the front fog lamp (right) circuit.<br><b>NOTE:</b><br>When the number of front fog lamp (right) circuit retries count is 20, this item counts 1.  |

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# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| Monitor Item<br>[Unit]                | Description  |
|---------------------------------------|--|
| NMB F FOG RH CIRC RETRY<br>[0 – 20]   | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the front fog lamp (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the front fog lamp (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1. |
| NMB F FOG RH CIRC SHORT<br>[0 – 5]    | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the front fog lamp (right) circuit.   |
| HL (HI) LH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (HI) (left) circuit.<br><b>NOTE:</b><br>When the number of headlamp (HI) (left) circuit retries count is 20, this item counts 1.  |
| NMB HL (HI) LH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (HI) (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (HI) (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.     |
| NMB HL (HI) LH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (HI) (left) circuit.   |
| HL (HI) RH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (HI) (right) circuit.<br><b>NOTE:</b><br>When the number of headlamp (HI) (right) circuit retries count is 20, this item counts 1.  |
| NMB HL (HI) RH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (HI) (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (HI) (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.   |
| NMB HL (HI) RH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (HI) (right) circuit.  |
| S/L CIRC MALFUNCTN<br>[0 – 1]         | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the steering lock circuit.<br><b>NOTE:</b><br>When the number of steering lock circuit retries count is 20, this item counts 1.  |
| NMB S/L CIRC RETRY<br>[0 – 20]        | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the steering lock circuit.<br><b>NOTE:</b><br>When the number of short circuits in the steering lock circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.                   |
| NMB S/L CIRC SHORT<br>[0 – 5]         | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the steering lock circuit.  |
| HL (LO) LH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (LO) (left) circuit.<br><b>NOTE:</b><br>When the number of headlamp (LO) (left) circuit retries count is 20, this item counts 1.  |
| NMB HL (LO) LH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (LO) (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.     |
| NMB HL (LO) LH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (left) circuit.   |
| HL (LO) RH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (LO) (right) circuit.<br><b>NOTE:</b><br>When the number of headlamp (LO) (right) circuit retries count is 20, this item counts 1.  |

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

| Monitor Item<br>[Unit]                | Description  |
|---------------------------------------|--|
| NMB HL (LO) RH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (LO) (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1. |
| NMB HL (LO) RH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (right) circuit.  |
| T LAMP LH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (left) circuit.<br><b>NOTE:</b><br>When the number of tail lamp (left) circuit retries count is 20, this item counts 1.  |
| NMB T LAMP LH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the tail lamp (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.           |
| NMB T LAMP LH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (left) circuit.   |
| T LAMP RH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (right) circuit.<br><b>NOTE:</b><br>When the number of tail lamp (right) circuit retries count is 20, this item counts 1.  |
| NMB T LAMP RH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the tail lamp (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.         |
| NMB T LAMP RH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (right) circuit.  |
| BATTERY STATUS<br>[OK/NG]             | Monitor the battery status from the battery output.  |

## ACTIVE TEST

| Test item          | Operation | Description   |
|--------------------|-----------|---|
| HORN               | Off       | OFF   |
|                    | On        | Operates horn relay for 20 ms.                              |
| HEADLAMP WASHER    | Off       | OFF   |
|                    | On        | Operates headlamp washer relay for 10 ms.                   |
| FRONT WIPER        | Off       | OFF   |
|                    | Low       | Operates the front wiper relay.                             |
|                    | High      | Operates the front wiper relay and front wiper HI/LO relay. |
| COMPRESSOR         | Off       | OFF   |
|                    | On        | Operates the A/C relay.                                     |
| COOLING FAN (MONO) | Off       | OFF   |
|                    | Lo        | Run the cooling fan at low speed.                           |
|                    | Hi        | Run the cooling fan at high speed.                          |
| HEADLAMP (HI)      | Off       | OFF   |
|                    | On        | Operates the headlamp (HI)                                  |
| HEADLAMP (LO)      | Off       | OFF   |
|                    | On        | Operates the headlamp (LO).                                 |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

| Test item              | Operation | Description  |
|------------------------|-----------|--|
| FRONT FOG LAMP         | Off       | OFF  |
|                        | On        | Operates the front fog lamp.   |
| DAYTIME RUNNING LIGHT  | Off       | OFF  |
|                        | On        | Operates the parking lamp (daytime running light operation).   |
| PARKING LAMP           | Off       | OFF  |
|                        | On        | Operates the parking lamp.   |
| TAIL LAMP              | Off       | OFF  |
|                        | On        | Operates the tail lamp.  |
| OPTIC AXIS ACTIVE TEST | Default   | Return the optical axis to the default position.<br><b>NOTE:</b><br>While the headlamp is OFF, it does not return to the default position. |
|                        | Lower     | Adjust the optical axis to the lowermost point.  |

## WORK SUPPORT

| Work item              | Description  |
|------------------------|--|
| SENSOR INITIALIZE      | Adjusts the height sensor signal output value in the unloaded vehicle condition. |
| CML B/DCHRG CRNT CLEAR | In this mode, cumulative battery discharge current is cleared.                   |



## ECU DIAGNOSIS INFORMATION

## BCM, IPDM E/R, FRONT CAMERA UNIT

## List of ECU Reference

INFOID:0000000010788783

| ECU               | Reference   |
|-------------------|---|
| BCM               | <a href="#">BCS-53, "Reference Value"</a>               |
|                   | <a href="#">BCS-76, "Fail-safe"</a>                     |
|                   | <a href="#">BCS-77, "DTC Inspection Priority Chart"</a> |
|                   | <a href="#">BCS-78, "DTC Index"</a>                     |
| IPDM E/R          | <a href="#">PCS-22, "Reference Value"</a>               |
|                   | <a href="#">PCS-34, "Fail-safe"</a>                     |
|                   | <a href="#">PCS-37, "DTC Inspection Priority Chart"</a> |
|                   | <a href="#">PCS-38, "DTC Index"</a>                     |
| Front camera unit | <a href="#">DAS-51, "Reference Value"</a>               |
|                   | <a href="#">DAS-55, "Fail-safe (Front Camera Unit)"</a> |
|                   | <a href="#">DAS-56, "DTC Inspection Priority Chart"</a> |
|                   | <a href="#">DAS-56, "DTC Index"</a>                     |

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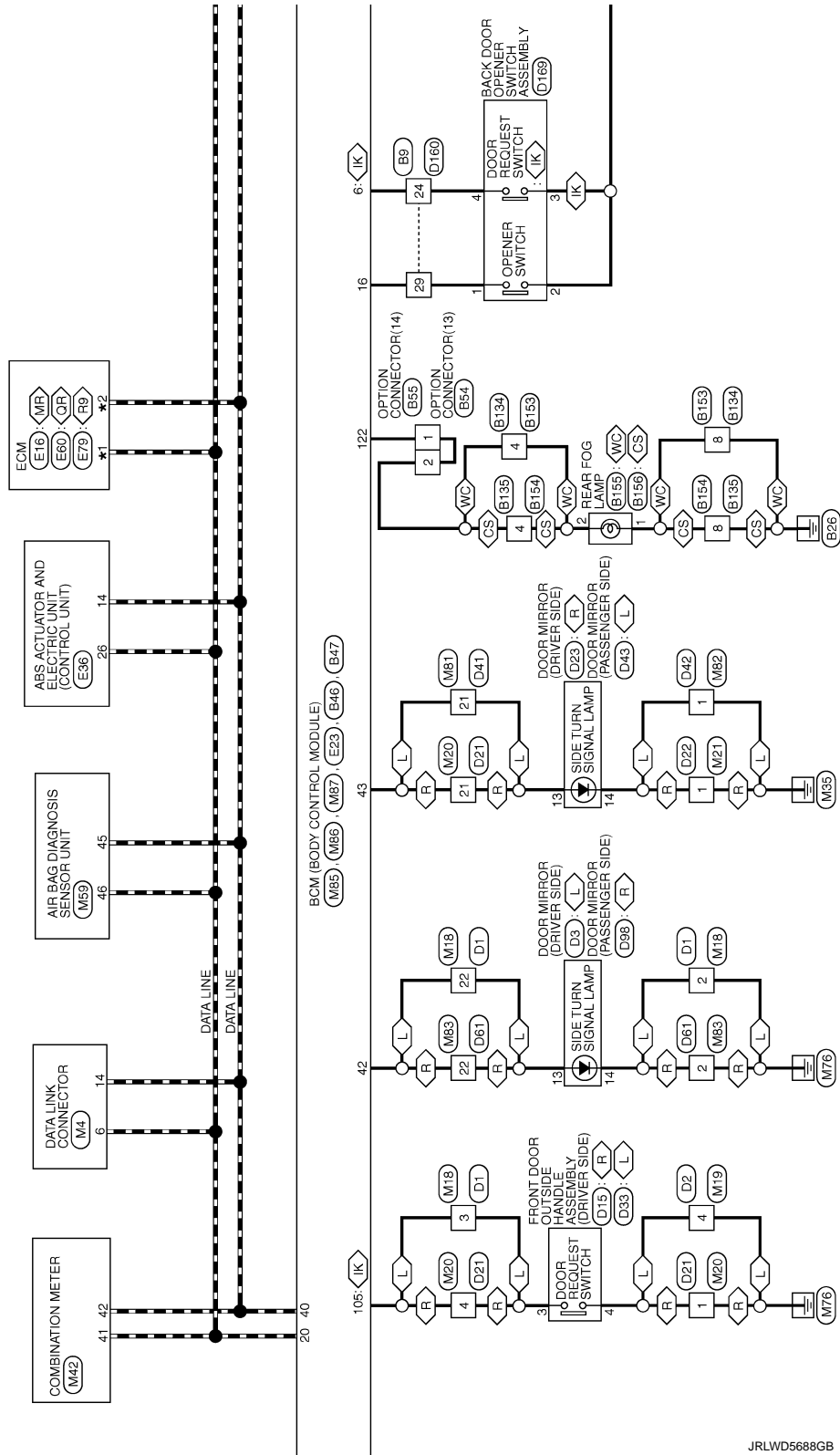


# EXTERIOR LIGHTING SYSTEM

[LED HEADLAMP]

< WIRING DIAGRAM >

- X9 : Except for R9M engine models
- MT : MR engine models with M/T
- MR : MR engine models
- XR : Except for R9M engine models with M/T
- R9 : R9M engine models
- RT : R9M engine models with M/T
- MR : MR engine models
- LR : With light & rain sensor
- LA : With LDW
- AB : With automatic back door system
- QR : QR engine models
- MR : MR engine models
- QB : Without automatic back door system
- HA : Halogen headlamp models
- IK : With intelligent key



JRLW5688GB

# EXTERIOR LIGHTING SYSTEM

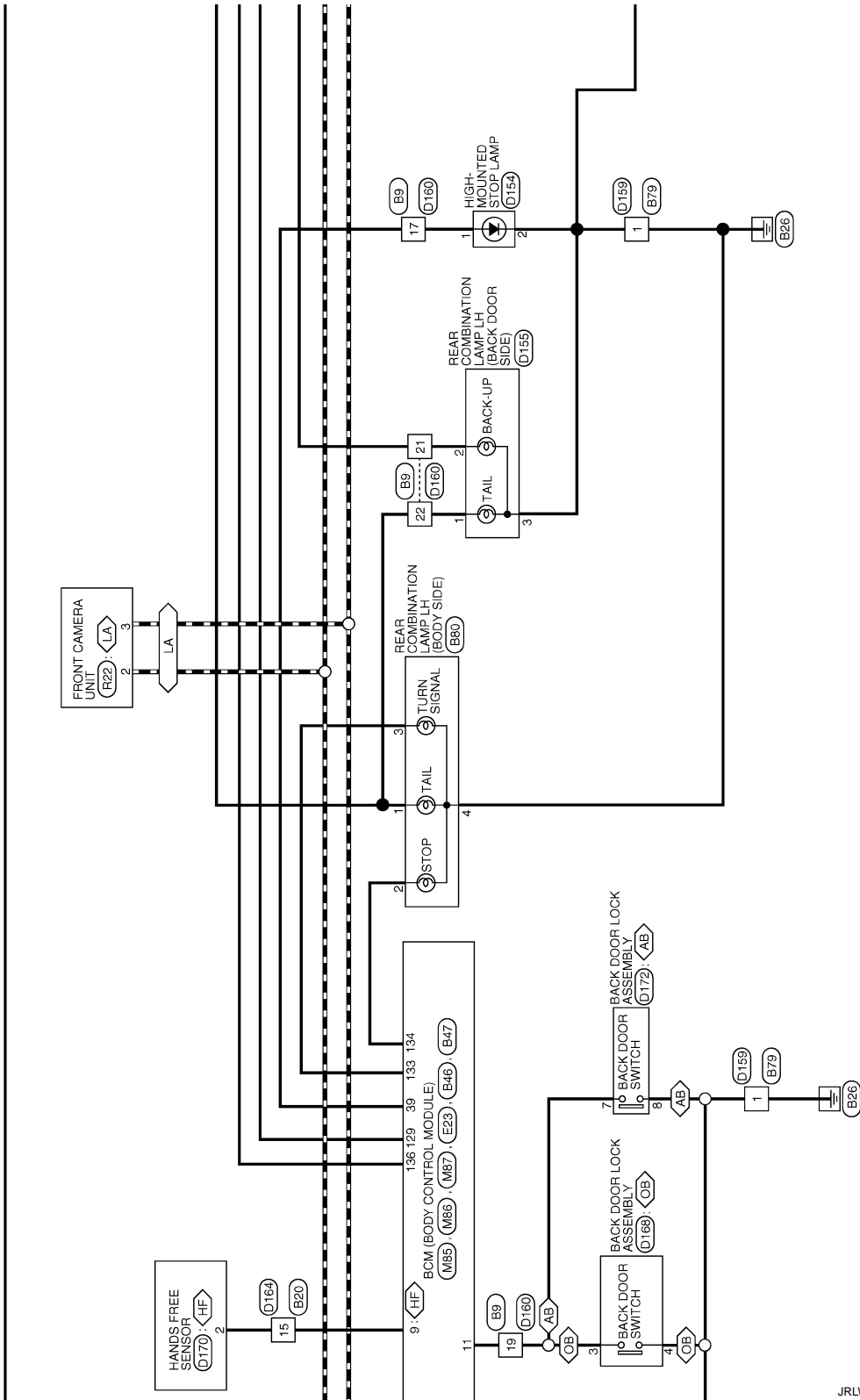
< WIRING DIAGRAM >

[LED HEADLAMP]

HF : With hands free sensor models

CS : With Sonar System OFF switch  
WC : Without Sonar System OFF switch

IS : With Stop / Start System  
OS : Without Stop / Start System

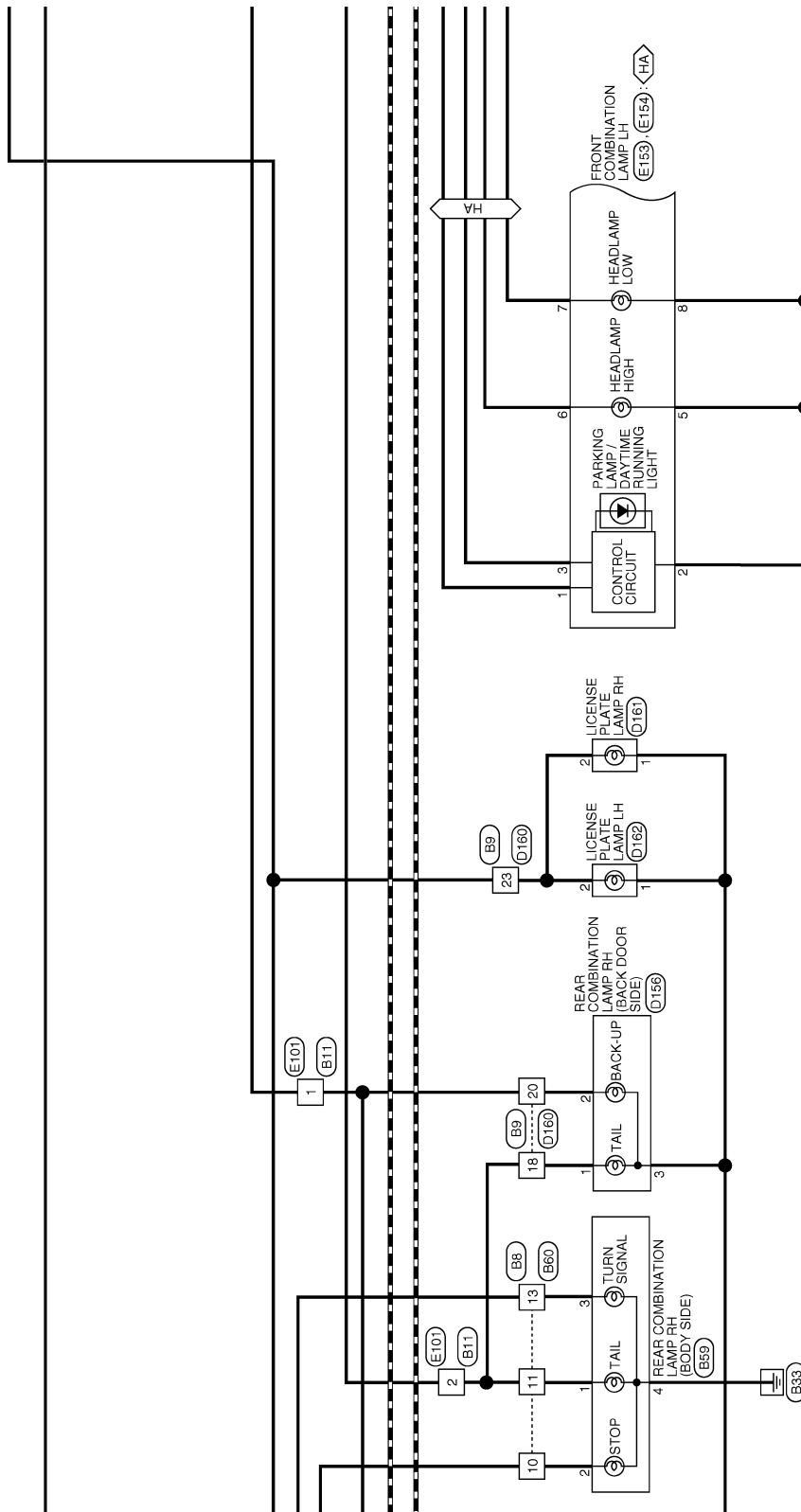


JRLW5689GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

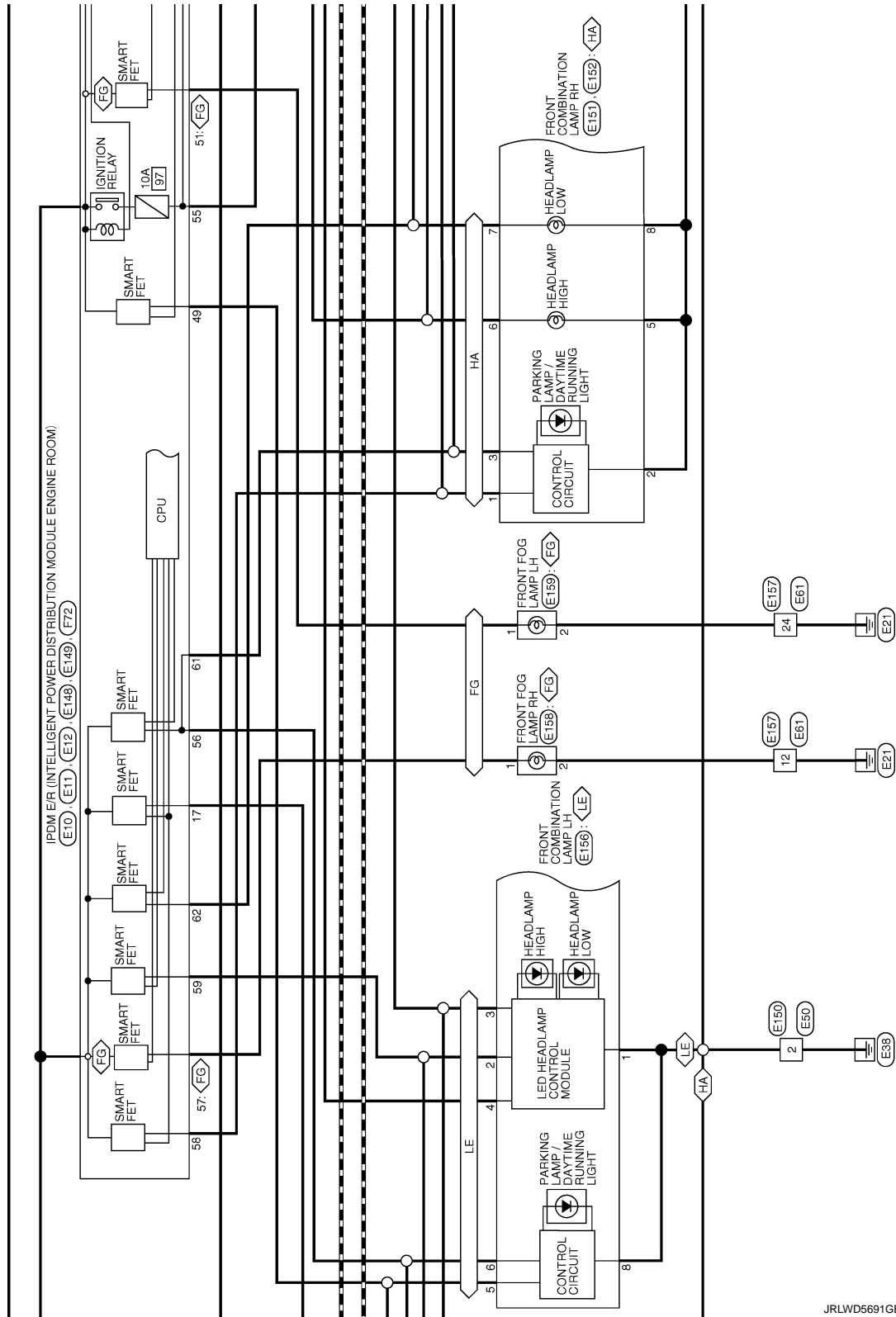


JRLWD5690GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

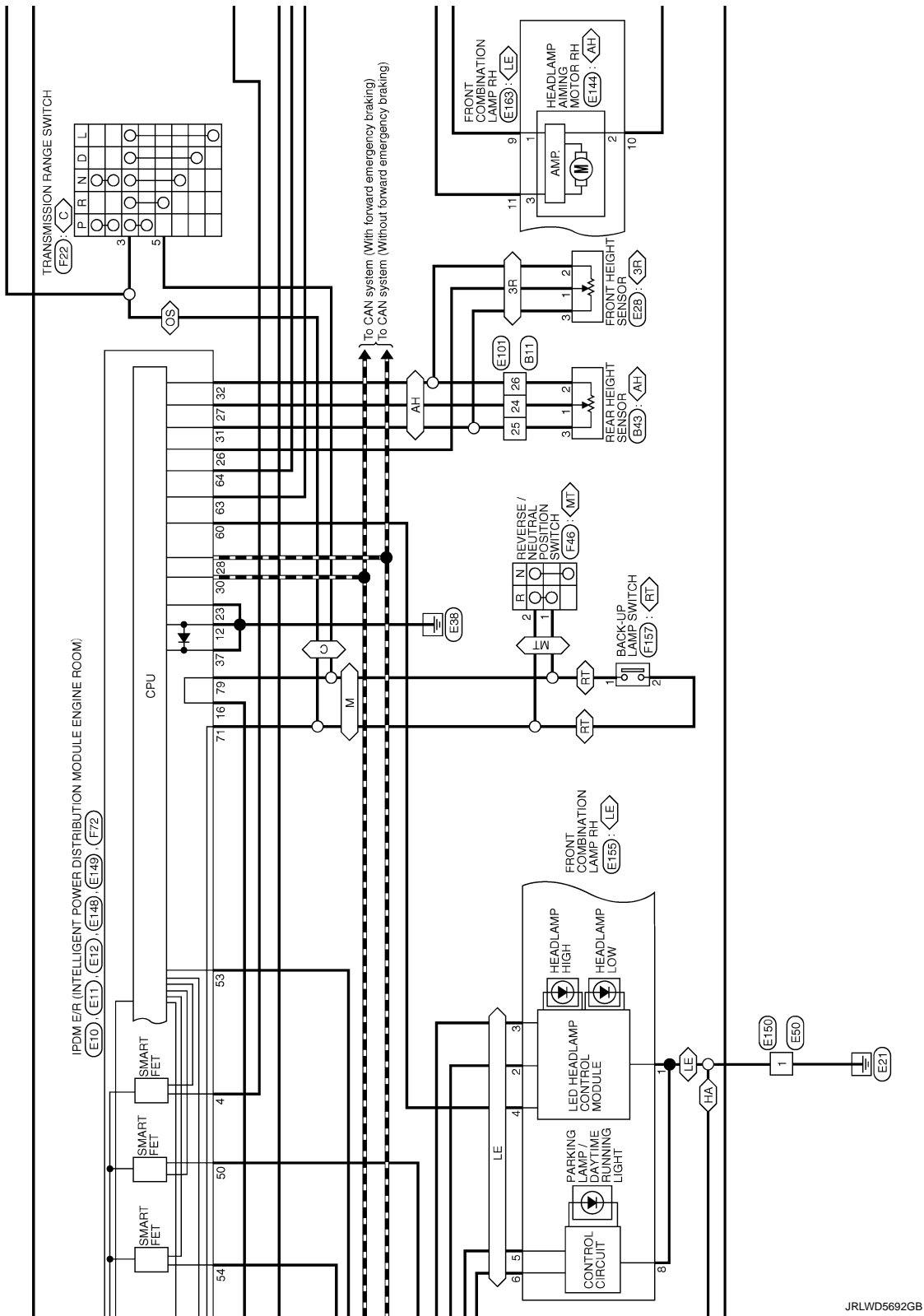


JRLWD5691GB

## EXTERIOR LIGHTING SYSTEM

## < WIRING DIAGRAM >

**[LED HEADLAMP]**

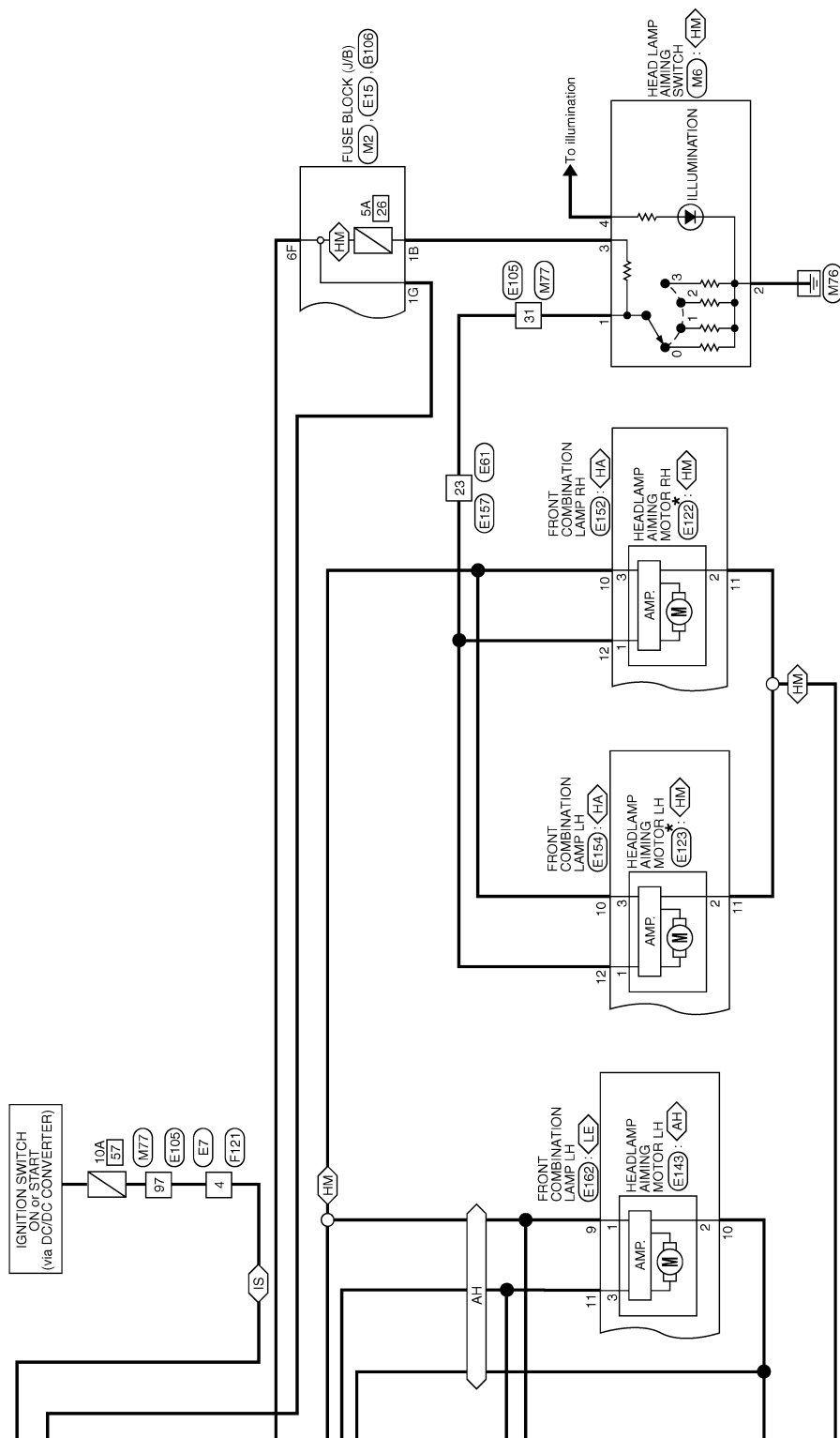


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O  
P

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]



★ : This connector is not shown in "Harness Layout".

JRLWD5693GB



# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |              |
|----------------|--------------|
| Connector No.  | B8           |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | G             | -                           |
| 3            | P             | -                           |
| 4            | L             | -                           |
| 5            | SB            | -                           |
| 6            | R             | -                           |
| 7            | LA/R          | -                           |
| 8            | LA/G          | -                           |
| 9            | LA/B          | -                           |
| 10           | LA/Y          | -                           |
| 11           | LA/W          | -                           |
| 12           | P             | -                           |
| 13           | R             | -                           |
| 14           | Y             | -                           |
| 15           | B             | -                           |
| 16           | W             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | B9           |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH32MW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 4            | W             | -                           |
| 5            | R             | -                           |
| 6            | B             | -                           |
| 7            | W             | -                           |
| 8            | SHIELD        | -                           |

|    |      |   |
|----|------|---|
| 13 | W    | - |
| 14 | V    | - |
| 15 | BR   | - |
| 16 | SB   | - |
| 17 | LA/W | - |
| 18 | LA/R | - |
| 19 | LG   | - |
| 20 | LA/G | - |
| 21 | LA/Y | - |
| 22 | LA/R | - |
| 23 | LA/R | - |
| 24 | R    | - |
| 29 | Y    | - |
| 30 | G    | - |
| 31 | GR   | - |
| 32 | LG   | - |

|                |                  |
|----------------|------------------|
| Connector No.  | B11              |
| Connector Name | WIRE TO WIRE     |
| Connector Type | TH8MDGY-CS16-TM4 |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | G             | -                           |
| 2            | LA/R          | -                           |
| 5            | BG            | -                           |
| 11           | BR            | -                           |
| 12           | W             | -                           |
| 13           | P             | -                           |
| 14           | SB            | -                           |
| 15           | V             | -                           |
| 16           | P             | -                           |
| 17           | P             | -                           |
| 18           | G             | -                           |
| 19           | P             | -                           |
| 20           | R             | -                           |
| 21           | BR            | -                           |
| 22           | Y             | -                           |
| 23           | BG            | -                           |
| 24           | SB            | -                           |

|    |    |   |
|----|----|---|
| 25 | G  | - |
| 26 | B  | - |
| 27 | P  | - |
| 28 | R  | - |
| 29 | LG | - |
| 30 | P  | - |
| 92 | BR | - |
| 93 | GR | - |
| 94 | Y  | - |
| 95 | LG | - |
| 97 | LG | - |

|                |              |
|----------------|--------------|
| Connector No.  | B20          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 8            | LA/G          | -                           |
| 9            | LA/R          | -                           |
| 10           | LA/V          | -                           |
| 12           | L             | -                           |
| 13           | SB            | -                           |
| 14           | R             | -                           |
| 15           | G             | -                           |
| 16           | W             | -                           |

|                |                                    |
|----------------|------------------------------------|
| Connector No.  | B27                                |
| Connector Name | FRONT DOOR SWITCH (PASSENGER SIDE) |
| Connector Type | TH04FW-NH                          |



|   |   |   |
|---|---|---|
| 1 | 2 | 3 |
|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | GR            | - [For LHD models]          |
| 3            | SB            | - [For RHD models]          |

|                |                                 |
|----------------|---------------------------------|
| Connector No.  | B34                             |
| Connector Name | FRONT DOOR SWITCH (DRIVER SIDE) |
| Connector Type | TH04FW-NH                       |



|   |   |   |
|---|---|---|
| 1 | 2 | 3 |
|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | SB            | -                           |

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                    |
|----------------|--------------------|
| Connector No.  | B43                |
| Connector Name | REAR HEIGHT SENSOR |
| Connector Type | RHD3FB             |



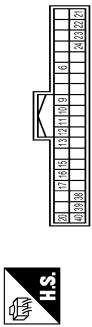
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | SB            | -                           |
| 2            | B             | -                           |
| 3            | G             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | B46                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | NS16GY-CS                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 121          | LAV           | BACK DOOR OPENER CONT       |
| 122          | Y             | REAR FOG LAMP OUTPUT        |
| 123          | LAV           | REAR WIPER OUTPUT           |
| 124          | W             | REAR DOOR UNLOCK OUTPUT     |
| 125          | L             | REAR DOOR LOCK OUTPUT       |
| 127          | R             | LUGGAGE ROOM LAMP CONT      |
| 129          | LAV           | STOP LAMP LH OUT            |
| 131          | R             | REAR DOOR SUPERLOCK OUTPUT  |
| 133          | GR            | TURN SIG LH (REAR)          |
| 134          | LAV           | STOP LAMP RH OUT            |
| 136          | P             | TURN SIG RH (REAR)          |

|                |                           |
|----------------|---------------------------|
| Connector No.  | B47                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FG-NH                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 6            | R             | BACK DOOR OPENER REQUEST SW |
| 9            | G             | HANDS FREE SENSOR           |
| 10           | W             | REAR RH DOOR SW             |
| 11           | LG            | BACK DOOR SW                |
| 12           | R             | REAR LH DOOR SW             |
| 13           | SB            | PASSENGER DOOR SW           |
| 15           | LAV           | REAR WIPER AUTO STOP        |
| 16           | Y             | BACK DOOR OPENER SW         |
| 17           | SB            | DRIVER DOOR SW              |
| 20           | L             | CANH                        |
| 21           | BR            | BUMPER ANTENNA(-)           |
| 22           | Y             | REAR ANTENNA(-)             |
| 23           | L             | REAR ANTENNA(+)             |
| 24           | G             | BUMPER ANTENNA(+)           |
| 38           | V             | SIREN                       |
| 39           | LAV           | HIGH-MOUNTED STOP LAMP      |
| 40           | P             | CANH                        |

|                |                     |
|----------------|---------------------|
| Connector No.  | B53                 |
| Connector Name | REAR DOOR SWITCH RH |
| Connector Type | TH44FW-NH           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | W             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | B54                   |
| Connector Name | OPTION CONNECTOR (13) |
| Connector Type | NS02MBRC-CS           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | R             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | B55                   |
| Connector Name | OPTION CONNECTOR (14) |
| Connector Type | NS02FBR-CS            |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | Y             | -                           |
| 2            | SB            | -                           |

|                |                                      |
|----------------|--------------------------------------|
| Connector No.  | B59                                  |
| Connector Name | REAR COMBINATION LAMP RH (BODY SIDE) |
| Connector Type | NS04MW-CS                            |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAVR          | -                           |
| 2            | LAV           | -                           |
| 3            | LAV           | -                           |
| 4            | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | B60          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LALG          | -                           |
| 2            | LA/GR         | -                           |
| 3            | P             | -                           |
| 6            | L             | -                           |
| 7            | L             | -                           |
| 8            | GR            | - [For LHD models]          |
| 9            | SB            | - [For RHD models]          |
| 10           | LAV           | -                           |
| 11           | LAVR          | -                           |
| 12           | W             | -                           |
| 13           | LAV           | -                           |
| 14           | RS            | -                           |
| 15           | P             | -                           |
| 16           | P             | -                           |

JRLWLD5695GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                     |
|----------------|---------------------|
| Connector No.  | B71                 |
| Connector Name | REAR DOOR SWITCH LH |
| Connector Type | TH04FW-NH           |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 3 |
| Color Of Wire               | R |
| Signal Name [Specification] | - |

|                |              |
|----------------|--------------|
| Connector No.  | B79          |
| Connector Name | WIRE TO WIRE |
| Connector Type | M02MW-LC     |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 1 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                |                                    |
|----------------|------------------------------------|
| Connector No.  | B80                                |
| Connector Name | REAR COMBINATION LAMP (RIGHT SIDE) |
| Connector Type | NS04MW-GS                          |



|                             |      |
|-----------------------------|------|
| Terminal No.                | 1    |
| Color Of Wire               | LA/R |
| Signal Name [Specification] | -    |

|                             |      |
|-----------------------------|------|
| Terminal No.                | 2    |
| Color Of Wire               | LA/Y |
| Signal Name [Specification] | -    |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 3  |
| Color Of Wire               | GR |
| Signal Name [Specification] | -  |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                |                  |
|----------------|------------------|
| Connector No.  | B106             |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS06FW-GS        |



|                             |      |
|-----------------------------|------|
| Terminal No.                | 1G   |
| Color Of Wire               | LA/R |
| Signal Name [Specification] | -    |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 2G |
| Color Of Wire               | P  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 3G |
| Color Of Wire               | G  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 4G |
| Color Of Wire               | P  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 5G |
| Color Of Wire               | G  |
| Signal Name [Specification] | -  |

|                |              |
|----------------|--------------|
| Connector No.  | B134         |
| Connector Name | WIRE TO WIRE |
| Connector Type | RH08MB       |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 4  |
| Color Of Wire               | SB |
| Signal Name [Specification] | -  |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                |              |
|----------------|--------------|
| Connector No.  | B135         |
| Connector Name | WIRE TO WIRE |
| Connector Type | RH08MB       |



|                             |    |
|-----------------------------|----|
| Terminal No.                | 4  |
| Color Of Wire               | SB |
| Signal Name [Specification] | -  |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                |              |
|----------------|--------------|
| Connector No.  | B153         |
| Connector Name | WIRE TO WIRE |
| Connector Type | RH08FB       |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color Of Wire               | Y |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                |              |
|----------------|--------------|
| Connector No.  | B154         |
| Connector Name | WIRE TO WIRE |
| Connector Type | RH08FB       |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color Of Wire               | Y |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                |               |
|----------------|---------------|
| Connector No.  | B155          |
| Connector Name | REAR FOG LAMP |
| Connector Type | RS02FGY       |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 1 |
| Color Of Wire               | B |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 2 |
| Color Of Wire               | Y |
| Signal Name [Specification] | - |

JRLWD5696GB

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |               |
|----------------|---------------|
| Connector No.  | B156          |
| Connector Name | REAR FOG LAMP |
| Connector Type | RS02FGY       |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | Y             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D1           |
| Connector Name | WIRE TO WIRE |
| Connector Type | T124FW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 12 | 11 | 10 | 9  | 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1  |
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAV           | -                           |
| 2            | LAVB          | -                           |
| 3            | W             | -                           |
| 4            | V             | -                           |
| 5            | SB            | -                           |
| 6            | LG            | -                           |
| 7            | GR            | -                           |
| 8            | G             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | R             | -                           |
| 13           | LAW           | -                           |
| 14           | LAW           | -                           |
| 15           | LAVG          | -                           |
| 16           | LAV           | -                           |
| 17           | LAVL          | -                           |
| 18           | LAVB          | -                           |
| 19           | LAVR          | -                           |

|    |     |   |
|----|-----|---|
| 22 | LAG | - |
| 23 | L   | - |
| 24 | BG  | - |

|                |              |
|----------------|--------------|
| Connector No.  | D2           |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



|    |    |    |    |    |    |    |   |   |
|----|----|----|----|----|----|----|---|---|
| 7  | 6  | 5  | 4  | 3  | 2  | 1  |   |   |
| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAV           | -                           |
| 2            | R             | -                           |
| 3            | LAG           | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | LAVL          | -                           |
| 7            | LAVBR         | -                           |
| 8            | SB            | -                           |
| 9            | LAVGR         | -                           |
| 10           | LAVSB         | -                           |
| 11           | P             | -                           |
| 12           | LG            | -                           |
| 13           | LAVY          | -                           |
| 14           | LAW           | -                           |
| 15           | LAVR          | -                           |
| 16           | B             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | D3                        |
| Connector Name | DOOR MIRROR (DRIVER SIDE) |
| Connector Type | T16MW-NH                  |



|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 8  | 7  | 5  | 4  | 3  | 2  |
| 16 | 15 | 14 | 12 | 11 | 10 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LG            | -                           |
| 3            | LAP           | -                           |
| 4            | LAVB          | -                           |
| 5            | LAW           | -                           |
| 7            | GR            | -                           |
| 8            | G             | -                           |
| 10           | B             | -                           |
| 11           | LAVSB         | -                           |
| 12           | LAVGR         | -                           |
| 14           | LAVB          | -                           |
| 15           | B             | -                           |
| 16           | Y             | -                           |

|                |   |
|----------------|---|
| Connector No.  | D11   |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY PASSENGER SIDE |
| Connector Type | RH4FB   |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | SB            | -                           |
| 3            | P             | -                           |
| 4            | B             | -                           |

|                |  |
|----------------|--|
| Connector No.  | D15  |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY DRIVER SIDE |
| Connector Type | RH4FB  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | SB            | -                           |
| 3            | W             | -                           |
| 4            | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D21          |
| Connector Name | WIRE TO WIRE |
| Connector Type | T124FW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 12 | 11 | 10 | 9  | 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1  |
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 3            | B             | -                           |
| 4            | W             | -                           |
| 5            | V             | -                           |
| 6            | SB            | -                           |
| 7            | L             | -                           |
| 8            | G             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | G             | -                           |
| 13           | LAW           | -                           |
| 14           | LAVG          | -                           |
| 15           | LAVGR         | -                           |
| 16           | LAP           | -                           |
| 17           | LAVSB         | -                           |
| 18           | LAVR          | -                           |

JRLWD5697GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|    |      |   |
|----|------|---|
| 19 | LA5B | - |
| 20 | GR   | - |
| 21 | LAG  | - |
| 22 | R    | - |
| 23 | BG   | - |
| 24 | L    | - |

|                |              |
|----------------|--------------|
| Connector No.  | D22          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



|    |    |    |    |                      |    |    |   |   |
|----|----|----|----|----------------------|----|----|---|---|
| 7  | 6  | 5  | 4  | <input type="text"/> | 3  | 2  | 1 |   |
| 16 | 15 | 14 | 13 | 12                   | 11 | 10 | 9 | 8 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAB           | -                           |
| 2            | Y             | -                           |
| 3            | G             | -                           |
| 4            | V             | -                           |
| 5            | LG            | -                           |
| 6            | G             | -                           |
| 7            | SB            | -                           |
| 8            | LAB           | -                           |
| 9            | LAGR          | -                           |
| 10           | LAV           | -                           |
| 11           | LAL           | -                           |
| 12           | LAG           | -                           |
| 13           | LAR           | -                           |
| 14           | LAG           | -                           |
| 15           | LAR           | -                           |
| 16           | B             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | D23                       |
| Connector Name | DOOR MIRROR (DRIVER SIDE) |
| Connector Type | TH16MW-NH                 |



|    |    |    |    |    |   |
|----|----|----|----|----|---|
| 8  | 7  | 5  | 4  | 3  | 2 |
| 16 | 15 | 14 | 12 | 11 |   |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | GR            | -                           |
| 3            | LAL           | -                           |
| 4            | LAR           | -                           |
| 5            | LAY           | -                           |
| 7            | L             | -                           |
| 8            | G             | -                           |
| 11           | LAPG          | -                           |
| 12           | LAV           | -                           |
| 14           | LAB           | -                           |
| 15           | B             | -                           |
| 16           | Y             | -                           |

|                |  |
|----------------|--|
| Connector No.  | D33  |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY (DRIVER SIDE) |
| Connector Type | RHMFB  |



|   |   |   |   |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | SB            | -                           |
| 3            | W             | -                           |
| 4            | B             | -                           |

|                |   |
|----------------|---|
| Connector No.  | D34   |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY (PASSENGER SIDE) |
| Connector Type | RHMFB   |



|   |   |   |   |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | SB            | -                           |
| 3            | P             | -                           |
| 4            | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D41          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 12 | 11 | 10 | 9  | 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1  |
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 3            | B             | -                           |
| 4            | P             | -                           |
| 5            | R             | -                           |
| 6            | SB            | -                           |
| 7            | L             | -                           |
| 8            | V             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | G             | -                           |
| 13           | LAY           | -                           |
| 14           | LAR           | -                           |
| 15           | LAV           | -                           |
| 16           | LAL           | -                           |
| 17           | LAPG          | -                           |
| 18           | GR            | -                           |

|    |      |   |
|----|------|---|
| 21 | LA/G | - |
|----|------|---|

|                |              |
|----------------|--------------|
| Connector No.  | D42          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



|    |    |    |    |             |    |    |   |   |
|----|----|----|----|-------------|----|----|---|---|
| 7  | 6  | 5  | 4  | <div></div> | 3  | 2  | 1 |   |
| 16 | 15 | 14 | 13 | 12          | 11 | 10 | 9 | 8 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAB           | -                           |
| 2            | B             | -                           |
| 8            | LAGR          | -                           |
| 9            | LAY           | -                           |
| 10           | LAPR          | -                           |
| 11           | LAL           | -                           |
| 12           | LAV           | -                           |
| 13           | LAR           | -                           |
| 14           | LAG           | -                           |

|                |                              |
|----------------|------------------------------|
| Connector No.  | D43                          |
| Connector Name | DOOR MIRROR (PASSENGER SIDE) |
| Connector Type | TH16MW-NH                    |



|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 8  | 7  | 5  | 4  | 3  | 2  |
| 16 | 15 | 14 | 12 | 11 | 10 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | GR            | -                           |
| 3            | LAL           | -                           |
| 4            | LAR           | -                           |
| 5            | LAY           | -                           |
| 7            | L             | -                           |
| 8            | V             | -                           |
| 10           | B             | -                           |
| 11           | LAPG          | -                           |

JRLWD5698GB

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# EXTERIOR LIGHTING SYSTEM

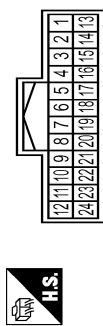
< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

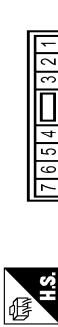
|    |     |   |
|----|-----|---|
| 12 | LAV | - |
| 14 | LAB | - |
| 15 | B   | - |
| 16 | Y   | - |

|                |              |
|----------------|--------------|
| Connector No.  | D61          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LAV           | -                           |
| 3            | P             | -                           |
| 4            | R             | -                           |
| 5            | SB            | -                           |
| 6            | LG            | -                           |
| 7            | L             | -                           |
| 8            | V             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | R             | -                           |
| 13           | B             | -                           |
| 14           | LAV           | -                           |
| 15           | LAG           | -                           |
| 16           | LAGR          | -                           |
| 17           | LAP           | -                           |
| 18           | LASE          | -                           |
| 19           | B             | -                           |
| 20           | LG            | -                           |
| 21           | BR            | -                           |
| 22           | LAG           | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D62          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | L             | -                           |
| 2            | V             | -                           |
| 3            | R             | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | LAL           | -                           |
| 7            | LABR          | -                           |
| 9            | LAY           | -                           |
| 10           | LABR          | -                           |
| 11           | LAL           | -                           |

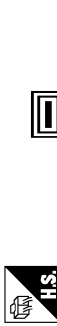
|                |                              |
|----------------|------------------------------|
| Connector No.  | D98                          |
| Connector Name | DOOR MIRROR (PASSENGER SIDE) |
| Connector Type | TH16MM-NH                    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LG            | -                           |
| 3            | LAP           | -                           |
| 4            | LAG           | -                           |
| 5            | LAW           | -                           |
| 7            | L             | -                           |
| 8            | V             | -                           |
| 11           | LASE          | -                           |
| 12           | LAGR          | -                           |
| 14           | LAV           | -                           |
| 15           | B             | -                           |

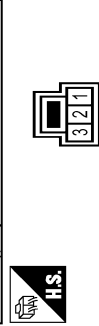
|    |   |   |
|----|---|---|
| 16 | Y | - |
|----|---|---|

|                |                        |
|----------------|------------------------|
| Connector No.  | D154                   |
| Connector Name | HIGH-MOUNTED STOP LAMP |
| Connector Type | TK02AW                 |



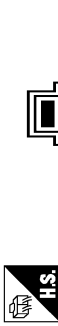
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |

|                |  |
|----------------|--|
| Connector No.  | D155                                     |
| Connector Name | REAR COMBINATION LAMP L (REAR DOOR SIDE) |
| Connector Type | NS03MW-CS                                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 3            | GR            | -                           |

|                |  |
|----------------|--|
| Connector No.  | D156                                     |
| Connector Name | REAR COMBINATION LAMP R (REAR DOOR SIDE) |
| Connector Type | NS03MW-CS                                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 3            | W             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D159         |
| Connector Name | WIRE TO WIRE |
| Connector Type | MO2FW-LC     |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |

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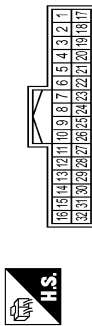
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |              |
|----------------|--------------|
| Connector No.  | D160         |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH32FW-NH    |



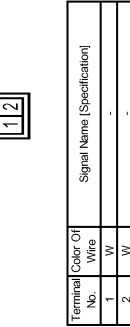
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 4            | W             | -                           |
| 5            | W             | -                           |
| 6            | W             | -                           |
| 7            | W             | -                           |
| 8            | W             | -                           |
| 13           | W             | -                           |
| 14           | W             | -                           |
| 15           | W             | -                           |
| 16           | W             | -                           |
| 17           | W             | -                           |
| 18           | W             | -                           |
| 19           | W             | -                           |
| 20           | W             | -                           |
| 21           | W             | -                           |
| 22           | W             | -                           |
| 23           | W             | -                           |
| 24           | W             | -                           |
| 29           | W             | -                           |
| 30           | W             | -                           |
| 31           | W             | -                           |
| 32           | W             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | D161                  |
| Connector Name | LICENSE PLATE LAMP RH |
| Connector Type | TK02FBR               |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | R             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | D162                  |
| Connector Name | LICENSE PLATE LAMP LH |
| Connector Type | TK02FBR               |



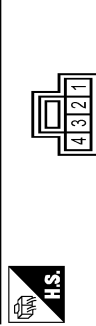
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D164         |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 8            | W             | -                           |
| 9            | W             | -                           |
| 10           | W             | -                           |
| 12           | W             | -                           |
| 13           | W             | -                           |
| 14           | W             | -                           |
| 15           | W             | -                           |
| 16           | W             | -                           |

|                |                         |
|----------------|-------------------------|
| Connector No.  | D168                    |
| Connector Name | BACK DOOR LOCK ASSEMBLY |
| Connector Type | NS04FW-CS               |



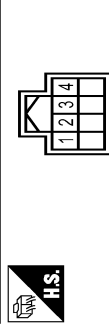
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | GR            | -                           |
| 3            | W             | -                           |
| 4            | GR            | -                           |

|                |                                  |
|----------------|----------------------------------|
| Connector No.  | D169                             |
| Connector Name | BACK DOOR OPENER SWITCH ASSEMBLY |
| Connector Type | TH04MW-NH                        |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | GR            | -                           |
| 3            | GR            | -                           |
| 4            | BR            | - [Without PBD]             |
| 4            | W             | - [With PBD]                |

|                |                   |
|----------------|-------------------|
| Connector No.  | D170              |
| Connector Name | HANDS FREE SENSOR |
| Connector Type | TH08FW-NH         |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | Signal Name [Specification] |
| 2            | W             | Power Management Port       |
| 3            | W             | Output Sensor               |
| 4            | W             | GND                         |
| 4            | W             | Cancel Signal               |

JRLWDS700GB

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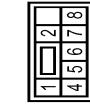
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                         |
|----------------|-------------------------|
| Connector No.  | D172                    |
| Connector Name | BACK DOOR LOCK ASSEMBLY |
| Connector Type | NS08FW-CS               |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 4            | W             | -                           |
| 5            | W             | -                           |
| 6            | W             | -                           |
| 7            | W             | -                           |
| 8            | B             | -                           |

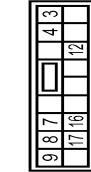
|                |              |
|----------------|--------------|
| Connector No.  | E7           |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MR-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification]        |
|--------------|---------------|------------------------------------|
| 1            | BR            | - [With MR20 or QR25 engine]       |
| 2            | BR            | - [With R3M engine]                |
| 3            | G             | - [With R3M engine]                |
| 4            | R             | -                                  |
| 5            | B             | - [With MR20 engine]               |
| 6            | L             | - [With R3M engine]                |
| 8            | LG            | - [With QR25 engine]               |
| 9            | B             | -                                  |
| 7            | G             | -                                  |
| 8            | V             | - [With MR20 engine or R3M engine] |
| 8            | W             | - [With QR25 engine]               |

|    |    |                              |
|----|----|------------------------------|
| 9  | BG | - [With R3M engine]          |
| 9  | BR | - [With MR20 engine]         |
| 10 | BR | -                            |
| 11 | Y  | -                            |
| 12 | L  | - [With R3M engine]          |
| 12 | LG | - [With QR25 engine]         |
| 13 | BR | - [With MR20 or QR25 engine] |
| 13 | R  | -                            |
| 15 | L  | -                            |
| 16 | SB | -                            |

|                |   |
|----------------|---|
| Connector No.  | E10   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS16FGY-CS  |



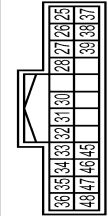
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | P             | -                           |
| 4            | Y             | -                           |
| 7            | L             | -                           |
| 8            | B             | -                           |
| 9            | L             | -                           |
| 12           | B             | -                           |
| 16           | G             | -                           |
| 17           | W             | -                           |

|                |   |
|----------------|---|
| Connector No.  | E11   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS16FGY-NH  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 19           | V             | -                           |
| 20           | R             | -                           |
| 21           | LG            | -                           |
| 22           | Y             | -                           |
| 23           | B             | -                           |
| 24           | W             | -                           |

|                |   |
|----------------|---|
| Connector No.  | E12   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | TH24FGY-NH  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 25           | LG            | -                           |
| 26           | W             | -                           |
| 27           | SB            | -                           |
| 28           | P             | -                           |
| 30           | L             | -                           |
| 31           | G             | -                           |
| 32           | B             | -                           |
| 33           | B             | -                           |
| 34           | LG            | -                           |
| 35           | V             | -                           |
| 36           | Y             | -                           |
| 37           | B             | -                           |
| 38           | GR            | -                           |
| 39           | BR            | -                           |

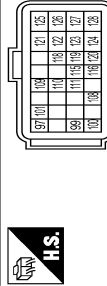
|    |   |   |
|----|---|---|
| 45 | L | - |
| 46 | P | - |
| 47 | W | - |
| 48 | R | - |

|                |                 |
|----------------|-----------------|
| Connector No.  | E15             |
| Connector Name | FUSE BLOCK (JB) |
| Connector Type | NS10FW-CS       |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 10P          | L             | -                           |
| 1F           | W             | -                           |
| 5F           | V             | -                           |
| 6F           | Y             | -                           |

|                |                 |
|----------------|-----------------|
| Connector No.  | E16             |
| Connector Name | ECM             |
| Connector Type | RH24FB-R2B-L-LH |



| Terminal No. | Color Of Wire | Signal Name [Specification]  |
|--------------|---------------|------------------------------|
| 97           | W             | BAROMETRIC PRESSURE SENSOR   |
| 99           | P             | CANL                         |
| 100          | L             | CANH                         |
| 101          | Y             | SENSOR POWER SUPPLY          |
| 108          | R             | CLUTCH PEDAL POSITION SWITCH |
| 109          | LG            | IGNITION SWITCH              |
| 110          | G             | ASCD STEERING SWITCH         |
| 111          | BR            | SENSOR GROUND                |
| 115          | V             | STOP LAMP SWITCH             |
| 116          | GR            | BRAKE PEDAL POSITION SWITCH  |

JRLWD5701GB



# EXTERIOR LIGHTING SYSTEM

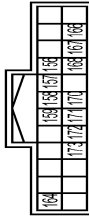
< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|     |    |                                     |
|-----|----|-------------------------------------|
| 118 | SB | SENSOR POWER SUPPLY                 |
| 119 | Y  | ACCELERATOR PEDAL POSITION SENSOR 2 |
| 120 | LG | SENSOR GROUND                       |
| 121 | BR | POWER SUPPLY FOR ECM                |
| 122 | V  | SENSOR POWER SUPPLY                 |
| 123 | B  | ECM GROUND                          |
| 124 | R  | SENSOR GROUND                       |
| 125 | B  | ECM GROUND                          |
| 126 | GR | ACCELERATOR PEDAL POSITION SENSOR 1 |
| 127 | R  | SENSOR GROUND                       |
| 128 | B  | ECM GROUND                          |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E23                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | IT24FB-NH                 |



| Terminal No. | Wire | Signal Name [Specification]     |
|--------------|------|---------------------------------|
| 156          | V    | CLUTCH INTERLOCK SW             |
| 157          | LG   | STOP LAMP SW 2                  |
| 158          | W    | STOP LAMP SW 1                  |
| 159          | R    | ASCD CLUTCH SWITCH              |
| 164          | Y    | INTELLIGENT KEY WARNING BUZZER  |
| 166          | P    | STEERING LOCK UNIT POWER SUPPLY |
| 167          | BR   | TURN SIG LH (FRONT)             |
| 168          | GR   | TURN SIG RH (FRONT)             |
| 170          | L    | PTC RELAY-3 CONTROL             |
| 171          | G    | STARTER RELAY CONT              |
| 172          | V    | PTC RELAY-1 CONTROL             |
| 173          | BG   | PTC RELAY-2 CONTROL             |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E27                       |
| Connector Name | FRONT TURN SIGNAL LAMP LH |
| Connector Type | RS02FGY                   |



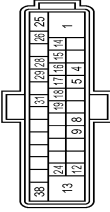
| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | BR   | -                           |
| 2            | B    | -                           |

|                |                     |
|----------------|---------------------|
| Connector No.  | E28                 |
| Connector Name | FRONT HEIGHT SENSOR |
| Connector Type | RH03FB              |



| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | W    | SIGNAL                      |
| 2            | B    | -                           |
| 3            | BR   | VDC                         |

|                |   |
|----------------|---|
| Connector No.  | E36   |
| Connector Name | ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) |
| Connector Type | BE24FB-BH/2-BJ/2-RH                           |



| Terminal No. | Wire   | Signal Name [Specification]      |
|--------------|--------|----------------------------------|
| 1            | Y      | MOTOR POWER SUPPLY               |
| 4            | SB     | FR RH WHEEL SENSOR SIGNAL        |
| 5            | SB     | BRAKE VACUUM SENSOR POWER SUPPLY |
| 6            | V      | FR LH WHEEL SENSOR SIGNAL        |
| 8            | P      | FR LH WHEEL SENSOR SIGNAL        |
| 9            | Y      | THrottle control SWITCH SIGNAL   |
| 12           | LG     | BRAKE VACUUM SENSOR SIGNAL       |
| 13           | B      | GROUND (MOTOR)                   |
| 14           | P      | CAN-L                            |
| 15           | BR     | VDC OFF SWITCH SIGNAL            |
| 16           | R      | FR RH WHEEL SENSOR POWER SUPPLY  |
| 17           | Y      | RR RH WHEEL SENSOR POWER SUPPLY  |
| 18           | G      | RR LH WHEEL SENSOR SIGNAL        |
| 19           | W      | FR LH WHEEL SENSOR POWER SUPPLY  |
| 24           | SHIELD | BRAKE VACUUM SENSOR GROUND       |
| 25           | BR     | VALVE POWER SUPPLY               |
| 26           | L      | CAN-H                            |
| 28           | GR     | IGNITION POWER SUPPLY            |
| 29           | LG     | RR RH WHEEL SENSOR SIGNAL        |
| 31           | BR     | RR LH WHEEL SENSOR POWER SUPPLY  |
| 38           | B      | GROUND (VALVE)                   |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E46                       |
| Connector Name | FRONT TURN SIGNAL LAMP RH |
| Connector Type | RS02FGY                   |



| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | GR   | -                           |
| 2            | B    | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | E50          |
| Connector Name | WIRE TO WIRE |
| Connector Type | M02MM-GY-LC  |



| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | GR   | -                           |
| 2            | B    | -                           |

JRLWD5702GB

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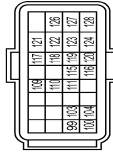
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                 |
|----------------|-----------------|
| Connector No.  | E60             |
| Connector Name | ECM             |
| Connector Type | RH24FB-R28-L-LH |



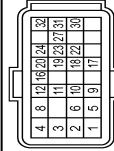
| Terminal No. | Color | Wire | Signal Name [Specification]         |
|--------------|-------|------|-------------------------------------|
| 99           | P     |      | CAN COMMUNICATION LINE (CANL)       |
| 100          | L     |      | CAN COMMUNICATION LINE (CANH)       |
| 103          | Y     |      | REFRIGERANT PRESSURE SENSOR         |
| 104          | R     |      | SENSOR POWER SUPPLY                 |
| 109          | LG    |      | IGNITION SWITCH                     |
| 110          | G     |      | ASCD STEERING SWITCH                |
| 111          | BR    |      | SENSOR GROUND                       |
| 115          | V     |      | STOP LAMP SWITCH                    |
| 116          | GR    |      | BRAKE PEDAL POSITION SWITCH         |
| 117          | W     |      | PNP SIGNAL                          |
| 118          | SB    |      | SENSOR POWER SUPPLY                 |
| 119          | Y     |      | ACCELERATOR PEDAL POSITION SENSOR 2 |
| 120          | LG    |      | SENSOR GROUND                       |
| 121          | BR    |      | POWER SUPPLY FOR ECM                |
| 122          | V     |      | SENSOR POWER SUPPLY                 |
| 123          | BR    |      | ECM GROUND                          |
| 124          | W     |      | SENSOR GROUND                       |
| 126          | GR    |      | ACCELERATOR PEDAL POSITION SENSOR 1 |
| 127          | R     |      | SENSOR GROUND                       |
| 128          | BR    |      | ECM GROUND                          |

|                |              |
|----------------|--------------|
| Connector No.  | E61          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24MV-AH    |



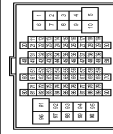
| Terminal No. | Color  | Wire | Signal Name [Specification] |
|--------------|--------|------|-----------------------------|
| 1            | V      |      |                             |
| 2            | L      |      |                             |
| 3            | P      |      |                             |
| 4            | W      |      |                             |
| 6            | P      |      |                             |
| 7            | G      |      |                             |
| 9            | P      |      |                             |
| 10           | BR     |      |                             |
| 12           | GR     |      |                             |
| 13           | SHIELD |      |                             |
| 14           | LG     |      |                             |
| 15           | P      |      |                             |
| 16           | V      |      |                             |
| 17           | SB     |      |                             |
| 18           | P      |      |                             |
| 19           | LG     |      |                             |
| 22           | R      |      |                             |
| 23           | Y      |      |                             |
| 24           | GR     |      |                             |

|                |                 |
|----------------|-----------------|
| Connector No.  | E79             |
| Connector Name | ECM             |
| Connector Type | RH24FB-R28-R-RH |



| Terminal No. | Color | Wire | Signal Name [Specification]                             |
|--------------|-------|------|---|
| 1            | B     |      | ECM GROUND  |
| 2            | W     |      | ACCELERATOR PEDAL POSITION SENSOR 1                     |
| 3            | Y     |      | SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 1       |
| 4            | B     |      | ECM GROUND  |
| 5            | L     |      | POWER SUPPLY FOR ECM                                    |
| 6            | G     |      | SENSOR POWER SUPPLY ACCELERATOR PEDAL POSITION SENSOR 1 |
| 8            | B     |      | ECM GROUND  |
| 9            | L     |      | FUEL HEATER AND WATER IN FUEL LEVEL SENSOR              |
| 10           | L     |      | SENSOR POWER SUPPLY ACCELERATOR PEDAL POSITION SENSOR 2 |
| 11           | V     |      | ACCELERATOR PEDAL POSITION SENSOR 2                     |
| 12           | P     |      | SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 2       |
| 16           | BG    |      | STOP LAMP SWITCH (With M/T)                             |
| 17           | R     |      | BRAKE PEDAL POSITION SWITCH (With CVT)                  |
| 18           | LG    |      | IGNITION SWITCH   |
| 19           | G     |      | ASCD STEERING SWITCH                                    |
| 20           | BR    |      | SENSOR GROUND ASCD STEERING SWITCH                      |
| 22           | G     |      | FUEL PUMP CONTROL MODULE (COMMAND)                      |
| 23           | V     |      | FUEL PUMP CONTROL MODULE (COMMONS)                      |
| 24           | R     |      | SPEED LIMITER MAIN SWITCH                               |
| 27           | V     |      | CLUTCH PEDAL POSITION SWITCH                            |
| 30           | BR    |      | ASCD MAIN SWITCH  |
| 31           | P     |      | CANL  |
| 32           | L     |      | CANH  |

|                |                   |
|----------------|-------------------|
| Connector No.  | E101              |
| Connector Name | WIRE TO WIRE      |
| Connector Type | TH80FDGY-CS16-TM4 |



| Terminal No. | Color | Wire | Signal Name [Specification] |
|--------------|-------|------|-----------------------------|
| 1            | G     |      |                             |
| 2            | W     |      |                             |
| 5            | G     |      |                             |
| 11           | BR    |      |                             |
| 12           | W     |      |                             |
| 13           | P     |      |                             |
| 14           | SB    |      |                             |
| 15           | V     |      |                             |

|    |    |  |  |
|----|----|--|--|
| 16 | P  |  |  |
| 17 | P  |  |  |
| 19 | G  |  |  |
| 20 | G  |  |  |
| 21 | BR |  |  |
| 22 | LG |  |  |
| 23 | Y  |  |  |
| 24 | SB |  |  |
| 25 | G  |  |  |
| 26 | B  |  |  |
| 27 | P  |  |  |
| 28 | R  |  |  |
| 29 | LG |  |  |
| 30 | P  |  |  |
| 92 | BR |  |  |
| 93 | GR |  |  |
| 94 | R  |  |  |
| 95 | L  |  |  |
| 97 | LG |  |  |

|                |                 |
|----------------|-----------------|
| Connector No.  | E105            |
| Connector Name | WIRE TO WIRE    |
| Connector Type | TH80FW-CS16-TM4 |



| Terminal No. | Color  | Wire | Signal Name [Specification] |
|--------------|--------|------|-----------------------------|
| 2            | W      |      |                             |
| 5            | V      |      |                             |
| 5            | W      |      |                             |
| 8            | L      |      |                             |
| 9            | LG     |      |                             |
| 10           | W      |      |                             |
| 20           | W      |      |                             |
| 21           | B      |      |                             |
| 22           | SHIELD |      |                             |
| 31           | Y      |      |                             |
| 32           | W      |      |                             |
| 33           | SB     |      |                             |
| 34           | LG     |      |                             |
| 35           | BG     |      |                             |

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|    |        |   |
|----|--------|---|
| 36 | LG     | - |
| 37 | V      | - |
| 38 | G      | - |
| 39 | BR     | - |
| 40 | L      | - |
| 41 | P      | - |
| 47 | GR     | - |
| 48 | SB     | - |
| 51 | P      | - |
| 52 | L      | - |
| 53 | W      | - |
| 54 | Y      | - |
| 55 | BR     | - |
| 56 | P      | - |
| 57 | B      | - |
| 58 | L      | - |
| 59 | W      | - |
| 60 | G      | - |
| 61 | BR     | - |
| 62 | V      | - |
| 63 | BR     | - |
| 64 | GR     | - |
| 65 | LG     | - |
| 66 | BG     | - |
| 67 | L      | - |
| 68 | R      | - |
| 71 | V      | - |
| 72 | L      | - |
| 73 | R      | - |
| 76 | L      | - |
| 77 | V      | - |
| 78 | LG     | - |
| 79 | SHIELD | - |
| 80 | GR     | - |
| 82 | Y      | - |
| 83 | SB     | - |
| 84 | L      | - |
| 85 | G      | - |
| 86 | Y      | - |
| 87 | B      | - |
| 88 | B      | - |
| 91 | R      | - |
| 92 | BR     | - |
| 93 | W      | - |
| 96 | GR     | - |
| 97 | R      | - |
| 98 | V      | - |
| 99 | Y      | - |

|                |                  |
|----------------|------------------|
| Connector No.  | E115             |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC         |



|                |                  |
|----------------|------------------|
| Connector No.  | E121             |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC         |



|                |                          |
|----------------|--------------------------|
| Connector No.  | E123                     |
| Connector Name | HEADLAMP AIMING MOTOR LH |
| Connector Type | HS03FGY                  |

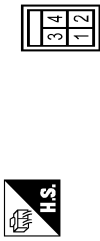


|              |       |          |                             |
|--------------|-------|----------|-----------------------------|
| Terminal No. | Color | Off Wire | Signal Name [Specification] |
| 1            | V     | -        | -                           |
| 2            | LG    | -        | -                           |
| 3            | L     | -        | -                           |
| 4            | W     | -        | -                           |

|              |       |          |                             |
|--------------|-------|----------|-----------------------------|
| Terminal No. | Color | Off Wire | Signal Name [Specification] |
| 1            | V     | -        | -                           |
| 2            | LG    | -        | -                           |
| 3            | Y     | -        | -                           |
| 4            | W     | -        | -                           |

|              |       |          |                             |
|--------------|-------|----------|-----------------------------|
| Terminal No. | Color | Off Wire | Signal Name [Specification] |
| 1            | -     | -        | -                           |
| 2            | -     | -        | -                           |
| 3            | -     | -        | -                           |

|                |                  |
|----------------|------------------|
| Connector No.  | E120             |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC         |



|                |                          |
|----------------|--------------------------|
| Connector No.  | E122                     |
| Connector Name | HEADLAMP AIMING MOTOR RH |
| Connector Type | HS03FGY                  |



|                |                          |
|----------------|--------------------------|
| Connector No.  | E143                     |
| Connector Name | HEADLAMP AIMING MOTOR LH |
| Connector Type | HS03FGY                  |



|              |       |          |                             |
|--------------|-------|----------|-----------------------------|
| Terminal No. | Color | Off Wire | Signal Name [Specification] |
| 1            | V     | -        | -                           |
| 2            | LG    | -        | -                           |
| 3            | Y     | -        | -                           |
| 4            | W     | -        | -                           |

|              |       |          |                             |
|--------------|-------|----------|-----------------------------|
| Terminal No. | Color | Off Wire | Signal Name [Specification] |
| 1            | -     | -        | -                           |
| 2            | -     | -        | -                           |
| 3            | -     | -        | -                           |

|              |       |          |                             |
|--------------|-------|----------|-----------------------------|
| Terminal No. | Color | Off Wire | Signal Name [Specification] |
| 1            | -     | -        | -                           |
| 2            | -     | -        | -                           |
| 3            | -     | -        | -                           |

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

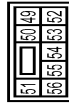
## EXTERIOR LIGHTING SYSTEM

|                |                          |
|----------------|--------------------------|
| Connector No.  | E144                     |
| Connector Name | HEADLAMP AIMING MOTOR RH |
| Connector Type | HS03FGY                  |



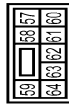
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | -             | -                           |
| 2            | -             | -                           |
| 3            | -             | -                           |

|                |   |
|----------------|---|
| Connector No.  | E148  |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS08BRC-CS  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 49           | R             | -                           |
| 50           | L             | -                           |
| 51           | V             | -                           |
| 52           | W             | -                           |
| 53           | GR            | -                           |
| 54           | LG            | -                           |
| 55           | SB            | -                           |
| 56           | BG            | -                           |

|                |   |
|----------------|---|
| Connector No.  | E149  |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS08FW-CS   |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 57           | W             | -                           |
| 58           | R             | -                           |
| 59           | G             | -                           |
| 60           | Y             | -                           |
| 61           | GR            | -                           |
| 62           | SB            | -                           |
| 63           | B             | -                           |
| 64           | V             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | E150         |
| Connector Name | WIRE TO WIRE |
| Connector Type | M02FW-GY-LC  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | B             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E151                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FGY-PR                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | GR            | -                           |
| 3            | GR            | -                           |
| 4            | B             | -                           |
| 6            | LG            | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E152                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FB-PR                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 7            | SB            | -                           |
| 8            | B             | -                           |
| 10           | SB            | -                           |
| 11           | B             | -                           |
| 12           | W             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E153                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FGY-PR                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | GR            | -                           |
| 3            | BG            | -                           |
| 4            | B             | -                           |
| 6            | G             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E154                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FB-PR                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 7            | L             | -                           |
| 8            | B             | -                           |
| 10           | L             | -                           |
| 11           | B             | -                           |
| 12           | P             | -                           |

JRLW05705GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                           |
|----------------|---------------------------|
| Connector No.  | E155                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FB-PR                 |



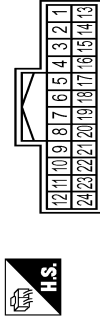
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | H, Lo-BEAM, GND             |
| 2            | LG            | L                           |
| 3            | SB            | Lo-BEAM +B                  |
| 4            | Y             | ECU OUTPUT                  |
| 5            | R             | DRL +                       |
| 6            | GR            | CLL +                       |
| 8            | B             | DRL, CLL, FSML, GND         |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E156                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FB-PR                 |



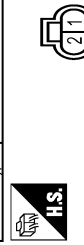
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | H, Lo-BEAM, GND             |
| 2            | G             | H-BEAM +B                   |
| 3            | L             | Lo-BEAM +B                  |
| 4            | GR            | ECU OUTPUT                  |
| 5            | R             | DRL +                       |
| 6            | BG            | CLL +                       |
| 8            | B             | DRL, CLL, FSML, GND         |

|                |              |
|----------------|--------------|
| Connector No.  | E157         |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-AH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | L             | -                           |
| 3            | P             | -                           |
| 4            | W             | -                           |
| 6            | P             | -                           |
| 7            | G             | -                           |
| 9            | P             | -                           |
| 10           | BR            | -                           |
| 12           | GR            | -                           |
| 13           | SHIELD        | -                           |
| 14           | LG            | -                           |
| 15           | P             | -                           |
| 16           | V             | -                           |
| 17           | SB            | -                           |
| 18           | P             | -                           |
| 19           | LG            | -                           |
| 22           | R             | -                           |
| 23           | V             | -                           |
| 24           | GR            | -                           |

|                |                   |
|----------------|-------------------|
| Connector No.  | E158              |
| Connector Name | FRONT FOG LAMP RH |
| Connector Type | FH202FB           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | GR            | -                           |

|                |                   |
|----------------|-------------------|
| Connector No.  | E159              |
| Connector Name | FRONT FOG LAMP LH |
| Connector Type | FH202FB           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | GR            | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E162                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FB                    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 9            | L             | -                           |
| 10           | B             | -                           |
| 11           | V             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E163                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FB                    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 9            | SB            | -                           |
| 10           | B             | -                           |
| 11           | V             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | F22                       |
| Connector Name | TRANSMISSION RANGE SWITCH |
| Connector Type | YD06FB-HS4                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | BG            | -                           |
| 2            | GR            | -                           |
| 3            | W             | -                           |
| 4            | V             | -                           |
| 5            | G             | -                           |
| 6            | BR            | -                           |
| 7            | Y             | -                           |
| 8            | GR            | -                           |

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EXL

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

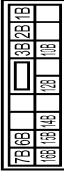
|                |                                   |
|----------------|-----------------------------------|
| Connector No.  | F46                               |
| Connector Name | REVERSE / NEUTRAL POSITION SWITCH |
| Connector Type | FEA03FG-LC                        |



|                |              |
|----------------|--------------|
| Connector No.  | F121         |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FBR-CS   |



|                |                     |
|----------------|---------------------|
| Connector No.  | F157                |
| Connector Name | BACK-UP LAMP SWITCH |
| Connector Type | RK02FB              |



|                |                  |
|----------------|------------------|
| Connector No.  | M2               |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FBR-CS       |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | G             | -                           |
| 2            | W             | -                           |
| 3            | SB            | -                           |

|                |   |
|----------------|---|
| Connector No.  | F72   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS16FW-CS   |

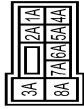


| Terminal No. | Color Of Wire | Signal Name [Specification]  |
|--------------|---------------|------------------------------|
| 65           | P             | -                            |
| 66           | L             | - [With R&M Engine]          |
| 67           | R             | - [With R&M Engine]          |
| 70           | BG            | - [With CVT]                 |
| 70           | GR            | - [With MT]                  |
| 71           | SB            | -                            |
| 72           | GR            | -                            |
| 73           | R             | - [With R&M Engine]          |
| 73           | Y             | - [With MR20 or QR25 Engine] |
| 75           | BR            | - [With MR20 or QR25 Engine] |
| 76           | L             | - [With R&M Engine]          |
| 76           | P             | - [With R&M Engine]          |
| 78           | L             | - [With QR25 engine]         |
| 78           | R             | - [With R&M Engine]          |
| 79           | G             | -                            |

| Terminal No. | Color Of Wire | Signal Name [Specification]        |
|--------------|---------------|------------------------------------|
| 1            | P             | - [With MR20 or QR25 engine]       |
| 1            | B             | - [With R&M engine]                |
| 2            | BR            | - [With QR25 engine]               |
| 2            | GR            | - [With MR20 engine]               |
| 2            | Y             | - [With R&M engine]                |
| 3            | G             | -                                  |
| 4            | BG            | -                                  |
| 5            | B             | - [With MR20 engine]               |
| 5            | L             | - [With R&M engine]                |
| 5            | LG            | - [With QR25 engine]               |
| 6            | V             | -                                  |
| 7            | G             | -                                  |
| 8            | V             | - [With MR20 engine or R&M engine] |
| 8            | W             | - [With QR25 engine]               |
| 9            | B             | - [With MR20 engine]               |
| 9            | W             | - [With R&M engine]                |
| 10           | BR            | -                                  |
| 11           | P             | - [Without ISS]                    |
| 11           | R             | - [With ISS]                       |
| 12           | G             | - [With QR25 engine]               |
| 12           | L             | - [With R&M engine]                |
| 13           | R             | - [With R&M engine]                |
| 13           | Y             | - [With MR20 or QR25 engine]       |
| 15           | L             | -                                  |
| 16           | LG            | -                                  |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | G             | -                           |
| 2            | W             | -                           |

|                |                  |
|----------------|------------------|
| Connector No.  | M1               |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS08FM-M2        |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1A           | L             | -                           |
| 2A           | LG            | -                           |
| 3A           | Y             | -                           |
| 4A           | LG            | -                           |
| 5A           | R             | -                           |
| 6A           | BG            | -                           |
| 7A           | BR            | -                           |
| 8A           | SB            | -                           |

| Terminal No. | Color Of Wire | Signal Name [Specification]        |
|--------------|---------------|------------------------------------|
| 10B          | GR            | - [With MR20 engine or R&M engine] |
| 10B          | LA/GR         | - [With QR25 Engine]               |
| 12B          | BR            | -                                  |
| 14B          | W             | -                                  |
| 16B          | W             | -                                  |
| 16B          | GR            | -                                  |
| 1B           | G             | -                                  |
| 2B           | R             | -                                  |
| 3B           | V             | -                                  |
| 6B           | LAL           | -                                  |
| 7B           | LAV           | -                                  |

|                |                  |
|----------------|------------------|
| Connector No.  | M3               |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FM-CS        |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 10C          | LG            | -                           |
| 13C          | LA/G          | -                           |
| 14C          | R             | -                           |
| 15C          | L             | -                           |
| 16C          | LAW           | -                           |
| 1C           | R             | -                           |
| 2C           | G             | -                           |
| 3C           | Y             | -                           |
| 4C           | LG            | -                           |

JRLWD5707GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|    |       |                 |
|----|-------|-----------------|
| 5C | GR    | -               |
| 6C | LA/R  | -               |
| 7C | Y     | -               |
| 8C | BR    | - [With ISS]    |
| 8C | LA/BR | - [Without ISS] |
| 9C | L     | -               |

|                |                     |
|----------------|---------------------|
| Connector No.  | M4                  |
| Connector Name | DATA LINK CONNECTOR |
| Connector Type | BD16FW              |



|    |    |    |    |
|----|----|----|----|
| 11 | 14 | 15 | 16 |
| 3  | 4  | 5  | 6  |
| 8  |    |    |    |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | LG            | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | L             | -                           |
| 8            | Y             | -                           |
| 11           | SB            | -                           |
| 14           | P             | -                           |
| 15           | BR            | -                           |
| 16           | W             | -                           |

|                |                        |
|----------------|------------------------|
| Connector No.  | M6                     |
| Connector Name | HEADLAMP AIMING SWITCH |
| Connector Type | TH04FW-NH              |



|   |   |   |   |
|---|---|---|---|
| 2 | 1 | 3 | 4 |
|---|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | GR            | GND                         |
| 3            | G             | -                           |

|   |    |   |
|---|----|---|
| 4 | LG | - |
|---|----|---|

|                |              |
|----------------|--------------|
| Connector No.  | M18          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24MW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | B             | -                           |
| 3            | Y             | -                           |
| 4            | V             | -                           |
| 5            | BR            | -                           |
| 6            | LG            | -                           |
| 7            | L             | -                           |
| 8            | Y             | -                           |
| 9            | G             | -                           |
| 10           | SHIELD        | -                           |
| 11           | R             | -                           |
| 13           | GR            | -                           |
| 14           | LA/SE         | -                           |
| 15           | LA/GR         | -                           |
| 16           | LA/V          | -                           |
| 17           | LA/L          | -                           |
| 18           | LA/BG         | -                           |
| 19           | LA/R          | -                           |
| 22           | LA/G          | -                           |
| 23           | BG            | -                           |
| 24           | SB            | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | M19          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 |    |    |    |    |    |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | R             | -                           |
| 3            | G             | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | Y             | -                           |
| 7            | R             | -                           |
| 8            | L             | -                           |
| 9            | BR            | -                           |
| 10           | GR            | -                           |
| 11           | Y             | -                           |
| 12           | BG            | -                           |
| 13           | G             | -                           |
| 14           | R             | -                           |
| 15           | P             | -                           |
| 16           | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | M20          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24MW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 3            | GR            | -                           |
| 5            | V             | -                           |

|    |        |   |
|----|--------|---|
| 6  | BR     | - |
| 7  | L      | - |
| 8  | Y      | - |
| 9  | G      | - |
| 10 | SHIELD | - |
| 11 | G      | - |
| 13 | LA/W   | - |
| 14 | LA/G   | - |
| 15 | LA/GR  | - |
| 16 | LA/P   | - |
| 17 | LA/SE  | - |
| 18 | LA/R   | - |
| 19 | GR     | - |
| 20 | GR     | - |
| 21 | LA/Y   | - |
| 22 | R      | - |
| 23 | SB     | - |
| 24 | BG     | - |

|                |              |
|----------------|--------------|
| Connector No.  | M21          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 |    |    |    |    |    |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | G             | -                           |
| 3            | R             | -                           |
| 4            | V             | -                           |
| 5            | W             | -                           |
| 6            | G             | -                           |
| 7            | L             | -                           |
| 8            | B             | -                           |
| 9            | BR            | -                           |
| 10           | GR            | -                           |
| 11           | Y             | -                           |
| 12           | BG            | -                           |
| 13           | GR            | -                           |
| 14           | W             | -                           |
| 15           | P             | -                           |
| 16           | B             | -                           |

JRLW5708GB

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EXL

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |              |
|----------------|--------------|
| Connector No.  | M23          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |

|                |               |
|----------------|---------------|
| Connector No.  | M45           |
| Connector Name | HAZARD SWITCH |
| Connector Type | TH04FW-NH     |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 7            | Y             | -                           |
| 8            | L             | -                           |
| 9            | R             | -                           |
| 13           | SB            | -                           |
| 15           | SB            | -                           |
| 16           | GR            | -                           |
| 17           | V             | -                           |
| 18           | G             | -                           |
| 19           | SB            | -                           |
| 20           | R             | -                           |
| 21           | B             | -                           |

|                |                    |
|----------------|--------------------|
| Connector No.  | M31                |
| Connector Name | COMBINATION SWITCH |
| Connector Type | TH16FW-NH          |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | LG            | INPUT 5                     |
| 2            | SB            | OUTPUT 1                    |
| 3            | GR            | INPUT 4                     |
| 4            | BG            | OUTPUT 4                    |
| 5            | G             | INPUT 3                     |
| 6            | W             | INPUT 2                     |
| 7            | V             | -                           |
| 8            | V             | -                           |
| 9            | G             | RR WASH MOTOR               |

|    |    |               |
|----|----|---------------|
| 10 | BR | OUTPUT 2      |
| 11 | Y  | FR WASH MOTOR |
| 14 | LG | IGN           |
| 15 | P  | OUTPUT 3      |
| 16 | GR | GND           |

|                |              |
|----------------|--------------|
| Connector No.  | M36          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS08FW-CS    |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | GR            | -                           |
| 2            | Y             | -                           |
| 3            | R             | -                           |
| 4            | GR            | -                           |

|                |                   |
|----------------|-------------------|
| Connector No.  | M42               |
| Connector Name | COMBINATION METER |
| Connector Type | TH12FW-NH         |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 41           | L             | CANL                        |
| 42           | P             | CANH                        |
| 43           | W             | ILLUMINATION CONTROL SIGNAL |
| 44           | LAV           | FUEL LEVEL SENSOR GROUND    |
| 45           | LAV           | BATTERY POWER SUPPLY        |
| 46           | LAVR          | IGNITION SIGNAL (WITH ISS)  |
| 47           | V             | IGNITION SIGNAL (WITH ISS)  |
| 48           | LG            | AV COMMUNICATION SIGNAL (I) |
| 49           | V             | AV COMMUNICATION SIGNAL (I) |
| 50           | BG            | OIL LEVEL SENSOR SIGNAL     |

|    |     |                          |
|----|-----|--------------------------|
| 51 | LAL | FUEL LEVEL SENSOR SIGNAL |
| 52 | B   | GROUND                   |

|                |               |
|----------------|---------------|
| Connector No.  | M45           |
| Connector Name | HAZARD SWITCH |
| Connector Type | TH04FW-NH     |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | GR            | -                           |
| 2            | Y             | -                           |
| 3            | R             | -                           |
| 4            | GR            | -                           |

|                |                               |
|----------------|-------------------------------|
| Connector No.  | M59                           |
| Connector Name | AIR BAG DIAGNOSIS SENSOR UNIT |
| Connector Type | N#28FY-EX                     |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 25           | LG            | INFLATOR AS-                |
| 26           | SB            | AST(-)                      |
| 27           | B             | AST(+)                      |
| 29           | Y             | DR1(-)                      |
| 30           | G             | DR1(+)                      |
| 31           | B             | EC2S(-)                     |
| 36           | BR            | DEACTIVE                    |
| 37           | R             | ACTIVE                      |
| 39           | SHIELD        | GND                         |
| 41           | W             | EC2S(+)                     |
| 45           | P             | CANL                        |
| 46           | L             | CANH                        |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 41           | L             | CANL                        |
| 42           | P             | CANH                        |
| 43           | W             | ILLUMINATION CONTROL SIGNAL |
| 44           | LAV           | FUEL LEVEL SENSOR GROUND    |
| 45           | LAV           | BATTERY POWER SUPPLY        |
| 46           | LAVR          | IGNITION SIGNAL (WITH ISS)  |
| 47           | V             | IGNITION SIGNAL (WITH ISS)  |
| 48           | LG            | AV COMMUNICATION SIGNAL (I) |
| 49           | V             | AV COMMUNICATION SIGNAL (I) |
| 50           | BG            | OIL LEVEL SENSOR SIGNAL     |

|    |    |            |
|----|----|------------|
| 47 | GR | AB ON IND  |
| 48 | W  | AB OFF IND |
| 49 | BG | K-LINE     |
| 50 | R  | IGN        |

|                |                 |
|----------------|-----------------|
| Connector No.  | M77             |
| Connector Name | WIRE TO WIRE    |
| Connector Type | TH80MW-CS16-TM4 |

|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 2            | LAVR          | -                           |
| 5            | V             | - [Without ISS]             |
| 5            | W             | - [With ISS]                |
| 8            | G             | -                           |
| 9            | Y             | -                           |
| 10           | R             | -                           |
| 20           | W             | -                           |
| 21           | B             | -                           |
| 22           | SHIELD        | -                           |
| 31           | V             | -                           |
| 32           | GR            | -                           |
| 33           | G             | -                           |
| 34           | LG            | -                           |
| 35           | BG            | -                           |
| 36           | LG            | -                           |
| 37           | V             | -                           |
| 38           | G             | -                           |
| 39           | BR            | -                           |
| 40           | L             | -                           |
| 41           | P             | -                           |
| 47           | Y             | -                           |
| 48           | BG            | -                           |
| 51           | GR            | -                           |
| 52           | SB            | -                           |
| 53           | R             | -                           |
| 54           | LAL           | -                           |
| 55           | BR            | -                           |
| 56           | P             | -                           |
| 57           | B             | -                           |
| 58           | L             | -                           |

JRLW5709GB



# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 59           | W      | -                           |
| 60           | LA/R   | -                           |
| 61           | P      | -                           |
| 62           | V      | -                           |
| 63           | LA/BR  | - [With SOW]                |
| 64           | Y      | - [Without SOW]             |
| 65           | GR     | -                           |
| 66           | BG     | -                           |
| 67           | L      | -                           |
| 68           | R      | -                           |
| 71           | V      | -                           |
| 72           | L      | -                           |
| 73           | Y      | -                           |
| 76           | L      | -                           |
| 77           | V      | -                           |
| 78           | LG     | -                           |
| 79           | SHIELD | -                           |
| 80           | L      | - [With ISS]                |
| 80           | LAL    | - [Without ISS]             |
| 82           | GR     | -                           |
| 83           | LG     | -                           |
| 84           | SB     | -                           |
| 85           | G      | -                           |
| 86           | G      | -                           |
| 87           | B      | -                           |
| 88           | B      | -                           |
| 91           | L      | -                           |
| 92           | W      | -                           |
| 93           | W      | -                           |
| 96           | LG     | -                           |
| 97           | BR     | -                           |
| 98           | V      | -                           |
| 99           | R      | -                           |

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M81           | WIRE TO WIRE | -                           |
| TH24MW-NH     | TH24MW-NH    | -                           |

| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | B    | -                           |
| 2            | GR   | -                           |
| 8            | SB   | -                           |
| 9            | BR   | -                           |
| 10           | GR   | -                           |
| 11           | L    | -                           |
| 12           | Y    | -                           |
| 13           | GR   | -                           |
| 14           | W    | -                           |

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 1            | B      | -                           |
| 3            | GR     | -                           |
| 3            | Y      | - [With SOW]                |
| 4            | V      | - [Without SOW]             |
| 5            | BR     | -                           |
| 6            | SB     | -                           |
| 7            | B      | -                           |
| 8            | L      | -                           |
| 9            | Y      | -                           |
| 10           | SHIELD | -                           |
| 11           | G      | -                           |
| 13           | LA/SE  | -                           |
| 14           | LA/GR  | -                           |
| 15           | LAV    | -                           |
| 16           | LAV    | -                           |
| 17           | LA/BS  | -                           |
| 18           | GR     | -                           |
| 21           | LAV    | -                           |

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M82           | WIRE TO WIRE | -                           |
| NS16MW-CS     | NS16MW-CS    | -                           |

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 1            | L      | -                           |
| 2            | Y      | -                           |
| 3            | W      | -                           |
| 4            | B      | -                           |
| 5            | SB     | -                           |
| 6            | G      | -                           |
| 7            | B      | -                           |
| 8            | L      | -                           |
| 9            | Y      | -                           |
| 10           | SHIELD | -                           |
| 11           | R      | -                           |
| 13           | B      | -                           |
| 14           | LAV    | -                           |
| 15           | LA/G   | -                           |
| 16           | LA/GR  | -                           |
| 17           | LAP    | -                           |
| 18           | LA/SE  | -                           |
| 19           | B      | -                           |
| 20           | LG     | -                           |
| 21           | BR     | -                           |
| 22           | LA/G   | -                           |

| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | B    | -                           |
| 2            | GR   | -                           |
| 8            | SB   | -                           |
| 9            | BR   | -                           |
| 10           | GR   | -                           |
| 11           | L    | -                           |
| 12           | Y    | -                           |
| 13           | GR   | -                           |
| 14           | W    | -                           |

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M83           | WIRE TO WIRE | -                           |
| TH24MW-NH     | TH24MW-NH    | -                           |

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 1            | L      | -                           |
| 2            | Y      | -                           |
| 3            | W      | -                           |
| 4            | B      | -                           |
| 5            | SB     | -                           |
| 6            | G      | -                           |
| 7            | B      | -                           |
| 8            | L      | -                           |
| 9            | Y      | -                           |
| 10           | SHIELD | -                           |
| 11           | R      | -                           |
| 13           | B      | -                           |
| 14           | LAV    | -                           |
| 15           | LA/G   | -                           |
| 16           | LA/GR  | -                           |
| 17           | LAP    | -                           |
| 18           | LA/SE  | -                           |
| 19           | B      | -                           |
| 20           | LG     | -                           |
| 21           | BR     | -                           |
| 22           | LA/G   | -                           |

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 1            | L      | -                           |
| 2            | Y      | -                           |
| 3            | W      | -                           |
| 4            | B      | -                           |
| 5            | SB     | -                           |
| 6            | G      | -                           |
| 7            | B      | -                           |
| 8            | L      | -                           |
| 9            | Y      | -                           |
| 10           | SHIELD | -                           |
| 11           | R      | -                           |
| 13           | B      | -                           |
| 14           | LAV    | -                           |
| 15           | LA/G   | -                           |
| 16           | LA/GR  | -                           |
| 17           | LAP    | -                           |
| 18           | LA/SE  | -                           |
| 19           | B      | -                           |
| 20           | LG     | -                           |
| 21           | BR     | -                           |
| 22           | LA/G   | -                           |

| Connector No. | Wire                      | Signal Name [Specification] |
|---------------|---------------------------|-----------------------------|
| M85           | BCM (BODY CONTROL MODULE) | -                           |
| NS16FBR-CS    | NS16FBR-CS                | -                           |

| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | L    | -                           |
| 2            | Y    | -                           |
| 3            | W    | -                           |
| 4            | B    | -                           |
| 5            | SB   | -                           |
| 6            | G    | -                           |
| 7            | Y    | -                           |
| 8            | R    | -                           |
| 9            | BR   | -                           |
| 10           | GR   | -                           |
| 11           | SB   | -                           |

| Terminal No. | Wire | Signal Name [Specification]   |
|--------------|------|-------------------------------|
| 137          | W    | BAT POWER SUPPLY (FUSE)       |
| 138          | SB   | INT ROOM LAMP CONT            |
| 139          | L    | PASSENGER DOOR UNLOCK OUTPUT  |
| 141          | V    | FRONT DOOR LOCK OUTPUT        |
| 143          | LAV  | POWER SUPPLY (FR DOOR LK ACT) |
| 144          | BG   | POWER SUPPLY (TURN SIGNAL)    |
| 145          | GR   | POWER SUPPLY (STOP LAMP)      |
| 146          | B    | GROUND                        |
| 147          | B    | GROUND                        |
| 148          | G    | DRIVER DOOR UNLOCK OUTPUT     |

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|     |    |                                 |
|-----|----|---------------------------------|
| 149 | W  | FRONT DOOR SUPERLOCK OUTPUT     |
| 151 | R  | POWER SUPPLY (REAR DOOR LK ACT) |
| 152 | LG | POWER SUPPLY (REAR WIPER)       |

|                |                           |
|----------------|---------------------------|
| Connector No.  | M86                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FB-NH                 |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| Terminal No. | Color Of Wire | Signal Name [Specification]             |
|--------------|---------------|---|
| 81           | L             | KEY SWITCH                              |
| 82           | LAR           | KEY SW (ST) [Without Intelligent key]   |
| 82           | W             | PASS DOOR REQ SW [With Intelligent key] |
| 84           | BR            | COMBI SW OUTPUT 2                       |
| 85           | SB            | COMBI SW OUTPUT 1                       |
| 86           | P             | COMBI SW OUTPUT 3                       |
| 87           | BG            | COMBI SW OUTPUT 4                       |
| 88           | W             | PUSHBTN IGN SW ILL CONT                 |
| 90           | Y             | SIL CONDITION                           |
| 94           | G             | DETENTION SW                            |
| 95           | V             | EXTENDED STORAGE FUSE SW                |
| 99           | R             | STOP/START OFF SW                       |
| 100          | V             | DRIVER DOOR ANT +                       |
| 101          | Y             | PUSH SW                                 |
| 104          | R             | DR DOOR UNLK SENS                       |
| 105          | Y             | DR DOOR REQ SW                          |
| 106          | W             | ACC OUTPUT                              |
| 107          | V             | SENSOR CANCEL SW                        |
| 109          | P             | NATS ANTENNA AMP                        |
| 110          | BG            | DIMMER SIGNAL                           |
| 111          | R             | DOOR LK STAT IND OUTPUT                 |
| 112          | SB            | STOP/START OFF SW INDICATOR             |
| 113          | LG            | NATS ANTENNA AMP                        |
| 114          | Y             | NATS ANTENNA AMP                        |
| 115          | W             | NATS ANTENNA AMP                        |
| 116          | BG            | ROOM ANT 1 +                            |
| 117          | GR            | ROOM ANT 1 +                            |
| 118          | SB            | PASSENGER DOOR ANT -                    |
| 119          | P             | PASSENGER DOOR ANT +                    |
| 120          | BR            | DRIVER DOOR ANT +                       |

|                |                           |
|----------------|---------------------------|
| Connector No.  | M87                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40GY-NH                 |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 60 |    |    | 57 | 58 |    |    |    | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 |
| 90 | 79 | 78 | 77 | 76 | 75 | 74 | 73 |    |    |    | 68 | 67 |    |    | 65 | 64 | 63 |    |

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[LED HEADLAMP]

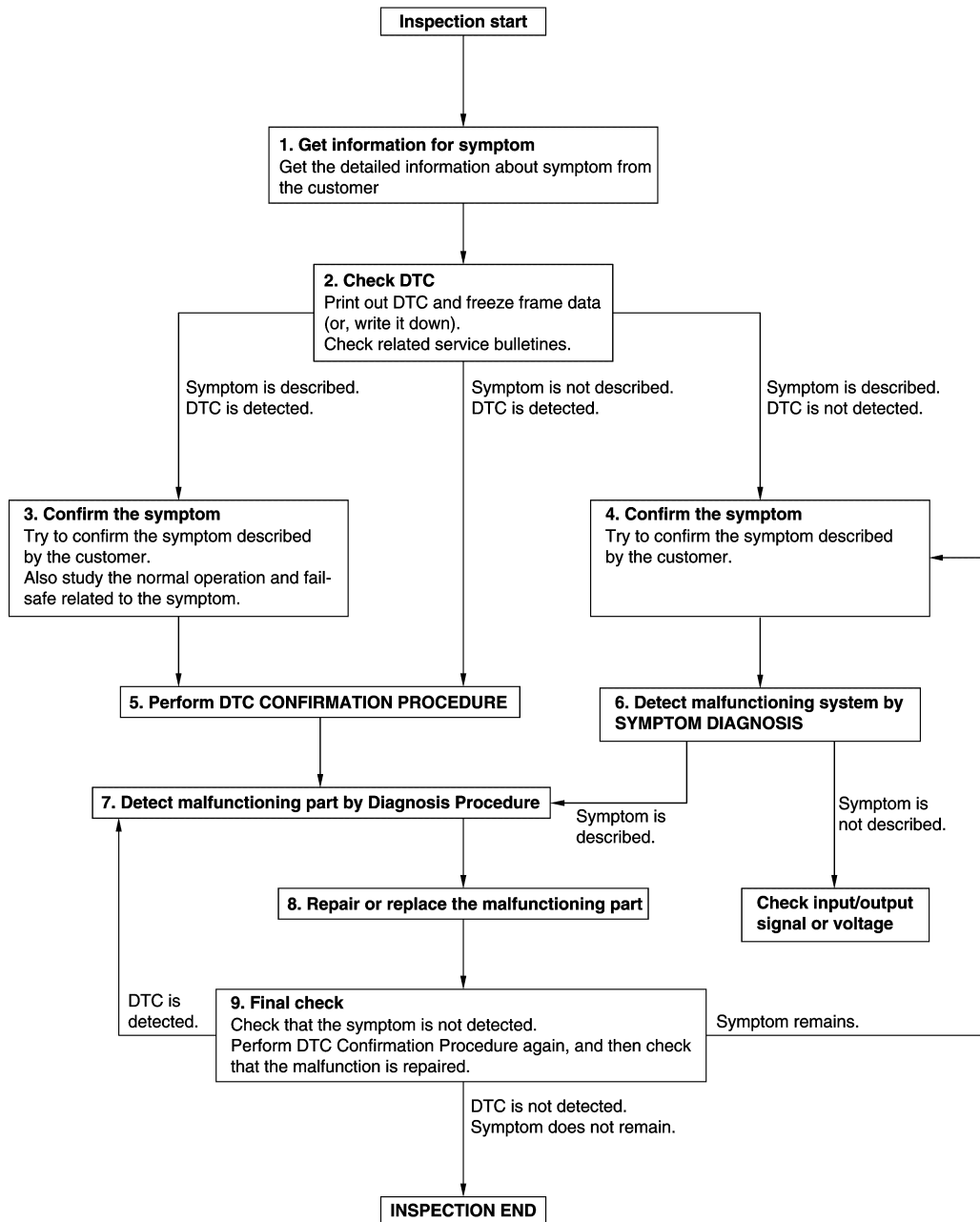
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010788785

OVERALL SEQUENCE



DETAILED FLOW

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[LED HEADLAMP]

---

## 1.GET INFORMATION FOR SYMPTOM

---

1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

## 2.CHECK DTC

---

1. Check DTC.
2. Perform the following procedure if DTC is detected.
  - Record DTC and freeze frame data (Print them out using CONSULT.)
  - Erase DTC.
  - Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.

Symptom is described, DTC is not detected>>GO TO 4.

Symptom is not described, DTC is detected>>GO TO 5.

## 3.CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

## 5.PERFORM DTC CONFIRMATION PROCEDURE

---

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time. If two or more DTCs are detected, refer to DTC INSPECTION PRIORITY CHART, and determine trouble diagnosis order.

### NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.  
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-44. "Intermittent Incident"](#).

## 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

---

Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

## 7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

---

# DIAGNOSIS AND REPAIR WORK FLOW

## < BASIC INSPECTION >

[LED HEADLAMP]

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-44. "Intermittent Incident"](#).

## 8.REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement.
3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

## 9.FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

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# LED HEADLAMP OPERATION INSPECTION

< BASIC INSPECTION >

[LED HEADLAMP]

## LED HEADLAMP OPERATION INSPECTION

### Work Procedure

INFOID:0000000010788786

#### 1. CHECK START

1. In the cool LED status (wait for more than 10 minutes after turning headlamp OFF), turn ON and turn OFF headlamp for the several times. Check that headlamp operates normally each time.
2. In the cool LED status, turn headlamp ON, wait until headlamp enters to the stable status (approximately 5 minutes after turning headlamp ON), and then check that headlamp operates normally without blinking or flickering.
3. In the warm LED status (turn headlamp ON for more than 15 minutes and wait for 1 minute after turning OFF), turn ON and turn OFF headlamp for the several times. Check that headlamp operates normally each time.
4. Turn headlamp ON for approximately 30 minutes, and then check that headlamp operates normally without difference in brightness between LH and RH, blinking or flickering.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to [EXL-176, "Symptom Table"](#).

## SENSOR INITIALIZE

### Description

INFOID:0000000010788787

Perform the sensor initialize when the following operation is performed.

- Replacing IPDM E/R
- Removing, installing or replacing front height sensor / rear height sensor
- Adjusting, removing, installing or replacing suspension components

### Work Procedure

INFOID:0000000010788788

#### 1.VEHICLE CONDITION CHECK

1. Park the vehicle in the straight-forward position.
2. Unload the vehicle (no passenger aboard).

>> GO TO 2.

#### 2.SENSOR INITIALIZE

 With CONSULT

1. Turn ignition switch ON.
2. Select "SENSOR INITIALIZE" in "Work Support" mode of "IPDM E/R" using CONSULT.
3. Touch "Start".
4. When "INITIALISE COMPLETE", touch "End".

#### NOTE:

If "INITIALISE NOT DONE" is indicated, IPDM E/R detects that the front height sensor signal or rear height sensor signal changes. The sensor initialize is cancelled. In this case, turn the ignition switch OFF to prevent the vehicle from the height change. Perform the sensor initialize again.

Is the sensor initialize completed?

- YES >> GO TO 3.  
NO >> Perform the sensor initialize again.

#### 3.SELF DIAGNOSTIC RESULT CHECK

 With CONSULT

1. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
2. Check DTC.

Is DTC detected?

- YES >> GO TO 2.  
NO >> WORK END

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EXL

# B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## DTC/CIRCUIT DIAGNOSIS

### B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

#### DTC Description

INFOID:0000000010788789

#### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                             | DTC detection condition   |
|---------|---|---|
| B121A   | FR FOG LAMP LH PWR SPLY CIRC<br>(Front fog lamp left hand power supply circuit) | [CIRC SHORT TO GRND]<br>When front fog lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the front fog lamp LH power supply circuit. |

#### POSSIBLE CAUSE

- Harness or connector
- Front fog lamp LH bulb
- IPDM E/R

#### FAIL-SAFE

Shuts off the power supply to the front fog lamp LH power supply circuit until the front fog lamp ON conditions are no longer satisfied.

#### DTC CONFIRMATION PROCEDURE

##### 1. PRECONDITIONING

###### ⓘ With CONSULT

1. Turn ignition switch ON.
2. Select "F FOG LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item            | Monitor status |
|-------------------------|----------------|
| F FOG LH CIRC MALFUNCTN | 0              |
|                         | 1              |

###### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the front fog lamp LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-100, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

##### 2. PERFORM DTC CONFIRMATION PROCEDURE

###### ⓘ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST, and front fog lamp switch ON.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

###### Is DTC detected?

YES >> Refer to [EXL-100, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:0000000010788790

##### 1. CHECK FRONT FOG LAMP LH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.



# B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

- Turn lighting switch OFF, and front fog lamp switch OFF.
- Disconnect IPDM E/R connector and front fog lamp LH connector.
- Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 51       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK FRONT FOG LAMP LH POWER SUPPLY

With CONSULT

- Connect IPDM E/R connector.
- Turn ignition switch ON
- Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
- With operating the test items, check the voltage between front fog lamp LH harness connector and ground.

| +                 |          | -      | Test item      |     | Voltage  |
|-------------------|----------|--------|----------------|-----|----------|
| Front fog lamp LH |          |        |                |     |          |
| Connector         | Terminal |        |                |     |          |
| E159              | 1        | Ground | FRONT FOG LAMP | On  | 9 – 16 V |
|                   |          |        |                | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

## 3.CHECK FRONT FOG LAMP LH BULB

Check the front fog lamp LH bulb. Refer to [EXL-101. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp LH bulb. Refer to [EXL-193. "Replacement"](#).

## Component Inspection

INFOID:0000000010788791

EXL

## 1.CHECK FRONT FOG LAMP LH BULB

- Turn ignition switch OFF.
- Disconnect front fog lamp LH connector.
- Check resistance of front fog lamp LH terminals.

| Front fog lamp LH |   | Resistance |
|-------------------|---|------------|
| Terminal          |   |            |
| 1                 | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp LH bulb. Refer to [EXL-193. "Replacement"](#).

# B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788792

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                              | DTC detection condition   |
|---------|--|---|
| B1231   | DTRL RH PWR SPLY CIRC<br>(Daytime running light right hand power supply circuit) | [CIRC SHORT TO GRND]<br>When daytime running light ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the daytime running light RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp RH internal circuit
  - LED (Daytime running light)
  - Control circuit
  - Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the daytime running light RH power supply circuit until the daytime running light ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Select "DTRL RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item           | Monitor status |
|------------------------|----------------|
| DTRL RH CIRC MALFUNCTN | 0              |
|                        | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the daytime running light RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-102, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓔ With CONSULT

1. Turn ignition switch OFF.
2. Start engine.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-102, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788793

#### 1. CHECK DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT (SHORT)

# B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and front combination lamp RH connector.
3. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 58       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK DAYTIME RUNNING LIGHT RH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Test item                   |     | Voltage  |
|---------------------------|----------|--------|-----------------------------|-----|----------|
| Front combination lamp RH |          |        |                             |     |          |
| Connector                 | Terminal |        |                             |     |          |
| E155                      | 5        | Ground | DAYTIME<br>RUNNING<br>LIGHT | On  | 9 – 16 V |
|                           |          |        |                             | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

## 3.CHECK DAYTIME RUNNING LIGHT RH

Check the daytime running light RH. Refer to [EXL-103, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-191, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788794

EXL

## 1.CHECK DAYTIME RUNNING LIGHT RH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Check resistance of front combination lamp RH terminals.

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 5                         | 8 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-191, "Removal and Installation"](#).

# B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788795

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                              | DTC detection condition   |
|---------|--|---|
| B1256   | FR FOG LAMP RH PWR SPLY CIRC<br>(Front fog lamp right hand power supply circuit) | [CIRC SHORT TO GRND]<br>When front fog lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the front fog lamp RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front fog lamp RH bulb
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the front fog lamp RH power supply circuit until the front fog lamp ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### With CONSULT

1. Turn ignition switch ON.
2. Select "F FOG RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item            | Monitor status |
|-------------------------|----------------|
| F FOG RH CIRC MALFUNCTN | 0              |
|                         | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the front fog lamp RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-104, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST, and front fog lamp switch ON.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-104, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788796

#### 1. CHECK FRONT FOG LAMP RH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF, and front fog lamp switch OFF.
3. Disconnect IPDM E/R connector and front fog lamp RH connector.

# B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 57       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK FRONT FOG LAMP RH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front fog lamp RH harness connector and ground.

| +                 |          | -      | Test item      |     | Voltage  |
|-------------------|----------|--------|----------------|-----|----------|
| Front fog lamp RH |          |        |                |     |          |
| Connector         | Terminal |        |                |     |          |
| E158              | 1        | Ground | FRONT FOG LAMP | On  | 9 – 16 V |
|                   |          |        |                | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

## 3.CHECK FRONT FOG LAMP RH BULB

Check the front fog lamp RH bulb. Refer to [EXL-105, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp RH bulb. Refer to [EXL-193, "Replacement"](#).

## Component Inspection

INFOID:0000000010788797

### 1.CHECK FRONT FOG LAMP RH BULB

1. Turn ignition switch OFF.
2. Disconnect front fog lamp RH connector.
3. Check resistance of front fog lamp RH terminals.

| Front fog lamp RH |   | Resistance |
|-------------------|---|------------|
| Terminal          |   |            |
| 1                 | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp RH bulb. Refer to [EXL-193, "Replacement"](#).

# B1C00 HEIGHT SENSOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1C00 HEIGHT SENSOR POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788798

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                 | DTC detection condition  |
|---------|---|--|
| B1C00   | HEIGHT SENSOR PWR SPLY CIRC<br>(Height sensor power supply circuit) | [CIRC SHORT TO GRND]<br>When ignition switch is ON and the height sensor power voltage that is output to the front height sensor (3-row seat models) and rear height sensor is 0.5 V or less continually for 2 seconds or more.    |
|         |   | [CIRC SHORT TO BATTERY]<br>When ignition switch is ON and the height sensor power voltage that is output to the front height sensor (3-row seat models) and rear height sensor is 5.5 V or more continually for 2 seconds or more. |

### POSSIBLE CAUSE

[CIRC SHORT TO GRND]

- Harness or connector
- IPDM E/R

[CIRC SHORT TO BATTERY]

- Harness or connector
- IPDM E/R

### FAIL-SAFE

Right and left headlamp aiming motors stop at the position when DTC is detected.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

Ⓐ With CONSULT

1. Turn ignition switch ON and wait at least 2 seconds or more.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Check DTC.

Is DTC detected?

YES >> Refer to [EXL-106, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788799

#### 1.CHECK DTC

Perform each inspection according to the displayed DTC.

Which DTC is displayed?

[CIRC SHORT TO GRND]>>GO TO 2.

[CIRC SHORT TO BATTERY]>>GO TO 3.

#### 2.CHECK HEIGHT SENSOR POWER SUPPLY CIRCUIT (SHORT TO GROUND)

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - IPDM E/R
  - Front height sensor (3-row seat models)
  - Rear height sensor
3. Check continuity between IPDM E/R harness connector and ground.

# B1C00 HEIGHT SENSOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E12       | 31       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 3.CHECK HEIGHT SENSOR POWER SUPPLY CIRCUIT (SHORT TO BATTERY)

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - IPDM E/R
  - Front height sensor (3-row seat models)
  - Rear height sensor
3. Check the voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Voltage<br>(Approx.) |
|-----------|----------|--------|----------------------|
| IPDM E/R  |          |        |                      |
| Connector | Terminal |        |                      |
| E12       | 31       | Ground | 0 V                  |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.PERFORM DTC CONFIRMATION PROCEDURE

ⓘ With CONSULT

1. Connect the each connectors.
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-106. "DTC Description"](#).

Is DTC detected again?

YES >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

NO >> INSPECTION END

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# B1C01 FRONT HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1C01 FRONT HEIGHT SENSOR SIGNAL

### DTC Description

INFOID:0000000011008913

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)     | DTC detection condition   |
|---------|---|---|
| B1C01   | FR HEIGHT SENSOR SIGNAL<br>(Front height sensor signal) | [CIRC SHORT TO BATTERY]<br>When ignition switch is ON and the front height sensor signal voltage that is input from the front height sensor is 4.95 V or more continually for 2 seconds or more.                            |
|         |   | [CIRC SHORT TO GROUND OR OPEN]<br>When ignition switch is ON and the front height sensor signal voltage that is input from the front height sensor is 0.05 V or less continually for 2 seconds or more.                     |
|         |   | [CIRC VOLTAGE OUT OF RANGE]<br>When ignition switch is ON and the front height sensor signal voltage that is input from the front height sensor is 4.375 V – 4.95 V, or 0.05 V – 0.625 V continually for 2 seconds or more. |

### POSSIBLE CAUSE

#### [CIRC SHORT TO BATTERY]

- Harness or connector
- Front height sensor
- IPDM E/R

#### [CIRC SHORT TO GROUND OR OPEN]

- Harness or connector
- Front height sensor
- IPDM E/R

#### [CIRC VOLTAGE OUT OF RANGE]

- Front height sensor installation condition
- Front height sensor
- IPDM E/R

### FAIL-SAFE

Right and left headlamp aiming motors stop at the position when DTC is detected.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch ON and wait at least 2 seconds or more.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-108. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000011008914

#### 1.CHECK DTC

Perform each inspection according to the displayed DTC.

##### Which DTC is displayed?

[CIRC SHORT TO BATTERY]>>GO TO 2.

[CIRC SHORT TO GROUND OR OPEN]>>GO TO 4.

[CIRC VOLTAGE OUT OF RANGE]>>GO TO 7.



# B1C01 FRONT HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## 2.CHECK FRONT HEIGHT SENSOR GROUND CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and front height sensor connector.
3. Check continuity between IPDM E/R harness connector and front height sensor harness connector.

| IPDM E/R  |          | Front height sensor |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| E12       | 32       | E28                 | 2        | Existed    |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK FRONT HEIGHT SENSOR SIGNAL CIRCUIT (SHORT TO BATTERY)

Check the voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Voltage<br>(Approx.) |
|-----------|----------|--------|----------------------|
| IPDM E/R  |          |        |                      |
| Connector | Terminal |        |                      |
| E12       | 26       | Ground | 0 V                  |

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

## 4.CHECK FRONT HEIGHT SENSOR POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and front height sensor connector.
3. Check continuity between IPDM E/R harness connector and front height sensor harness connector.

| IPDM E/R  |          | Front height sensor |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| E12       | 31       | E28                 | 3        | Existed    |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK FRONT HEIGHT SENSOR SIGNAL CIRCUIT (OPEN)

Check continuity between IPDM E/R harness connector and front height sensor harness connector.

| IPDM E/R  |          | Front height sensor |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| E12       | 26       | E28                 | 1        | Existed    |

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6.CHECK FRONT HEIGHT SENSOR SIGNAL CIRCUIT (SHORT TO GROUND)

Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E12       | 26       | Ground | Not existed |

## B1C01 FRONT HEIGHT SENSOR SIGNAL

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

### 7. CHECK INSTALLATION OF FRONT HEIGHT SENSOR

Check front height sensor is properly installed. Refer to [EXL-199, "Exploded View"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace malfunctioning parts and perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

### 8. PERFORM DTC CONFIRMATION PROCEDURE

⑧ With CONSULT

1. Connect IPDM E/R connector and front height sensor connector.
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-108, "DTC Description"](#).

Is DTC detected again?

YES >> GO TO 9.

NO >> INSPECTION END

### 9. REPLACE FRONT HEIGHT SENSOR

⑧ With CONSULT

1. Replace front height sensor. Refer to [EXL-200, "FRONT HEIGHT SENSOR : Removal and Installation"](#).
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-108, "DTC Description"](#).

Is DTC detected again?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> INSPECTION END

# B1C02 REAR HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1C02 REAR HEIGHT SENSOR SIGNAL

### DTC Description

INFOID:0000000010788800

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)    |                                | DTC detection condition  |
|---------|--|--------------------------------|--|
| B1C02   | RR HEIGHT SENSOR SIGNAL<br>(Rear height sensor signal) | [CIRC SHORT TO BATTERY]        | When ignition switch is ON and the rear height sensor signal voltage that is input from the rear height sensor is 4.95 V or more continually for 2 seconds or more.                        |
|         |  | [CIRC SHORT TO GROUND OR OPEN] | When ignition switch is ON and the rear height sensor signal voltage that is input from the rear height sensor is 0.05 V or less continually for 2 seconds or more.                        |
|         |  | [CIRC VOLTAGE OUT OF RANGE]    | When ignition switch is ON and the rear height sensor signal voltage that is input from the rear height sensor is 4.375 V – 4.95 V, or 0.05 V – 0.625 V continually for 2 seconds or more. |

### POSSIBLE CAUSE

#### [CIRC SHORT TO BATTERY]

- Harness or connector
- Rear height sensor
- IPDM E/R

#### [CIRC SHORT TO GROUND OR OPEN]

- Harness or connector
- Rear height sensor
- IPDM E/R

#### [CIRC VOLTAGE OUT OF RANGE]

- Rear height sensor installation condition
- Rear height sensor
- IPDM E/R

### FAIL-SAFE

Right and left headlamp aiming motors stop at the position when DTC is detected.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch ON and wait at least 2 seconds or more.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-111, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788801

#### 1.CHECK DTC

Perform each inspection according to the displayed DTC.

##### Which DTC is displayed?

[CIRC SHORT TO BATTERY]>>GO TO 2.

[CIRC SHORT TO GROUND OR OPEN]>>GO TO 4.

[CIRC VOLTAGE OUT OF RANGE]>>GO TO 7.

# B1C02 REAR HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## 2.CHECK REAR HEIGHT SENSOR GROUND CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and rear height sensor connector.
3. Check continuity between IPDM E/R harness connector and rear height sensor harness connector.

| IPDM E/R  |          | Rear height sensor |          | Continuity |
|-----------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector          | Terminal |            |
| E12       | 32       | B43                | 2        | Existed    |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK REAR HEIGHT SENSOR SIGNAL CIRCUIT (SHORT TO BATTERY)

Check the voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Voltage<br>(Approx.) |
|-----------|----------|--------|----------------------|
| IPDM E/R  |          |        |                      |
| Connector | Terminal |        |                      |
| E12       | 27       | Ground | 0 V                  |

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

## 4.CHECK REAR HEIGHT SENSOR POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and rear height sensor connector.
3. Check continuity between IPDM E/R harness connector and rear height sensor harness connector.

| IPDM E/R  |          | Rear height sensor |          | Continuity |
|-----------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector          | Terminal |            |
| E12       | 31       | B43                | 3        | Existed    |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK REAR HEIGHT SENSOR SIGNAL CIRCUIT (OPEN)

Check continuity between IPDM E/R harness connector and rear height sensor harness connector.

| IPDM E/R  |          | Rear height sensor |          | Continuity |
|-----------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector          | Terminal |            |
| E12       | 27       | B43                | 1        | Existed    |

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6.CHECK REAR HEIGHT SENSOR SIGNAL CIRCUIT (SHORT TO GROUND)

Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E12       | 27       | Ground | Not existed |

## B1C02 REAR HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

### 7. CHECK INSTALLATION OF REAR HEIGHT SENSOR

Check rear height sensor is properly installed. Refer to [EXL-199, "Exploded View"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace malfunctioning parts and perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

### 8. PERFORM DTC CONFIRMATION PROCEDURE

⑧ With CONSULT

1. Connect IPDM E/R connector and rear height sensor connector.
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-111, "DTC Description"](#).

Is DTC detected again?

YES >> GO TO 9.

NO >> INSPECTION END

### 9. REPLACE REAR HEIGHT SENSOR

⑧ With CONSULT

1. Replace rear height sensor. Refer to [EXL-200, "REAR HEIGHT SENSOR : Removal and Installation"](#).
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-111, "DTC Description"](#).

Is DTC detected again?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> INSPECTION END

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EXL

# B1C07 AIMING MOTOR DRIVE SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1C07 AIMING MOTOR DRIVE SIGNAL

### DTC Description

INFOID:0000000010788802

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)      | DTC detection condition   |
|---------|--|---|
| B1C07   | AIMING MOTOR DRIVE SIGNAL<br>(Aiming motor drive signal) | [CIRC SHORT TO GRND]<br>When ignition switch is ON, headlamp (LO) ON conditions are satisfied, and the aiming motor drive signal voltage that is output to the headlamp aiming motor is 1.25 V or less continually for 2 seconds or more.   |
|         |  | [CIRC SHORT TO BATTERY]<br>When ignition switch is ON, headlamp (LO) ON conditions are satisfied, and the aiming motor drive signal voltage that is output to the headlamp aiming motor is 11.25 V or more continually for 2 seconds or more.   |
|         |  | [SIGNAL COMPARE FAILURE]<br>When ignition switch is ON, headlamp (LO) ON conditions are satisfied, and the difference between the calculated value and actual output value for the aiming motor drive signal voltage that is output to the headlamp aiming motor is 1.75 V or more continually for 2 seconds or more. |

### POSSIBLE CAUSE

[CIRC SHORT TO GRND]

- Harness or connector
- Headlamp aiming motor
- IPDM E/R

[CIRC SHORT TO BATTERY]

- Harness or connector
- Headlamp aiming motor
- IPDM E/R

[SIGNAL COMPARE FAILURE]

- Harness or connector
- Headlamp aiming motor
- IPDM E/R

### FAIL-SAFE

Right and left headlamp aiming motors stop at the position when DTC is detected.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Turn lighting switch 2ND and wait at least 2 seconds or more.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

Is DTC detected?

YES >> Refer to [EXL-114, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788803

#### 1.CHECK DTC

Perform each inspection according to the displayed DTC.

Which DTC is displayed?

[CIRC SHORT TO GRND]>>GO TO 2.

# B1C07 AIMING MOTOR DRIVE SIGNAL

[LED HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

[CIRC SHORT TO BATTERY]>>GO TO 3.  
[SIGNAL COMPARE FAILURE]>>GO TO 4.

### 2.CHECK AIMING MOTOR DRIVE SIGNAL CIRCUIT (SHORT TO GROUND)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect the following connectors.
  - IPDM E/R
  - Headlamp aiming motor LH
  - Headlamp aiming motor RH
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 64       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 6.  
NO >> Repair or replace harness.

### 3.CHECK AIMING MOTOR DRIVE SIGNAL CIRCUIT (SHORT TO BATTERY)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect the following connectors.
  - IPDM E/R
  - Headlamp aiming motor LH
  - Headlamp aiming motor RH
4. Check the voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Voltage<br>(Approx.) |
|-----------|----------|--------|----------------------|
| IPDM E/R  |          |        |                      |
| Connector | Terminal |        |                      |
| E149      | 64       | Ground | 0 V                  |

Is the inspection result normal?

YES >> GO TO 6.  
NO >> Repair or replace harness.

### 4.CHECK AIMING MOTOR DRIVE SIGNAL

④ With CONSULT

1. Select "OPTIC AXIS ACTIVE TEST" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Test item                 |         | Voltage<br>(Approx.) |
|-----------|----------|--------|---------------------------|---------|----------------------|
| IPDM E/R  |          |        |                           |         |                      |
| Connector | Terminal |        |                           |         |                      |
| E149      | 64       | Ground | OPTIC AXIS<br>ACTIVE TEST | Default | 8.75 V               |
|           |          |        |                           | Lower   | 3.25 V               |

Is the inspection result normal?

YES >> GO TO 5.  
NO >> GO TO 6.

### 5.CHECK AIMING MOTOR DRIVE SIGNAL CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - IPDM E/R
  - Headlamp aiming motor LH

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

## B1C07 AIMING MOTOR DRIVE SIGNAL

[LED HEADLAMP]

### < DTC/CIRCUIT DIAGNOSIS >

- Headlamp aiming motor RH
- 3. Check continuity between IPDM E/R harness connector and headlamp aiming motor harness connector.

| IPDM E/R  |      |          | Headlamp aiming motor |          | Continuity |
|-----------|------|----------|-----------------------|----------|------------|
| Connector |      | Terminal | Connector             | Terminal |            |
| RH        | E149 | 64       | E144                  | 3        | Existed    |
| LH        |      |          | E143                  |          |            |

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

### 6.PERFORM DTC CONFIRMATION PROCEDURE

ⓘ With CONSULT

1. Connect IPDM E/R connector and headlamp aiming motor connector.
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-114, "DTC Description"](#).

Is DTC detected again?

YES >> GO TO 7.

NO >> INSPECTION END

### 7.REPLACE HEADLAMP AIMING MOTOR

ⓘ With CONSULT

1. Replace headlamp aiming motor. Refer to [EXL-192, "Disassembly and Assembly"](#).
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-114, "DTC Description"](#).

Is DTC detected again?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> INSPECTION END



# B1C11 FRONT HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1C11 FRONT HEIGHT SENSOR SIGNAL

### DTC Description

INFOID:0000000011008915

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)     |                                       | DTC detection condition   |
|---------|---|---------------------------------------|---|
| B1C11   | FR HEIGHT SENSOR SIGNAL<br>(Front height sensor signal) | [SIG<br>PRTCTN<br>CLCLTN IN-<br>CRCT] | When ignition switch is ON and the front height sensor signal voltage that is input from the front height sensor is 4.75 V or more, or 0.25 V or less compared to the initial setting value continually for 30 seconds or more. |

### POSSIBLE CAUSE

- Front height sensor installation condition
- Front height sensor
- IPDM E/R

### FAIL-SAFE

Right and left headlamp aiming motors stop at the position when DTC is detected.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch ON and wait at least 30 seconds or more.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Check DTC.

##### Is DTC detected?

- YES >> Refer to [EXL-117, "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000011008916

#### 1.CHECK FRONT HEIGHT SENSOR SIGNAL

1. Unload the vehicle (no passenger aboard).
2. Turn ignition switch ON.
3. Check the voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Voltage<br>(Approx.) |
|-----------|----------|--------|----------------------|
| IPDM E/R  |          |        |                      |
| Connector | Terminal |        |                      |
| E12       | 26       | Ground | 2.4 V                |

##### Is the inspection result normal?

- YES >> INSPECTION END  
NO >> GO TO 2.

#### 2.CHECK INSTALLATION OF FRONT HEIGHT SENSOR

Check front height sensor is properly installed. Refer to [EXL-199, "Exploded View"](#).

##### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace malfunctioning parts and perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

#### 3.PERFORM SENSOR INITIALIZE

Perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

## B1C11 FRONT HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Is the sensor initialize completed?

YES >> GO TO 4.

NO >> Replace front height sensor. Refer to [EXL-200. "FRONT HEIGHT SENSOR : Removal and Installation"](#).

### 4.PERFORM DTC CONFIRMATION PROCEDURE

Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE" to erase DTC memory of IPDM E/R.
4. Turn ignition switch OFF.
5. Perform DTC confirmation procedure. Refer to [EXL-117. "DTC Description"](#).

Is DTC detected again?

YES >> GO TO 5.

NO >> INSPECTION END

### 5.REPLACE FRONT HEIGHT SENSOR

Ⓔ With CONSULT

1. Replace front height sensor. Refer to [EXL-200. "FRONT HEIGHT SENSOR : Removal and Installation"](#).
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-117. "DTC Description"](#).

Is DTC detected again?

YES >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

NO >> INSPECTION END

# B1C12 REAR HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1C12 REAR HEIGHT SENSOR SIGNAL

### DTC Description

INFOID:0000000010788804

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)    |                                       | DTC detection condition   |
|---------|--|---------------------------------------|---|
| B1C12   | RR HEIGHT SENSOR SIGNAL<br>(Rear height sensor signal) | [SIG<br>PRTCTN<br>CLCLTN IN-<br>CRCT] | When ignition switch is ON and the rear height sensor signal voltage that is input from the rear height sensor is 4.75 V or more, or 0.25 V or less compared to the initial setting value continually for 30 seconds or more. |

### POSSIBLE CAUSE

- Rear height sensor installation condition
- Rear height sensor
- IPDM E/R

### FAIL-SAFE

Right and left headlamp aiming motors stop at the position when DTC is detected.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch ON and wait at least 30 seconds or more.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Check DTC.

##### Is DTC detected?

- YES >> Refer to [EXL-119, "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788805

#### 1.CHECK REAR HEIGHT SENSOR SIGNAL

1. Unload the vehicle (no passenger aboard).
2. Turn ignition switch ON.
3. Check the voltage between IPDM E/R harness connector and ground.

| +         |          | -      | Voltage<br>(Approx.) |
|-----------|----------|--------|----------------------|
| IPDM E/R  |          |        |                      |
| Connector | Terminal |        |                      |
| E12       | 27       | Ground | 1.8 V                |

##### Is the inspection result normal?

- YES >> INSPECTION END  
NO >> GO TO 2.

#### 2.CHECK INSTALLATION OF REAR HEIGHT SENSOR

Check rear height sensor is properly installed. Refer to [EXL-199, "Exploded View"](#).

##### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace malfunctioning parts and perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

#### 3.PERFORM SENSOR INITIALIZE

Perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

## B1C12 REAR HEIGHT SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Is the sensor initialize completed?

YES >> GO TO 4.

NO >> Replace rear height sensor. Refer to [EXL-200. "REAR HEIGHT SENSOR : Removal and Installation"](#).

### 4.PERFORM DTC CONFIRMATION PROCEDURE

Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE" to erase DTC memory of IPDM E/R.
4. Turn ignition switch OFF.
5. Perform DTC confirmation procedure. Refer to [EXL-119. "DTC Description"](#).

Is DTC detected again?

YES >> GO TO 5.

NO >> INSPECTION END

### 5.REPLACE REAR HEIGHT SENSOR

Ⓔ With CONSULT

1. Replace rear height sensor. Refer to [EXL-200. "REAR HEIGHT SENSOR : Removal and Installation"](#).
2. Turn ignition switch ON.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Touch "ERASE" to erase DTC memory of IPDM E/R.
5. Turn ignition switch OFF.
6. Perform DTC confirmation procedure. Refer to [EXL-119. "DTC Description"](#).

Is DTC detected again?

YES >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

NO >> INSPECTION END

# B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788806

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                             |                      | DTC detection condition   |
|---------|---|----------------------|---|
| B20CB   | DTRL LH PWR SPLY CIRC<br>(Daytime running light left hand power supply circuit) | [CIRC SHORT TO GRND] | When daytime running light ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the daytime running light LH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED (Daytime running light)
  - Control circuit
  - Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the daytime running light LH power supply circuit until the daytime running light ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "DTRL LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item           | Monitor status |
|------------------------|----------------|
| DTRL LH CIRC MALFUNCTN | 0              |
|                        | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the daytime running light LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-121, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch OFF.
2. Start engine.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-121, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788807

#### 1. CHECK DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT (SHORT)

# B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

[LED HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and front combination lamp LH connector.
3. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 49       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK DAYTIME RUNNING LIGHT LH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Test item                   |     | Voltage  |
|---------------------------|----------|--------|-----------------------------|-----|----------|
| Front combination lamp LH |          |        |                             |     |          |
| Connector                 | Terminal |        |                             |     |          |
| E156                      | 5        | Ground | DAYTIME<br>RUNNING<br>LIGHT | On  | 9 – 16 V |
|                           |          |        |                             | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

## 3.CHECK DAYTIME RUNNING LIGHT LH

Check the daytime running light LH. Refer to [EXL-122, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788808

## 1.CHECK DAYTIME RUNNING LIGHT LH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Check resistance of front combination lamp LH terminals.

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 5                         | 8 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).

# B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788809

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                          | DTC detection condition   |
|---------|--|---|
| B20CE   | HL (HI) LH PWR SPLY CIRC<br>[Headlamp (high) left hand power supply circuit] | [CIRC SHORT TO GRND]<br>When headlamp (HI) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (HI) LH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED [Headlamp (HI)]
  - LED headlamp control module
- Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (HI) LH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "HL (HI) LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (HI) LH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (HI) LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-123, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND, and lighting switch HI.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-123, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788810

#### 1. CHECK HEADLAMP (HI) LH POWER SUPPLY CIRCUIT (SHORT)

## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect IPDM E/R connector and front combination lamp LH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 59       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (HI) LH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Test item     |     | Voltage  |
|---------------------------|----------|--------|---------------|-----|----------|
| Front combination lamp LH |          |        |               |     |          |
| Connector                 | Terminal |        |               |     |          |
| E156                      | 2        | Ground | HEADLAMP (HI) | On  | 9 – 16 V |
|                           |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

### 3.CHECK HEADLAMP (HI) LH

Check the headlamp (HI) LH. Refer to [EXL-124, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788811

### 1.CHECK HEADLAMP (HI) LH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Check resistance of front combination lamp LH terminals.

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 2                         | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).



# B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788812

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                          |                      | DTC detection condition   |
|---------|--|----------------------|---|
| B20CF   | HL (HI) RH PWR SPLY CIRC<br>[Headlamp (high) left hand power supply circuit] | [CIRC SHORT TO GRND] | When headlamp (HI) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (HI) RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp RH internal circuit
  - LED [Headlamp (HI)]
  - LED headlamp control module
- Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (HI) RH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "HL (HI) RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (HI) RH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (HI) RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-125, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND, and lighting switch HI.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-125, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788813

#### 1. CHECK HEADLAMP (HI) RH POWER SUPPLY CIRCUIT (SHORT)

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect IPDM E/R connector and front combination lamp RH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 54       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (HI) RH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Test item     |     | Voltage  |
|---------------------------|----------|--------|---------------|-----|----------|
| Front combination lamp RH |          |        |               |     |          |
| Connector                 | Terminal |        |               |     |          |
| E155                      | 2        | Ground | HEADLAMP (HI) | On  | 9 – 16 V |
|                           |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

### 3.CHECK HEADLAMP (HI) RH

Check the headlamp (HI) RH. Refer to [EXL-126, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-191, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788814

### 1.CHECK HEADLAMP (HI) RH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Check resistance of front combination lamp RH terminals.

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 2                         | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-191, "Removal and Installation"](#).

# B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:000000010788815

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                         |                      | DTC detection condition   |
|---------|---|----------------------|---|
| B20D0   | HL (LO) LH PWR SPLY CIRC<br>[Headlamp (low) left hand power supply circuit] | [CIRC SHORT TO GRND] | When headlamp (LO) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (LO) LH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED [Headlamp (LO)]
  - LED headlamp control module
- Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (LO) LH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "HL (LO) LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (LO) LH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (LO) LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-127, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-127, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010788816

#### 1. CHECK HEADLAMP (LO) LH POWER SUPPLY CIRCUIT (SHORT)

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

[LED HEADLAMP]

### < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect IPDM E/R connector and front combination lamp LH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 50       | Ground | Not existed |

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (LO) LH POWER SUPPLY

#### With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Test item     |     | Voltage  |
|---------------------------|----------|--------|---------------|-----|----------|
| Front combination lamp LH |          |        |               |     |          |
| Connector                 | Terminal |        |               |     |          |
| E156                      | 3        | Ground | HEADLAMP (LO) | On  | 9 – 16 V |
|                           |          |        |               | Off | 0 – 1 V  |

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

### 3.CHECK HEADLAMP (LO) LH

Check the headlamp (LO) LH. Refer to [EXL-128, "Component Inspection"](#).

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788817

### 1.CHECK HEADLAMP (LO) LH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Check resistance of front combination lamp LH terminals.

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 3                         | 1 | Except 0 Ω |

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).

# B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010788818

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                         | DTC detection condition   |
|---------|---|---|
| B20D1   | HL (LO) RH PWR SPLY CIRC<br>[Headlamp (low) left hand power supply circuit] | [CIRC SHORT TO GRND]<br>When headlamp (LO) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (LO) RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp RH internal circuit
  - LED [Headlamp (LO)]
  - LED headlamp control module
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (LO) RH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "HL (LO) RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (LO) RH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (LO) RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-129, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-129, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788819

#### 1. CHECK HEADLAMP (LO) RH POWER SUPPLY CIRCUIT (SHORT)

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect IPDM E/R connector and front combination lamp RH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 62       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (LO) RH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Test item     |     | Voltage  |
|---------------------------|----------|--------|---------------|-----|----------|
| Front combination lamp RH |          |        |               |     |          |
| Connector                 | Terminal |        |               |     |          |
| E155                      | 3        | Ground | HEADLAMP (LO) | On  | 9 – 16 V |
|                           |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

### 3.CHECK HEADLAMP (LO) RH

Check the headlamp (LO) RH. Refer to [EXL-130, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-191, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788820

### 1.CHECK HEADLAMP (LO) RH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Check resistance of front combination lamp RH terminals.

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 3                         | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-191, "Removal and Installation"](#).

# B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

### DTC Description

INFOID:000000010788821

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)               |                            | DTC detection condition  |
|---------|---|----------------------------|--|
| B20D2   | PARKING LAMP PWR SPLY CIRC<br>(Parking lamp power supply circuit) | [CIRC<br>SHORT TO<br>GRND] | When the parking lamp, license plate lamp, and tail lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the parking lamp LH power supply circuit or parking lamp RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED (Parking lamp)
  - Control circuit
  - Harness
- Front combination lamp RH internal circuit
  - LED (Parking lamp)
  - Control circuit
  - Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the parking lamp (LH/RH) power supply circuit until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### With CONSULT

1. Turn ignition switch ON.
2. Select "P LAMP CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item          | Monitor status |
|-----------------------|----------------|
| P LAMP CIRC MALFUNCTN | 0              |
|                       | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the parking lamp LH or parking lamp RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-132, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-132, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

# B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

NO-2 >> Confirmation after repair: INSPECTION END

## Diagnosis Procedure

INFOID:000000010788822

### 1.CHECK PARKING LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect IPDM E/R connector and front combination lamp connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |      |          | —      | Continuity  |
|-----------|------|----------|--------|-------------|
| Connector |      | Terminal |        |             |
| RH        | E149 | 61       | Ground | Not existed |
| LH        | E148 | 56       |        |             |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK PARKING LAMP POWER SUPPLY

Ⓟ With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "PARKING LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp harness connector and ground.

| +                      |      |   | -      | Test item    |     | Voltage  |
|------------------------|------|---|--------|--------------|-----|----------|
| Front combination lamp |      |   |        |              |     |          |
| Connector              |      |   |        | Terminal     |     |          |
| RH                     | E155 | 6 | Ground | PARKING LAMP | On  | 9 – 16 V |
|                        |      |   |        |              | Off | 0 – 1 V  |
| LH                     | E156 |   |        |              | On  | 9 – 16 V |
|                        |      |   |        |              | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3.CHECK PARKING LAMP

Check the parking lamp. Refer to [EXL-132. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the corresponding front combination lamp. Refer to [EXL-191. "Removal and Installation"](#).

## Component Inspection

INFOID:000000010788823

### 1.CHECK PARKING LAMP

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Check resistance of front combination lamp terminals.

Parking lamp LH

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 6                         | 8 | Except 0 Ω |



## B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Parking lamp RH

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 6                         | 8 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the corresponding front combination lamp. Refer to [EXL-191, "Removal and Installation"](#).

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## B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

#### DTC Description

INFOID:000000010788824

#### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                      |                            | DTC detection condition   |
|---------|--|----------------------------|---|
| B20D4   | TAIL LAMP LH PWR SPLY CIRC<br>(Tail lamp left hand power supply circuit) | [CIRC<br>SHORT TO<br>GRND] | When the parking lamp, license plate lamp, and tail lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the following power supply circuit. <ul style="list-style-type: none"><li>• Tail lamp LH (body side)</li><li>• Tail lamp LH (back door side)</li><li>• License plate lamp LH</li><li>• License plate lamp RH</li></ul> |

#### POSSIBLE CAUSE

- Harness or connector
- Tail lamp LH (body side) bulb
- Tail lamp LH (back door side) bulb
- Tail lamp LH (body side) bulb socket or harness
- Tail lamp LH (back door side) bulb socket or harness
- License plate lamp LH bulb
- License plate lamp RH bulb
- License plate lamp LH bulb socket
- License plate lamp RH bulb socket
- IPDM E/R

#### FAIL-SAFE

Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.

- Tail lamp LH (body side)
- Tail lamp LH (back door side)
- License plate lamp LH
- License plate lamp RH

#### DTC CONFIRMATION PROCEDURE

##### 1. PRECONDITIONING

###### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "T LAMP LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item             | Monitor status |
|--------------------------|----------------|
| T LAMP LH CIRC MALFUNCTN | 0              |
|                          | 1              |

###### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the tail lamp LH (body side), tail lamp LH (back door side), license plate lamp LH or license plate lamp RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-135, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

##### 2. PERFORM DTC CONFIRMATION PROCEDURE

###### Ⓐ With CONSULT

# B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

[LED HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

### Is DTC detected?

- YES >> Refer to [EXL-135, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

## Diagnosis Procedure

INFOID:0000000010788825

### 1.CHECK TAIL LAMP LH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect the following connectors.
  - IPDM E/R
  - Rear combination lamp LH (body side)
  - Rear combination lamp LH (back door side)
  - License plate lamp LH
  - License plate lamp RH
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E10       | 4        | Ground | Not existed |

### Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace harness.

### 2.CHECK TAIL LAMP LH POWER SUPPLY

#### With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between rear combination lamp LH (body side) harness connector and ground.

| +                                    |          | -      | Test item |     | Voltage  |
|--------------------------------------|----------|--------|-----------|-----|----------|
| Rear combination lamp LH (body side) |          |        |           |     |          |
| Connector                            | Terminal |        |           |     |          |
| B80                                  | 1        | Ground | TAIL LAMP | On  | 9 – 16 V |
|                                      |          |        |           | Off | 0 – 1 V  |

### Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

### 3.CHECK TAIL LAMP LH

Check the tail lamp LH. Refer to [EXL-136, "Component Inspection \(Tail Lamp\)"](#).

### Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace the malfunctioning part.

### 4.CHECK LICENSE PLATE LAMP

# B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Check the license plate lamp. Refer to [EXL-136, "Component Inspection \(License Plate Lamp\)"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection (Tail Lamp)

INFOID:000000001078826

### 1.CHECK TAIL LAMP LH

1. Turn ignition switch OFF.
2. Disconnect rear combination lamp LH (body side) and rear combination lamp LH (back door side) connector.
3. Check resistance of rear combination lamp LH (body side) and rear combination lamp LH (back door side) terminals.

Rear combination lamp LH (body side)

| Rear combination lamp LH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp LH (back door side)

| Rear combination lamp LH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2.CHECK TAIL LAMP LH

1. Remove tail lamp LH bulb
2. Check resistance of rear combination lamp LH (body side) and rear combination lamp LH (back door side) terminals.

Rear combination lamp LH (body side)

| Rear combination lamp LH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp LH (back door side)

| Rear combination lamp LH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace the corresponding tail lamp LH bulb. Refer to [EXL-204, "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (body side) or [EXL-206, "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Replacement"](#) (back door side).

NO >> Repair or replace the corresponding tail lamp LH bulb socket and harness.

## Component Inspection (License Plate Lamp)

INFOID:000000001078827

### 1.CHECK LICENSE PLATE LAMP

1. Turn ignition switch OFF.
2. Disconnect license plate lamp connector.
3. Check resistance of license plate lamp terminals.

## B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

License plate lamp LH

| License plate lamp LH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

License plate lamp RH

| License plate lamp RH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2. CHECK LICENSE PLATE LAMP

1. Remove license plate lamp bulb.
2. Check resistance of license plate lamp terminals.

License plate lamp LH

| License plate lamp LH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

License plate lamp RH

| License plate lamp RH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace the corresponding license plate lamp bulb. Refer to [EXL-209, "Replacement"](#).

NO >> Repair or replace the corresponding license plate lamp bulb socket.

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## B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

#### DTC Description

INFOID:000000010788828

#### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                       |                            | DTC detection condition   |
|---------|---|----------------------------|---|
| B20D5   | TAIL LAMP RH PWR SPLY CIRC<br>(Tail lamp right hand power supply circuit) | [CIRC<br>SHORT TO<br>GRND] | When the parking lamp, license plate lamp, and tail lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the following power supply circuit. <ul style="list-style-type: none"><li>• Tail lamp RH (body side)</li><li>• Tail lamp RH (back door side)</li></ul> |

#### POSSIBLE CAUSE

- Harness or connector
- Tail lamp RH (body side) bulb
- Tail lamp RH (back door side) bulb
- Tail lamp RH (body side) bulb socket or harness
- Tail lamp RH (back door side) bulb socket or harness
- IPDM E/R

#### FAIL-SAFE

Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.

- Tail lamp RH (body side)
- Tail lamp RH (back door side)

#### DTC CONFIRMATION PROCEDURE

##### 1. PRECONDITIONING

###### With CONSULT

1. Turn ignition switch ON.
2. Select "T LAMP RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item             | Monitor status |
|--------------------------|----------------|
| T LAMP RH CIRC MALFUNCTN | 0              |
|                          | 1              |

###### What is the monitor status?

- "0" >> GO TO 2.
- "1" >> A short circuit is detected multiple times in the tail lamp RH (body side) or tail lamp RH (back door side) power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-139, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

##### 2. PERFORM DTC CONFIRMATION PROCEDURE

###### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

###### Is DTC detected?

- YES >> Refer to [EXL-139, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

# B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## Diagnosis Procedure

INFOID:000000001078829

### 1.CHECK TAIL LAMP RH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect the following connectors.
  - IPDM E/R
  - Rear combination lamp RH (body side)
  - Rear combination lamp RH (back door side)
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E10       | 17       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK TAIL LAMP RH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between rear combination lamp RH (body side) harness connector and ground.

| +                                    |          | -      | Test item |     | Voltage  |
|--------------------------------------|----------|--------|-----------|-----|----------|
| Rear combination lamp RH (body side) |          |        |           |     |          |
| Connector                            | Terminal |        |           |     |          |
| B59                                  | 1        | Ground | TAIL LAMP | On  | 9 – 16 V |
|                                      |          |        |           | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3.CHECK TAIL LAMP RH

Check the tail lamp RH. Refer to [EXL-139. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:000000001078830

### 1.CHECK TAIL LAMP RH

1. Turn ignition switch OFF.
2. Disconnect rear combination lamp RH (body side) and rear combination lamp RH (back door side) connector.
3. Check resistance of rear combination lamp RH (body side) and rear combination lamp RH (back door side) terminals.

## B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Rear combination lamp RH (body side)

| Rear combination lamp RH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp RH (back door side)

| Rear combination lamp RH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2. CHECK TAIL LAMP RH

1. Remove tail lamp RH bulb
2. Check resistance of rear combination lamp RH (body side) and rear combination lamp RH (back door side) terminals.

Rear combination lamp RH (body side)

| Rear combination lamp RH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp RH (back door side)

| Rear combination lamp RH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace the corresponding tail lamp RH bulb. Refer to [EXL-204. "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (body side) or [EXL-206. "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Replacement"](#) (back door side).

NO >> Repair or replace the corresponding tail lamp RH bulb socket and harness.



# B20DB HEIGHT SENSOR INITIALIZE NOT DONE

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20DB HEIGHT SENSOR INITIALIZE NOT DONE

### DTC Description

INFOID:0000000010788831

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                    |                       | DTC detection condition  |
|---------|--|-----------------------|--|
| B20DB   | HEIGHT SENS INITIALIZE NOT DONE<br>(Height Sensor Initialize not done) | [MISSING CALIBRATION] | Initialization incomplete status of the height sensor is detected when the ignition switch is turned ON. |
|         |  | [NOT CONFIGURED]      | "HLL" vehicle specification is not written to IPDM E/R when ignition switch is turned ON.                |

### POSSIBLE CAUSE

[MISSING CALIBRATION]

Sensor initialize is not completed

[NOT CONFIGURED]

Configuration is not completed

### FAIL-SAFE

Right and left headlamp aiming motors fix at the initial aiming position.

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

④ With CONSULT

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Check DTC.

Is DTC detected?

YES >> Refer to [EXL-141, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010788832

#### 1.CHECK DTC

Perform each inspection according to the displayed DTC.

Which DTC is displayed?

[MISSING CALIBRATION]>>GO TO 2.

[NOT CONFIGURED]>>GO TO 3.

#### 2.PERFORM SENSOR INITIALIZE

Perform sensor initialize. Refer to [EXL-99, "Work Procedure"](#).

>> INSPECTION END

#### 3.PERFORM CONFIGURATION

Perform configuration for "HLL" of IPDM E/R. Refer to [PCS-48, "Work Procedure"](#).

>> INSPECTION END

&lt; DTC/CIRCUIT DIAGNOSIS &gt;

## B20E2 LED HEADLAMP RH

## DTC Description

INFOID:0000000010788833

## DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)           | DTC detection condition   |
|---------|---|---|
| B20E2   | LED HEADLAMP RH<br>(Light emitting diode headlamp right hand) | [CMPNENT<br>INTERNAL<br>MLFNCTN]<br>When headlamp (LO) ON conditions are satisfied, and the headlamp warning RH signal voltage that is input from the LED headlamp control module is 2.2 V or more continually for 2 seconds or more. |

## POSSIBLE CAUSE

- Harness or connector
- Front combination lamp RH internal circuit
  - LED [Headlamp (LO)]
  - LED headlamp control module
  - Harness
- IPDM E/R

## FAIL-SAFE

Transmits the headlamp warning signal (CAN communication) to the combination meter when the headlamp (LO) ON conditions are satisfied. (When the ignition switch turns ON, the headlamp warning is displayed on the information display of the combination meter.)

## DTC CONFIRMATION PROCEDURE

## 1.CHECK DTC PRIORITY

If DTC B20E2 is displayed with DTC B20D1, first perform the confirmation procedure (trouble diagnosis) for DTC B20D1.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [EXL-129, "DTC Description"](#).  
 NO >> GO TO 2.

## 2.PERFORM DTC CONFIRMATION PROCEDURE

## ⓅWith CONSULT

1. Turn ignition switch ON.
2. Turn lighting switch 2ND and wait at least 2 seconds or more.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

Is DTC detected?

- YES >> Refer to [EXL-142, "Diagnosis Procedure"](#).  
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).  
 NO-2 >> Confirmation after repair: INSPECTION END

## Diagnosis Procedure

INFOID:0000000010788834

## 1.CHECK HEADLAMP (LO) RH OPERATION

## ⓅWith CONSULT

1. Turn ignition switch ON.
2. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
3. With operating the test items, check that the headlamp (LO) RH is turned ON.

**On : Headlamp (LO) RH ON**  
**Off : Headlamp (LO) RH OFF**

Is the inspection result normal?

- YES >> GO TO 2.

## B20E2 LED HEADLAMP RH

### < DTC/CIRCUIT DIAGNOSIS >

### [LED HEADLAMP]

NO >> Perform the headlamp (LO) RH circuit diagnosis. Refer to [EXL-147. "Diagnosis Procedure"](#).

### 2.CHECK HEADLAMP WARNING RH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Turn ignition switch ON
4. Check voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Voltage  |
|---------------------------|----------|--------|----------|
| Front combination lamp RH |          |        |          |
| Connector                 | Terminal |        |          |
| E155                      | 4        | Ground | 9 – 16 V |

Is the inspection result normal?

YES >> Replace front combination lamp RH. Refer to [EXL-191. "Removal and Installation"](#).

NO >> GO TO 3.

### 3.CHECK HEADLAMP WARNING RH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between front combination lamp RH harness connector and IPDM E/R harness connector.

| Front combination lamp RH |          | IPDM E/R  |          | Continuity |
|---------------------------|----------|-----------|----------|------------|
| Connector                 | Terminal | Connector | Terminal |            |
| E155                      | 4        | E149      | 60       | Existed    |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

NO >> Repair or replace harness.

EXL

&lt; DTC/CIRCUIT DIAGNOSIS &gt;

## B20E3 LED HEADLAMP LH

## DTC Description

INFOID:0000000010788835

## DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)  | DTC detection condition   |
|---------|--|---|
| B20E3   | LED HEADLAMP LH<br>(Light emitting diode headlamp left hand)<br>[CMPNENT<br>INTERNAL<br>MLFNCTN] | When headlamp (LO) ON conditions are satisfied, and the headlamp warning LH signal voltage that is input from the LED headlamp control module is 2.2 V or more continually for 2 seconds or more. |

## POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED [Headlamp (LO)]
  - LED headlamp control module
  - Harness
- IPDM E/R

## FAIL-SAFE

Transmits the headlamp warning signal (CAN communication) to the combination meter when the headlamp (LO) ON conditions are satisfied. (When the ignition switch turns ON, the headlamp warning is displayed on the information display of the combination meter.)

## DTC CONFIRMATION PROCEDURE

## 1.CHECK DTC PRIORITY

If DTC B20E3 is displayed with DTC B20D0, first perform the confirmation procedure (trouble diagnosis) for DTC B20D0.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [EXL-127, "DTC Description"](#).  
 NO >> GO TO 2.

## 2.PERFORM DTC CONFIRMATION PROCEDURE

## ⓅWith CONSULT

1. Turn ignition switch ON.
2. Turn lighting switch 2ND and wait at least 2 seconds or more.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

Is DTC detected?

- YES >> Refer to [EXL-144, "Diagnosis Procedure"](#).  
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).  
 NO-2 >> Confirmation after repair: INSPECTION END

## Diagnosis Procedure

INFOID:0000000010788836

## 1.CHECK HEADLAMP (LO) LH OPERATION

## ⓅWith CONSULT

1. Turn ignition switch ON.
2. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
3. With operating the test items, check that the headlamp (LO) LH is turned ON.

**On : Headlamp (LO) LH ON**  
**Off : Headlamp (LO) LH OFF**

Is the inspection result normal?

- YES >> GO TO 2.

## B20E3 LED HEADLAMP LH

### < DTC/CIRCUIT DIAGNOSIS >

### [LED HEADLAMP]

NO >> Perform the headlamp (LO) LH circuit diagnosis. Refer to [EXL-147, "Diagnosis Procedure"](#).

### 2.CHECK HEADLAMP WARNING LH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Turn ignition switch ON
4. Check voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Voltage  |
|---------------------------|----------|--------|----------|
| Front combination lamp LH |          |        |          |
| Connector                 | Terminal |        |          |
| E156                      | 4        | Ground | 9 – 16 V |

Is the inspection result normal?

YES >> Replace front combination lamp LH. Refer to [EXL-191, "Removal and Installation"](#).

NO >> GO TO 3.

### 3.CHECK HEADLAMP WARNING LH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between front combination lamp LH harness connector and IPDM E/R harness connector.

| Front combination lamp LH |          | IPDM E/R  |          | Continuity |
|---------------------------|----------|-----------|----------|------------|
| Connector                 | Terminal | Connector | Terminal |            |
| E156                      | 4        | E148      | 53       | Existed    |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Repair or replace harness.

EXL

# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## HEADLAMP (HI) CIRCUIT

### Component Function Check

INFOID:000000010788837

#### 1.CHECK HEADLAMP (HI) OPERATION

④ With CONSULT

1. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the headlamp (HI) is turned ON.

On : Headlamp (HI) ON

Off : Headlamp (HI) OFF

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to [EXL-146, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010788838

#### 1.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item     |     | Voltage  |
|-----------|------|----------|--------|---------------|-----|----------|
| IPDM E/R  |      |          |        |               |     |          |
| Connector |      | Terminal |        |               |     |          |
| RH        | E148 | 54       | Ground | HEADLAMP (HI) | On  | 9 – 16 V |
|           |      |          |        |               | Off | 0 – 1 V  |
| LH        | E149 | 59       |        |               | On  | 9 – 16 V |
|           |      |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E148 | 54       | E155                   | 2        | Existed    |
| LH        | E149 | 59       | E156                   |          |            |

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to [EXL-148, "Diagnosis Procedure"](#).

NO >> Repair or replace harness.

# HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## HEADLAMP (LO) CIRCUIT

### Component Function Check

INFOID:0000000010788839

#### 1.CHECK HEADLAMP (LO) OPERATION

④ With CONSULT

1. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the headlamp (LO) is turned ON.

**Lo** : Headlamp (LO) ON

**Off** : Headlamp (LO) OFF

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.

NO >> Refer to [EXL-147, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010788840

#### 1.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item        |     | Voltage  |
|-----------|------|----------|--------|------------------|-----|----------|
| IPDM E/R  |      |          |        |                  |     |          |
| Connector |      | Terminal |        |                  |     |          |
| RH        | E149 | 62       | Ground | HEADLAMP<br>(LO) | On  | 9 – 16 V |
|           |      |          |        |                  | Off | 0 – 1 V  |
| LH        | E148 | 50       |        |                  | On  | 9 – 16 V |
|           |      |          |        |                  | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK HEADLAMP (LO) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E149 | 62       | E155                   | 3        | Existed    |
| LH        | E148 | 50       | E156                   |          |            |

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to [EXL-148, "Diagnosis Procedure"](#).

NO >> Repair or replace harness.

## LED HEADLAMP

### Diagnosis Procedure

INFOID:0000000010788841

#### 1. CHECK LED HEADLAMP GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Check continuity between front combination lamp harness connector and ground.

| Front combination lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| RH                     | E155     | Ground | Existed    |
| LH                     | E156     |        |            |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2. CHECK LED HEADLAMP

Install the normal front combination lamp to the applicable headlamp. Check that the headlamp is turned ON. Refer to [EXL-98, "Work Procedure"](#).

Is the headlamp turned ON?

YES >> Replace the corresponding front combination lamp. Refer to [EXL-191, "Removal and Installation"](#).

NO >> LED headlamp is normal.



# HEADLAMP LEVELIZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## HEADLAMP LEVELIZER CIRCUIT

### Component Function Check

INFOID:0000000010788842

#### 1.CHECK HEADLAMP LEVELIZER OPERATION

④ With CONSULT

1. Turn ignition switch ON.
2. Turn lighting switch 2ND.
3. Select "OPTIC AXIS ACTIVE TEST" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test item, check light axis operation.

| Test item              |         | Light axis operation                          |
|------------------------|---------|---|
| OPTIC AXIS ACTIVE TEST | Default | Moves the light axis to the initial position. |
|                        | Lower   | Moves the light axis to the lowest position.  |

Is the inspection result normal?

- YES >> Headlamp levelizer circuit is normal.  
NO >> Refer to [EXL-149, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010788843

#### 1.CHECK HEADLAMP AIMING MOTOR FUSE

1. Turn ignition switch OFF.
2. Check that the following fuses are not fusing.

| Unit                  | Location | Fuse No. | Capacity |
|-----------------------|----------|----------|----------|
| Headlamp aiming motor | IPDM E/R | #97      | 10 A     |

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 2.CHECK HEADLAMP AIMING MOTOR POWER SUPPLY

1. Disconnect headlamp aiming motor connector.
2. Turn ignition switch ON.
3. Check voltage between headlamp aiming motor harness connector and ground.

| +                     |          | - | Voltage |          |
|-----------------------|----------|---|---------|----------|
| Headlamp aiming motor |          |   |         |          |
| Connector             | Terminal |   |         |          |
| RH                    | E144     | 1 | Ground  | 9 – 16 V |
| LH                    | E143     |   |         |          |

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> GO TO 3.

#### 3.CHECK HEADLAMP AIMING MOTOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connectors.
3. Check continuity between headlamp aiming motor harness connector and IPDM E/R connector.

## HEADLAMP LEVELIZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| Headlamp aiming motor |          | IPDM E/R  |          | Continuity |
|-----------------------|----------|-----------|----------|------------|
| Connector             | Terminal | Connector | Terminal |            |
| RH                    | E144     | E148      | 55       | Existed    |
| LH                    | E143     |           |          |            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 4. CHECK HEADLAMP AIMING MOTOR GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between headlamp aiming motor harness connector and IPDM E/R harness connector.

| Headlamp aiming motor |          | IPDM E/R  |          | Continuity |
|-----------------------|----------|-----------|----------|------------|
| Connector             | Terminal | Connector | Terminal |            |
| RH                    | E144     | E149      | 63       | Existed    |
| LH                    | E143     |           |          |            |

Is the inspection result normal?

YES >> Replace the corresponding front combination lamp. Refer to [EXL-191, "Removal and Installation"](#).

NO >> Repair or replace harness.

# PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## PARKING LAMP CIRCUIT

### Component Function Check

INFOID:00000001078844

#### 1.CHECK PARKING LAMP OPERATION

④ With CONSULT

1. Select "PARKING LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the parking lamp is turned ON.

**On** : Parking lamp ON  
**Off** : Parking lamp OFF

Is the inspection result normal?

- YES >> Parking lamp circuit is normal.  
NO >> Refer to [EXL-151, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:00000001078845

#### 1.CHECK PARKING LAMP OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "PARKING LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item    |     | Voltage  |
|-----------|------|----------|--------|--------------|-----|----------|
| IPDM E/R  |      |          |        |              |     |          |
| Connector |      | Terminal |        |              |     |          |
| RH        | E149 | 61       | Ground | PARKING LAMP | On  | 9 – 16 V |
|           |      |          |        |              | Off | 0 – 1 V  |
| LH        | E148 | 56       |        |              | On  | 9 – 16 V |
|           |      |          |        |              | Off | 0 – 1 V  |

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK PARKING LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E149 | 61       | E155                   | 6        | Existed    |
| LH        | E148 | 56       | E156                   |          |            |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness.

#### 3.CHECK PARKING LAMP GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.

## PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| Front combination lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| RH                     | E155     | Ground | Existed    |
| LH                     | E156     |        |            |

Is the inspection result normal?

- YES >> Replace the corresponding front combination lamp. Refer to [EXL-191, "Removal and Installation"](#).  
NO >> Repair or replace harness.

# TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## TAIL LAMP CIRCUIT

### Component Function Check

INFOID:000000001078846

#### 1.CHECK TAIL LAMP OPERATION

④ With CONSULT

1. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the tail lamp is turned ON.

**On** : Tail Lamp ON  
**Off** : Tail lamp OFF

Is the inspection result normal?

- YES >> Tail lamp circuit is normal.  
NO >> Refer to [EXL-153, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001078847

#### 1.CHECK TAIL LAMP OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - Rear combination lamp LH (body side)
  - Rear combination lamp RH (body side)
  - Rear combination lamp LH (back door side)
  - Rear combination lamp RH (back door side)
3. Turn ignition switch ON.
4. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |     |          | -      | Test item |     | Voltage  |
|-----------|-----|----------|--------|-----------|-----|----------|
| IPDM E/R  |     |          |        |           |     |          |
| Connector |     | Terminal |        |           |     |          |
| RH        | E10 | 17       | Ground | TAIL LAMP | On  | 9 – 16 V |
|           |     |          |        |           | Off | 0 – 1 V  |
| LH        |     | 4        |        |           | On  | 9 – 16 V |
|           |     |          |        |           | Off | 0 – 1 V  |

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK TAIL LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and each rear combination lamp harness connector.

Body side

| IPDM E/R  |     |          | Rear combination lamp (body side) |          | Continuity |
|-----------|-----|----------|-----------------------------------|----------|------------|
| Connector |     | Terminal | Connector                         | Terminal |            |
| RH        | E10 | 17       | B59                               | 1        | Existed    |
| LH        |     | 4        | B80                               |          |            |

# TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Back door side

| IPDM E/R  |     |          | Rear combination lamp (back door side) |          | Continuity |
|-----------|-----|----------|--|----------|------------|
| Connector |     | Terminal | Connector                              | Terminal |            |
| RH        | E10 | 17       | D156                                   | 1        | Existed    |
| LH        |     | 4        | D155                                   |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between each tail lamp harness connector and ground.

Body side

| Rear combination lamp (body side) |     |          | —      | Continuity |
|-----------------------------------|-----|----------|--------|------------|
| Connector                         |     | Terminal |        |            |
| RH                                | B59 | 1        | Ground | Existed    |
| LH                                | B80 |          |        |            |

Back door side

| Rear combination lamp (back door side) |          |          | —      | Continuity |
|--|----------|----------|--------|------------|
| Connector                              | Terminal | Terminal |        |            |
| RH                                     | D156     | 1        | Ground | Existed    |
| LH                                     | D155     |          |        |            |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK TAIL LAMP BULB

Check the applicable tail lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding tail lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding tail lamp bulb. Refer to [EXL-204. "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (body side) or [EXL-206. "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Replacement"](#) (back door side).

# LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## LICENSE PLATE LAMP CIRCUIT

### Component Function Check

INFOID:0000000010788848

#### 1.CHECK TAIL LAMP LH OPERATION

Check that tail lamp LH is turned ON when lighting switch is turned 1ST.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check tail lamp circuit. Refer to [EXL-153, "Component Function Check"](#).

#### 2.CHECK LICENSE PLATE LAMP OPERATION

Ⓔ With CONSULT

1. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.

2. With operating the test items, check that the license plate lamp is turned ON.

**On : License plate lamp ON**

**Off : License plate lamp OFF**

Is the inspection result normal?

YES >> License plate lamp circuit is normal.

NO >> Refer to [EXL-155, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010788849

#### 1.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector and license plate lamp connector.

3. Check continuity between IPDM E/R harness connector and license plate lamp harness connector.

| IPDM E/R  |     |          | License plate lamp |          | Continuity |
|-----------|-----|----------|--------------------|----------|------------|
| Connector |     | Terminal | Connector          | Terminal |            |
| RH        | E10 | 4        | D161               | 2        | Existed    |
| LH        |     |          | D162               |          |            |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between license plate lamp harness connector and ground.

| License plate lamp |      |          | —      | Continuity |
|--------------------|------|----------|--------|------------|
| Connector          |      | Terminal |        |            |
| RH                 | D161 | 1        | Ground | Existed    |
| LH                 | D162 |          |        |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK LICENSE PLATE LAMP BULB

Check the applicable license plate lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding license plate lamp bulb socket. Repair or replace if necessary.

NO >> Replace the corresponding license plate lamp bulb. Refer to [EXL-209, "Replacement"](#).

# DAYTIME RUNNING LIGHT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## DAYTIME RUNNING LIGHT CIRCUIT

### Component Function Check

INFOID:000000010788850

#### 1.CHECK DAYTIME RUNNING LIGHT OPERATION

④With CONSULT

1. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the daytime running light is turned ON.

On : Daytime running light ON

Off : Daytime running light OFF

Is the inspection result normal?

YES >> Daytime running light circuit is normal.

NO >> Refer to [EXL-156, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010788851

#### 1.CHECK DAYTIME RUNNING LIGHT OUTPUT VOLTAGE

④With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item                  |     | Voltage  |
|-----------|------|----------|--------|----------------------------|-----|----------|
| IPDM E/R  |      |          |        |                            |     |          |
| Connector |      | Terminal |        |                            |     |          |
| RH        | E149 | 58       | Ground | DAYTIME RUN-<br>NING LIGHT | On  | 9 – 16 V |
|           |      |          |        |                            | Off | 0 – 1 V  |
| LH        | E148 | 49       |        |                            | On  | 9 – 16 V |
|           |      |          |        |                            | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK DAYTIME RUNNING LIGHT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E149 | 58       | E155                   | 5        | Existed    |
| LH        | E148 | 49       | E156                   |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK DAYTIME RUNNING LIGHT GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.



## DAYTIME RUNNING LIGHT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| Front combination lamp |          | — | Continuity        |
|------------------------|----------|---|-------------------|
| Connector              | Terminal |   |                   |
| RH                     | E155     | 8 | Ground<br>Existed |
| LH                     | E156     |   |                   |

Is the inspection result normal?

YES >> Replace the corresponding front combination lamp. Refer to [EXL-191, "Removal and Installation"](#).  
NO >> Repair or replace harness.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

# STOP LAMP CIRCUIT

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

## STOP LAMP CIRCUIT

### Component Function Check

INFOID:00000001078852

#### 1.CHECK STOP LAMP OPERATION

1. Turn ignition switch ON.
2. With operating the brake pedal, check that the stop lamp and high-mounted stop lamp is turned ON.

**Depressed** : Stop lamp and high-mounted stop lamp  
**ON**  
**Fully re-leased** : Stop lamp and high-mounted stop lamp  
**OFF**

Is the inspection result normal?

- YES >> Stop lamp circuit is normal.  
NO >> Refer to [EXL-158, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:00000001078853

#### 1.CHECK SYMPTOM

Check symptom (A or B)

| Symptom |   |
|---------|---|
| A       | All of stop lamp and high-mounted stop lamp are not turned ON |
| B       | Any of stop lamp and high-mounted stop lamp are not turned ON |

Which symptom is detected?

- A >> GO TO 2.  
B >> GO TO 7.

#### 2.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

CVT models

| Unit                        | Location         | Fuse No. | Capacity |
|-----------------------------|------------------|----------|----------|
| • BCM<br>• Stop lamp switch | Fuse block (J/B) | #10      | 10 A     |
| Stop lamp switch            |                  | #30      |          |

M/T models

| Unit                        | Location         | Fuse No. | Capacity |
|-----------------------------|------------------|----------|----------|
| • BCM<br>• Stop lamp switch | Fuse block (J/B) | #10      | 10 A     |
| Stop lamp switch            |                  | #20      |          |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 3.CHECK BCM POWER SUPPLY (STOP LAMP)

1. Disconnect BCM connector.
2. Check voltage between BCM harness connector and ground.

# STOP LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| +         |          | -      | Voltage  |
|-----------|----------|--------|----------|
| BCM       |          |        |          |
| Connector | Terminal |        |          |
| M85       | 145      | Ground | 9 – 16 V |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK STOP LAMP SWITCH POWER SUPPLY

1. Disconnect stop lamp switch connector.
2. Connect BCM connector.
3. Turn ignition switch ON.
4. Check voltage between stop lamp switch harness connector and ground.

CVT models

| +                |          | -      | Voltage  |
|------------------|----------|--------|----------|
| Stop lamp switch |          |        |          |
| Connector        | Terminal |        |          |
| E115             | 1        | Ground | 9 – 16 V |
|                  | 3        |        |          |

M/T models

| +                |          | -      | Voltage  |
|------------------|----------|--------|----------|
| Stop lamp switch |          |        |          |
| Connector        | Terminal |        |          |
| E121             | 1        | Ground | 9 – 16 V |
|                  | 3        |        |          |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK STOP LAMP SWITCH SIGNAL CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and stop lamp switch harness connector.

CVT models

| BCM       |          | Stop lamp switch |          | Continuity |
|-----------|----------|------------------|----------|------------|
| Connector | Terminal | Connector        | Terminal |            |
| E23       | 157      | E115             | 2        | Existed    |
|           | 158      |                  | 4        | Existed    |

M/T models

| BCM       |          | Stop lamp switch |          | Continuity |
|-----------|----------|------------------|----------|------------|
| Connector | Terminal | Connector        | Terminal |            |
| E23       | 157      | E121             | 2        | Existed    |
|           | 158      |                  | 4        | Existed    |

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6.CHECK STOP LAMP SWITCH

Check stop lamp switch. Refer to [EXL-161. "Component Inspection"](#).

# STOP LAMP CIRCUIT

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121. "Removal and Installation"](#).  
 NO >> Replace stop lamp switch. Refer to [BR-21. "Removal and Installation"](#) (LHD models) or [BR-85. "Removal and Installation"](#) (RHD models).

## 7. CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP OUTPUT VOLTAGE

Ⓐ With CONSULT

1. Disconnect rear combination lamp (body side) and high-mounted stop lamp connectors.
2. Turn ignition switch ON.
3. Select "HEAD LAMP" of "BCM" using CONSULT.
4. Select "STOP LAMP 1", "STOP LAMP 2" or "STOP LAMP 3" in "Active Test" mode.
5. With operating the test items, check voltage between BCM harness connector and ground.

Stop lamp RH

| +         |          | -      | Test item   |     | Voltage<br>(Approx.) |
|-----------|----------|--------|-------------|-----|----------------------|
| BCM       |          |        |             |     |                      |
| Connector | Terminal |        |             |     |                      |
| B46       | 129      | Ground | STOP LAMP 1 | On  | 9 – 16 V             |
|           |          |        |             | Off | 0 V                  |

Stop lamp LH

| +         |          | -      | Test item   |     | Voltage<br>(Approx.) |
|-----------|----------|--------|-------------|-----|----------------------|
| BCM       |          |        |             |     |                      |
| Connector | Terminal |        |             |     |                      |
| B46       | 134      | Ground | STOP LAMP 2 | On  | 9 – 16 V             |
|           |          |        |             | Off | 0 V                  |

High-mounted stop lamp

| +         |          | -      | Test item   |     | Voltage<br>(Approx.) |
|-----------|----------|--------|-------------|-----|----------------------|
| BCM       |          |        |             |     |                      |
| Connector | Terminal |        |             |     |                      |
| B47       | 39       | Ground | STOP LAMP 3 | On  | 9 – 16 V             |
|           |          |        |             | Off | 0 V                  |

Is the inspection result normal?

- YES >> GO TO 9.  
 NO >> GO TO 8.

## 8. CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and ground.

Stop lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | B46 | 129      | Ground | Not existed |
| LH        |     | 134      |        |             |

High-mounted stop lamp

| BCM       |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| B47       | 39       | Ground | Not existed |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121. "Removal and Installation"](#).

# STOP LAMP CIRCUIT

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness.

## 9.CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and each stop lamp harness connector.

Stop lamp

| BCM       |     |          | Rear combination lamp (body side) |          | Continuity |
|-----------|-----|----------|-----------------------------------|----------|------------|
| Connector |     | Terminal | Connector                         | Terminal |            |
| RH        | B46 | 129      | B59                               | 2        | Existed    |
| LH        |     | 134      | B80                               |          |            |

High-mounted stop lamp

| BCM       |          | High-mounted stop lamp |          | Continuity |
|-----------|----------|------------------------|----------|------------|
| Connector | Terminal | Connector              | Terminal |            |
| B47       | 39       | D154                   | 1        | Existed    |

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness.

## 10.CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP GROUND CIRCUIT

Check continuity between each stop lamp harness connector and ground.

Stop lamp

| Rear combination lamp (body side) |     |          | —      | Continuity |
|-----------------------------------|-----|----------|--------|------------|
| Connector                         |     | Terminal |        |            |
| RH                                | B59 | 4        | Ground | Existed    |
| LH                                | B80 |          |        |            |

High-mounted stop lamp

| High-mounted stop lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| D154                   | 2        | Ground | Existed    |

Is the inspection result normal?

YES-1 >> Stop lamp: GO TO 11.

YES-2 >> High-mounted stop lamp: Replace high-mounted stop lamp. Refer to [EXL-207. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 11.CHECK STOP LAMP BULB

Check the applicable stop lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding stop lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding stop lamp bulb. Refer to [EXL-204. "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#).

## Component Inspection

INFOID:000000001078854

### 1.CHECK STOP LAMP SWITCH-1

1. Turn ignition switch OFF.
2. Disconnect stop lamp switch connector.
3. Check continuity of stop lamp switch terminals.

# STOP LAMP CIRCUIT

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

CVT models

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |

M/T models

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Not existed |
|                  |   |             | Fully released | Existed     |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

## 2.CHECK STOP LAMP SWITCH-2

1. Adjust stop lamp switch installation. Refer to [BR-11, "Inspection and Adjustment"](#) (LHD models) or [BR-75, "Inspection and Adjustment"](#) (RHD models).
2. Check continuity of stop lamp switch terminals.

CVT models

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |

M/T models

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Not existed |
|                  |   |             | Fully released | Existed     |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to [BR-21, "Removal and Installation"](#) (LHD models) or [BR-85, "Removal and Installation"](#) (RHD models).

# FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## FRONT FOG LAMP CIRCUIT

### Component Function Check

INFOID:000000010788855

#### 1.CHECK FRONT FOG LAMP OPERATION

④ With CONSULT

1. Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the front fog lamp is turned ON.

**On** : Front fog lamp ON

**Off** : Front fog lamp OFF

Is the inspection result normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to [EXL-163, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010788856

#### 1.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front fog lamp connector.
3. Turn ignition switch ON.
4. Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item      |     | Voltage  |
|-----------|------|----------|--------|----------------|-----|----------|
| IPDM E/R  |      |          |        |                |     |          |
| Connector |      | Terminal |        |                |     |          |
| RH        | E149 | 57       | Ground | FRONT FOG LAMP | On  | 9 – 16 V |
|           |      |          |        |                | Off | 0 – 1 V  |
| LH        | E148 | 51       |        |                | On  | 9 – 16 V |
|           |      |          |        |                | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front fog lamp harness connector.

| IPDM E/R  |      |          | Front fog lamp |          | Continuity |
|-----------|------|----------|----------------|----------|------------|
| Connector |      | Terminal | Connector      | Terminal |            |
| RH        | E149 | 57       | E158           | 1        | Existed    |
| LH        | E148 | 51       | E159           |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

## FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| Front fog lamp |          | —      | Continuity |
|----------------|----------|--------|------------|
| Connector      | Terminal |        |            |
| RH             | E158     | Ground | Existed    |
| LH             | E159     |        |            |

Is the inspection result normal?

- YES    >> Replace the corresponding front fog lamp bulb. Refer to [EXL-193, "Replacement"](#).  
NO     >> Repair or replace harness.



# REAR FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## REAR FOG LAMP CIRCUIT

### Component Function Check

INFOID:0000000010788857

#### 1.CHECK REAR FOG LAMP OPERATION

④With CONSULT

1. Select "HEAD LAMP" of "BCM" using CONSULT.
2. Select "RR FOG LAMP" in "Active Test" mode.
3. With operating the test items, check that the rear fog lamp is turned ON.

On : Rear fog lamp ON

Off : Rear fog lamp OFF

Is the inspection result normal?

YES >> Rear fog lamp circuit is normal.

NO >> Refer to [EXL-165, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010788858

#### 1.CHECK REAR FOG LAMP OUTPUT VOLTAGE

④With CONSULT

1. Turn ignition switch OFF.
2. Disconnect rear fog lamp connector.
3. Turn ignition switch ON.
4. Select "HEAD LAMP" of "BCM" using CONSULT.
5. Select "RR FOG LAMP" in "Active Test" mode.
6. With operating the test items, check voltage between rear fog lamp harness connector and ground.

| +             |          | -      | Test item   |     | Voltage  |
|---------------|----------|--------|-------------|-----|----------|
| Rear fog lamp |          |        |             |     |          |
| Connector     | Terminal |        |             |     |          |
| B152          | 2        | Ground | RR FOG LAMP | On  | 9 – 16 V |
|               |          |        |             | Off | 0 V      |

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

#### 2.CHECK REAR FOG LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and rear fog lamp harness connector.

| BCM       |          | Rear fog lamp |          | Continuity |
|-----------|----------|---------------|----------|------------|
| Connector | Terminal | Connector     | Terminal |            |
| B46       | 122      | B152          | 2        | Existed    |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK REAR FOG LAMP POWER SUPPLY CIRCUIT (SHORT)

Check continuity between BCM harness connector and ground.

## REAR FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

| BCM       |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| B46       | 122      | Ground | Not existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 4.CHECK REAR FOG LAMP GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear fog lamp harness connector and ground.

| Rear fog lamp |          | —      | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| B152          | 1        | Ground | Existed    |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5.CHECK REAR FOG LAMP BULB

Check rear fog lamp bulb.

Is the inspection result normal?

YES >> Check rear fog lamp bulb socket. Repair or replace if necessary.

NO >> Replace rear fog lamp bulb. Refer to [EXL-204, "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#).

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## TURN SIGNAL LAMP CIRCUIT

### Component Function Check

INFOID:0000000010788859

#### 1.CHECK TURN SIGNAL LAMP OPERATION

1. Turn ignition switch ON.
2. With operating the turn signal switch, check that the turn signal lamp is blinks.

**Right** : Turn signal lamps RH blink  
**Left** : Turn signal lamps LH blink  
**Center** : Turn signal lamps OFF

Is the inspection result normal?

- YES >> Turn signal lamp circuit is normal.  
NO >> Refer to [EXL-167. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010788860

#### 1.CHECK SYMPTOM

Check symptom (A or B)

| Symptom |  |
|---------|--|
| A       | All of turn signal lamp are not blinks           |
| B       | Applicable side performs high flasher activation |

Which symptom is detected?

- A >> GO TO 2.  
B >> GO TO 4.

#### 2.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

| Unit | Location         | Fuse No. | Capacity |
|------|------------------|----------|----------|
| BCM  | Fuse block (J/B) | #1       | 15 A     |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 3.CHECK BCM POWER SUPPLY (TURN SIGNAL LAMP)

1. Disconnect BCM connector.
2. Check voltage between BCM harness connector and ground.

| +         |          | -      | Voltage  |
|-----------|----------|--------|----------|
| BCM       |          |        |          |
| Connector | Terminal |        |          |
| M85       | 144      | Ground | 9 – 16 V |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121. "Removal and Installation"](#).  
NO >> Repair or replace harness.

#### 4.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - Front turn signal lamp

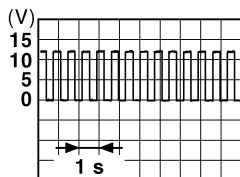
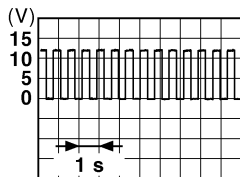
# TURN SIGNAL LAMP CIRCUIT

[LED HEADLAMP]

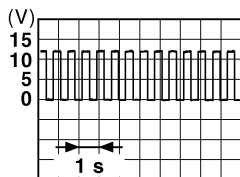
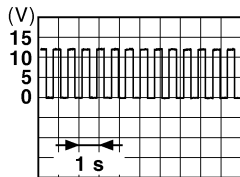
< DTC/CIRCUIT DIAGNOSIS >

- Door mirror
- Rear combination lamp (body side)
- 3. Turn ignition switch ON.
- 4. With operating the turn signal switch, check voltage between BCM harness connector and ground.

Front turn signal lamp

| +         |          |     | -      | Test item             | Voltage<br>(Approx.) |   |   |
|-----------|----------|-----|--------|-----------------------|----------------------|---|---|
| BCM       |          |     |        |                       |                      |   |   |
| Connector | Terminal |     |        |                       |                      |   |   |
| RH        | E23      | 168 | Ground | Turn signal<br>switch | Right                |  |   |
|           |          |     |        |                       | Center               | 0 V   |   |
| LH        |          |     |        |                       | 167                  | Left  |  |
|           |          |     |        |                       |                      | Center  | 0 V   |

Side turn signal lamp

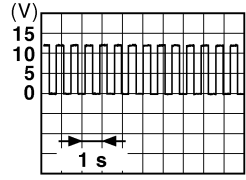
| +         |          | -      | Test item             | Voltage<br>(Approx.)  |   |
|-----------|----------|--------|-----------------------|---|---|
| BCM       |          |        |                       |   |   |
| Connector | Terminal |        |                       |   |   |
| RH        | M87      | Ground | Turn signal<br>switch |  |   |
|           |          |        |                       | Center  | 0 V   |
| LH        |          |        |                       | Left  |  |
|           |          |        |                       | Center  | 0 V   |

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Rear turn signal lamp

| +         |          |     | -      | Test item             | Voltage<br>(Approx.) |   |
|-----------|----------|-----|--------|-----------------------|----------------------|---|
| BCM       |          |     |        |                       |                      |   |
| Connector | Terminal |     |        |                       |                      |   |
| RH        | B46      | 136 | Ground | Turn signal<br>switch | Right                |  |
|           |          |     |        |                       | Center               | 0 V   |
| LH        |          |     |        |                       | 133                  | Left  |
|           |          |     |        | Center                | 0 V                  |   |

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

## 5.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and ground.

Front turn signal lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | E23 | 168      | Ground | Not existed |
| LH        |     | 167      |        |             |

Side turn signal lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | M87 | 43       | Ground | Not existed |
| LH        |     | 42       |        |             |

Rear turn signal lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | B46 | 136      | Ground | Not existed |
| LH        |     | 133      |        |             |

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 6.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.

# TURN SIGNAL LAMP CIRCUIT

[LED HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between BCM harness connector and each turn signal lamp harness connector.

Front turn signal lamp

| BCM       |     |          | Front turn signal lamp |          | Continuity |
|-----------|-----|----------|------------------------|----------|------------|
| Connector |     | Terminal | Connector              | Terminal |            |
| RH        | E23 | 168      | E46                    | 1        | Existed    |
| LH        |     | 167      | E27                    |          |            |

Side turn signal lamp (LHD models)

| BCM       |     |          | Door mirror |          | Continuity |
|-----------|-----|----------|-------------|----------|------------|
| Connector |     | Terminal | Connector   | Terminal |            |
| RH        | M87 | 43       | D43         | 13       | Existed    |
| LH        |     | 42       | D3          |          |            |

Side turn signal lamp (RHD models)

| BCM       |     |          | Door mirror |          | Continuity |
|-----------|-----|----------|-------------|----------|------------|
| Connector |     | Terminal | Connector   | Terminal |            |
| RH        | M87 | 43       | D23         | 13       | Existed    |
| LH        |     | 42       | D98         |          |            |

Rear turn signal lamp

| BCM       |     |          | Rear combination lamp (body side) |          | Continuity |
|-----------|-----|----------|-----------------------------------|----------|------------|
| Connector |     | Terminal | Connector                         | Terminal |            |
| RH        | B46 | 136      | B59                               | 3        | Existed    |
| LH        |     | 133      | B80                               |          |            |

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 7. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

Check continuity between each turn signal lamp harness connector and ground.

Front turn signal lamp

| Front combination lamp |     |          | —      | Continuity |
|------------------------|-----|----------|--------|------------|
| Connector              |     | Terminal |        |            |
| RH                     | E46 | 2        | Ground | Existed    |
| LH                     | E27 |          |        |            |

Side turn signal lamp (LHD models)

| Door mirror |     |          | —      | Continuity |
|-------------|-----|----------|--------|------------|
| Connector   |     | Terminal |        |            |
| RH          | D43 | 14       | Ground | Existed    |
| LH          | D3  |          |        |            |

Side turn signal lamp (RHD models)

| Door mirror |     |          | —      | Continuity |
|-------------|-----|----------|--------|------------|
| Connector   |     | Terminal |        |            |
| RH          | D23 | 14       | Ground | Existed    |
| LH          | D98 |          |        |            |

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Rear turn signal lamp

| Rear turn signal lamp |          | — | Continuity |
|-----------------------|----------|---|------------|
| Connector             | Terminal |   |            |
| RH                    | B59      | 4 | Ground     |
| LH                    | B80      |   |            |

Is the inspection result normal?

YES-1 >> Front turn signal lamp or rear turn signal lamp: GO TO 8.

YES-2 >> Side turn signal lamp: Replace side turn signal lamp. Refer to [EXL-198, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 8.CHECK TURN SIGNAL LAMP BULB

Check the applicable turn signal lamp bulb.

Is the inspection result normal?

YES-1 >> Front turn signal lamp: Check the corresponding front turn signal lamp bulb socket. Repair or replace if necessary.

YES-2 >> Rear turn signal lamp: Check the corresponding rear turn signal lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding turn signal lamp bulb. Refer to [EXL-191, "Replacement"](#) (front turn signal lamp) or [EXL-204, "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (rear turn signal lamp).

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## LIGHT & RAIN SENSOR

### Component Function Check

INFOID:0000000010788861

#### 1.CHECK LIGHT & RAIN SENSOR

1. Clean light & rain sensor detection area of windshield fully.
2. Turn ignition switch ON.
3. Turn lighting switch AUTO.
4. With the light & rain sensor illuminating, check the auto light function.

| Condition           |                         | Auto light function |
|---------------------|-------------------------|---------------------|
| Light & rain sensor | When illuminating       | Not operating       |
|                     | When shutting off light | Operating           |

Is the inspection result normal?

- YES >> Light & rain sensor is normal.  
 NO >> Refer to [EXL-172, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010788862

#### 1.CHECK LIGHT & RAIN SENSOR POWER SUPPLY

1. Turn ignition switch OFF
2. Disconnect light & rain sensor connector.
3. Turn ignition switch ON.
4. Check voltage between light & rain sensor harness connector and ground.

| +                   |          | -      | Voltage         |
|---------------------|----------|--------|-----------------|
| Light & rain sensor |          |        |                 |
| Connector           | Terminal |        |                 |
| R20                 | 1        | Ground | Battery voltage |

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> GO TO 2.

#### 2.CHECK LIGHT & RAIN SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove interior room lamp relay.
3. Check continuity between interior room lamp relay harness connector and light & rain sensor harness connector.

| Interior room lamp relay |          | Light & rain sensor |          | Continuity |
|--------------------------|----------|---------------------|----------|------------|
| Connector                | Terminal | Connector           | Terminal |            |
| M44                      | 5        | R20                 | 1        | Existed    |

Is the inspection result normal?

- YES >> Perform the interior room lamp power supply circuit diagnosis. Refer to [INL-65, "Diagnosis Procedure"](#).  
 NO >> Repair or replace harness.

#### 3.CHECK LIGHT & RAIN SENSOR GROUND CIRCUIT

Check continuity between light & rain sensor harness connector and ground.

|                     |          |        |            |
|---------------------|----------|--------|------------|
| Light & rain sensor |          | —      | Continuity |
| Connector           | Terminal |        |            |
| R20                 | 3        | Ground | Existed    |



# LIGHT & RAIN SENSOR

[LED HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Repair or replace harness.

### 4.CHECK LIGHT & RAIN SENSOR SIGNAL

1. Connect light & rain sensor connector.
2. Turn ignition switch ON.
3. Check voltage between BCM harness connector and ground.

| +         |          | -      | Condition             | Voltage<br>(Approx.)  |
|-----------|----------|--------|-----------------------|---|
| BCM       |          |        |                       |   |
| Connector | Terminal |        |                       |   |
| M87       | 47       | Ground | Ignition switch<br>ON | 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|

Is the inspection result normal?

- YES >> Replace light & rain sensor. Refer to [EXL-195, "Removal and Installation"](#).  
NO >> GO TO 5.

### 5.CHECK LIGHT & RAIN SENSOR SIGNAL CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector and light & rain sensor connector.
3. Check continuity between BCM harness connector and light & rain sensor harness connector.

| BCM       |          | Light & rain sensor |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| M87       | 47       | R20                 | 2        | Existed    |

Is the inspection result normal?

- YES >> GO TO 6.  
NO >> Repair or replace harness.

### 6.CHECK LIGHT & RAIN SENSOR SIGNAL CIRCUIT (SHORT)

Check continuity between BCM harness connector and ground.

| BCM       |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| M87       | 47       | Ground | Not existed |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).  
NO >> Repair or replace harness.

## HAZARD SWITCH

## Component Function Check

INFOID:000000010788863

## 1.CHECK HAZARD SWITCH SIGNAL

## ④ With CONSULT

1. Turn ignition switch ON.
2. Select "FLASHER" of "BCM" using CONSULT.
3. Select "HAZARD SW" in "Data Monitor" mode.
4. With operating the hazard switch, check the monitor status.

| Monitor item | Condition     |     | Monitor status |
|--------------|---------------|-----|----------------|
| HAZARD SW    | Hazard switch | ON  | On             |
|              |               | OFF | Off            |

Is the inspection result normal?

- YES >> Hazard switch circuit is normal.  
 NO >> Refer to [EXL-174, "Diagnosis Procedure"](#).

## Diagnosis Procedure

INFOID:000000010788864

## 1.CHECK HAZARD SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Check voltage between hazard switch connector and ground.

| +             |          | -      | Voltage  |
|---------------|----------|--------|----------|
| Hazard switch |          |        |          |
| Connector     | Terminal |        |          |
| M45           | 2        | Ground | 9 – 16 V |

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> GO TO 2.

## 2.CHECK HAZARD SWITCH SIGNAL CIRCUIT (OPEN)

1. Disconnect BCM connector.
2. Check continuity between hazard switch harness connector and BCM harness connector.

| Hazard switch |          | BCM       |          | Continuity |
|---------------|----------|-----------|----------|------------|
| Connector     | Terminal | Connector | Terminal |            |
| M45           | 2        | M87       | 51       | Existed    |

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Repair or replace harness.

## 3.CHECK HAZARD SWITCH SIGNAL CIRCUIT (SHORT)

Check continuity between hazard switch harness connector and ground.

|               |          |        |             |
|---------------|----------|--------|-------------|
| Hazard switch |          | —      | Continuity  |
| Connector     | Terminal |        |             |
| M45           | 2        | Ground | Not existed |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

# HAZARD SWITCH

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness.

## 4.CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

| Hazard switch |          | —      | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| M45           | 1        | Ground | Existed    |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK HAZARD SWITCH

Check hazard switch. Refer to [EXL-175, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hazard switch. Refer to [EXL-197, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010788865

## 1.CHECK HAZARD SWITCH

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Check continuity of hazard switch terminals.

| Hazard switch |   | Condition     |     | Continuity  |
|---------------|---|---------------|-----|-------------|
| Terminal      |   |               |     |             |
| 2             | 1 | Hazard switch | ON  | Existed     |
|               |   |               | OFF | Not existed |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hazard switch. Refer to [EXL-197, "Removal and Installation"](#).

EXL

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## SYMPTOM DIAGNOSIS

### EXTERIOR LIGHTING SYSTEM SYMPTOMS

#### Symptom Table

INFOID:0000000010788866

#### NOTE:

Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

| Symptom  |            | Possible cause   | Inspection item   |
|--|------------|--|---|
| Headlamp (HI) is not turned ON   | One side   | <ul style="list-style-type: none"><li>Headlamp (HI) power supply circuit</li><li>Front combination lamp internal circuit<ul style="list-style-type: none"><li>LED [Headlamp (HI)]</li><li>LED headlamp control module</li><li>Harness</li></ul></li><li>IPDM E/R</li></ul> | Headlamp (HI) circuit<br>Refer to <a href="#">EXL-146, "Component Function Check"</a> . |
|  | Both sides | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-180, "Diagnosis Procedure"</a> .  |   |
| High beam indicator lamp is not turned ON [Headlamp (HI) is turned ON]   |            | Combination meter  | Combination meter<br>Data monitor "HI-BEAM IND"   |
| Headlamp (LO) is not turned ON   | One side   | <ul style="list-style-type: none"><li>Headlamp (LO) power supply circuit</li><li>Front combination lamp internal circuit<ul style="list-style-type: none"><li>LED [Headlamp (LO)]</li><li>LED headlamp control module</li><li>Harness</li></ul></li><li>IPDM E/R</li></ul> | Headlamp (LO) circuit<br>Refer to <a href="#">EXL-147, "Component Function Check"</a> . |
|  | Both sides | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-181, "Diagnosis Procedure"</a> .  |   |
| Dipped beam indicator lamp is not turned ON [Headlamp (LO) is turned ON] |            | Combination meter  | Combination meter<br>Data monitor "DIPPED BEAM IND"                                     |
| Headlamp (HI) and (LO) is not turned ON                                  |            | <ul style="list-style-type: none"><li>LED headlamp ground circuit</li><li>Front combination lamp internal circuit<ul style="list-style-type: none"><li>LED headlamp control module</li><li>Harness</li></ul></li></ul>   | LED headlamp<br>Refer to <a href="#">EXL-148, "Diagnosis Procedure"</a> .               |
| Each lamp is not turned ON/OFF with lighting switch AUTO                 |            | <ul style="list-style-type: none"><li>Combination switch input/output signal circuit</li><li>Combination switch</li><li>BCM</li></ul>  | Combination switch<br>Refer to <a href="#">BCS-119, "Symptom Table"</a> .               |
|  |            | <ul style="list-style-type: none"><li>Light &amp; rain sensor power supply/ground/signal circuit</li><li>Light &amp; rain sensor</li><li>BCM</li></ul>   | Light & rain sensor<br>Refer to <a href="#">EXL-172, "Component Function Check"</a> .   |
| Parking lamp is not turned ON  |            | <ul style="list-style-type: none"><li>Parking lamp power supply/ground circuit</li><li>Front combination lamp internal circuit<ul style="list-style-type: none"><li>LED (Parking lamp)</li><li>Control circuit</li><li>Harness</li></ul></li><li>IPDM E/R</li></ul>        | Parking lamp circuit<br>Refer to <a href="#">EXL-151, "Component Function Check"</a> .  |

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

| Symptom  |   | Possible cause   | Inspection item   |
|--|---|--|---|
| Tail lamp is not turned ON   |   | <ul style="list-style-type: none"> <li>• Tail lamp power supply/ground circuit</li> <li>• Tail lamp bulb</li> <li>• Tail lamp bulb socket/harness</li> <li>• IPDM E/R</li> </ul>   | Tail lamp circuit<br>Refer to <a href="#">EXL-153, "Component Function Check"</a> .   |
| License plate lamp is not turned ON  |   | <ul style="list-style-type: none"> <li>• License plate lamp power supply/ground circuit</li> <li>• License plate lamp bulb</li> <li>• License plate lamp bulb socket</li> </ul>  | License plate lamp circuit<br>Refer to <a href="#">EXL-155, "Component Function Check"</a> .  |
| Parking lamp, license plate lamp and tail lamp are not turned ON   |   | <b>Symptom diagnosis</b><br>"PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-182, "Diagnosis Procedure"</a> .   |   |
| Position lamp indicator is not turned ON<br>(Parking lamp, license plate lamp and tail lamp are turned ON) |   | Combination meter  | Combination meter<br>Data monitor "LIGHT IND"   |
| Daytime running light is not turned ON   |   | <ul style="list-style-type: none"> <li>• Daytime running light power supply/ground circuit</li> <li>• Front combination lamp internal circuit</li> <li>- LED (Daytime running light)</li> <li>- Control circuit</li> <li>- Harness</li> <li>• IPDM E/R</li> </ul>  | Daytime running light circuit<br>Refer to <a href="#">EXL-156, "Component Function Check"</a> .                                       |
| Turn signal lamp does not blink  | Indicator lamp is normal<br>(All of turn signal lamp is not blinks)               | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• BCM power supply (turn signal lamp) circuit</li> <li>• BCM</li> </ul>   | Turn signal lamp circuit<br>Refer to <a href="#">EXL-167, "Component Function Check"</a> .  |
|  | Indicator lamp is normal<br>(Applicable side performs high flasher activation)    | <ul style="list-style-type: none"> <li>• Front turn signal lamp</li> <li>- Front turn signal lamp power supply/ground circuit</li> <li>- Front turn signal lamp bulb</li> <li>- Front turn signal lamp bulb socket</li> <li>- BCM</li> <li>• Side turn signal lamp</li> <li>- Side turn signal lamp power supply/ground circuit</li> <li>- Side turn signal lamp</li> <li>- BCM</li> <li>• Rear turn signal lamp</li> <li>- Rear turn signal lamp power supply/ground circuit</li> <li>- Rear turn signal lamp bulb</li> <li>- Rear turn signal lamp bulb socket/harness</li> <li>- BCM</li> </ul> |   |
|  | Indicator lamp is included  | <ul style="list-style-type: none"> <li>• Combination switch input/output signal circuit</li> <li>• Combination switch</li> <li>• BCM</li> </ul>  | Combination switch<br>Refer to <a href="#">BCS-119, "Symptom Table"</a> .   |
| Turn signal indicator lamp does not blink<br>(Turn signal lamp is normal)                                  | One side  | Combination meter  | —   |
|  | Both sides<br>(Always)  | <ul style="list-style-type: none"> <li>• Turn indicator signal</li> <li>• BCM</li> <li>• Combination meter</li> </ul>  | Combination meter<br>Data monitor "TURN IND"  |
|  | Both sides<br>(Only when activating hazard warning lamp with ignition switch OFF) | <ul style="list-style-type: none"> <li>• Combination meter power supply/ground circuit</li> <li>• Combination meter</li> </ul>   | Combination meter<br>Power supply and ground circuit<br>Refer to <a href="#">MWI-129, "COMBINATION METER : Diagnosis Procedure"</a> . |

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# EXTERIOR LIGHTING SYSTEM SYMPTOMS

## < SYMPTOM DIAGNOSIS >

## [LED HEADLAMP]

| Symptom   |   | Possible cause  | Inspection item  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li>Hazard warning lamp does not activate (Turn signal is normal)</li> <li>Hazard warning lamp continues activating</li> </ul> |   | <ul style="list-style-type: none"> <li>Hazard switch signal/ground circuit</li> <li>Hazard switch</li> <li>BCM</li> </ul>   | Hazard switch<br>Refer to <a href="#">EXL-174, "Component Function Check"</a> .  |
| Stop lamp and high-mounted stop lamp are not turned ON  | All of stop lamp and high-mounted stop lamp are not turned ON | <ul style="list-style-type: none"> <li>Fuse</li> <li>BCM power supply (stop lamp) circuit</li> <li>Stop lamp switch power supply/signal circuit</li> <li>Stop lamp switch</li> <li>BCM</li> </ul>   | Stop lamp circuit<br>Refer to <a href="#">EXL-158, "Component Function Check"</a> .  |
|   | Any of stop lamp and high-mounted stop lamp are not turned ON | <ul style="list-style-type: none"> <li>Stop lamp</li> <li>- Stop lamp power supply/ground circuit</li> <li>- Stop lamp bulb</li> <li>- Stop lamp bulb socket/harness</li> <li>- BCM</li> <li>High-mounted stop lamp</li> <li>- High-mounted stop lamp power supply/ground circuit</li> <li>- High-mounted stop lamp</li> <li>- BCM</li> </ul> |  |
| Front fog lamp is not turned ON   | One side  | <ul style="list-style-type: none"> <li>Front fog lamp power supply/ground circuit</li> <li>Front fog lamp bulb</li> <li>IPDM E/R</li> </ul>   | Front fog lamp circuit<br>Refer to <a href="#">EXL-163, "Component Function Check"</a> .   |
|   | Both sides  | <b>Symptom diagnosis</b><br>"BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-183, "Diagnosis Procedure"</a> .  |  |
| Front fog lamp indicator lamp is not turned ON (Front fog lamp is turned ON)  |   | Combination meter   | <ul style="list-style-type: none"> <li>Combination meter</li> <li>Data monitor "FR FOG IND"</li> <li>BCM (HEAD LAMP)</li> <li>Active test "FR FOG LAMP"</li> </ul> |
| Rear fog lamp is not turned ON  | Rear fog lamp indicator lamp is normal                        | <ul style="list-style-type: none"> <li>Rear fog lamp power supply/ground circuit</li> <li>Rear fog lamp bulb</li> <li>Rear fog lamp bulb socket</li> <li>BCM</li> </ul>   | Rear fog lamp circuit<br>Refer to <a href="#">EXL-165, "Component Function Check"</a> .  |
|   | Rear fog lamp indicator lamp is included                      | <ul style="list-style-type: none"> <li>Combination switch input/output signal circuit</li> <li>Combination switch</li> <li>BCM</li> </ul>   | Combination switch<br>Refer to <a href="#">BCS-119, "Symptom Table"</a> .  |
| Rear fog lamp indicator lamp is not turned ON (Rear fog lamp is turned ON)  |   | <ul style="list-style-type: none"> <li>Rear fog lamp status signal</li> <li>BCM</li> <li>Combination meter</li> </ul>   | <ul style="list-style-type: none"> <li>Combination meter</li> <li>Data monitor "RR FOG IND"</li> <li>BCM (HEAD LAMP)</li> <li>Active test "RR FOG LAMP"</li> </ul> |
| Headlamp auto aiming does not activate  |   | <ul style="list-style-type: none"> <li>Fuse</li> <li>Headlamp aiming motor power supply/ground circuit</li> <li>Front combination lamp (Headlamp aiming motor)</li> <li>IPDM E/R</li> </ul>   | Headlamp levelizer circuit<br>Refer to <a href="#">EXL-149, "Component Function Check"</a> .   |

## NORMAL OPERATING CONDITION

### Description

INFOID:0000000010788867

#### LED HEADLAMP

- LED brightness and color may slightly change until the temperature becomes stable. This is not malfunction.
- Illumination time lag may occur between right and left. This is not malfunction.
- Brightness may be reduced due to aged deterioration of LED.

#### AUTO LIGHT SYSTEM

The headlamp may not be turned ON/OFF immediately after passing dark area or bright area (short tunnel, sky bridge, shadowed area etc.) while using the auto light system. This causes for the control difference. This is normal.

#### HIGH BEAM ASSIST SYSTEM

When driving while using the high beam assist system, the headlamp beam may not switch or the beam switching timing may vary according to the ambient environment (the condition of the vehicle ahead, the condition of the road, the position of the vehicle, etc.). This is due to control differences and is not a malfunction.

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# BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

### Description

INFOID:0000000010788868

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

### Diagnosis Procedure

INFOID:0000000010788869

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK HIGH BEAM REQUEST SIGNAL

Ⓔ With CONSULT

1. Select "HIGH BEAM REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the lighting switch, check the monitor status.

| Monitor item  | Condition             |            | Monitor status |
|---------------|-----------------------|------------|----------------|
| HIGH BEAM REQ | Lighting switch (2ND) | HI or PASS | On             |
|               |                       | LO         | Off            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).



# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

### Description

INFOID:0000000010788870

Both side headlamps (LO) are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000010788871

#### 1.CHECK COMBINATION SWITCH

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK LOW BEAM REQUEST SIGNAL

④ With CONSULT

1. Select "LOW BEAM REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the lighting switch, check the monitor status.

| Monitor item | Condition       |     | Monitor status |
|--------------|-----------------|-----|----------------|
| LOW BEAM REQ | Lighting switch | 2ND | On             |
|              |                 | OFF | Off            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

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# PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000010788872

The parking, license plate and tail lamps are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000010788873

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK POSITION LIGHT REQUEST SIGNAL

Ⓔ With CONSULT

1. Select "POSITION LIGHT REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the lighting switch, check the monitor status.

| Monitor item       | Condition       |     | Monitor status |
|--------------------|-----------------|-----|----------------|
| POSITION LIGHT REQ | Lighting switch | 1ST | On             |
|                    |                 | OFF | Off            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

### Description

INFOID:000000001078874

Both side front fog lamps are not turned ON in any condition.

### Diagnosis Procedure

INFOID:000000001078875

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-119. "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK FRONT FOG LIGHT REQUEST SIGNAL

④ With CONSULT

1. Select "FRONT FOG LAMP REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the front fog lamp switch, check the monitor status.

| Monitor item       | Condition   |     | Monitor status |
|--------------------|---|-----|----------------|
| FRONT FOG LAMP REQ | Front fog lamp switch<br>(With lighting switch 1ST) | ON  | On             |
|                    |   | OFF | Off            |

Is the item status normal?

YES >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121. "Removal and Installation"](#).

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# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

## PERIODIC MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT

#### LHD MODELS

#### LHD MODELS : Description

INFOID:0000000010788876

#### PREPARATION BEFORE ADJUSTING

##### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming adjustment if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

##### NOTE:

Never remove the temporary tire, jack and on-vehicle tool.

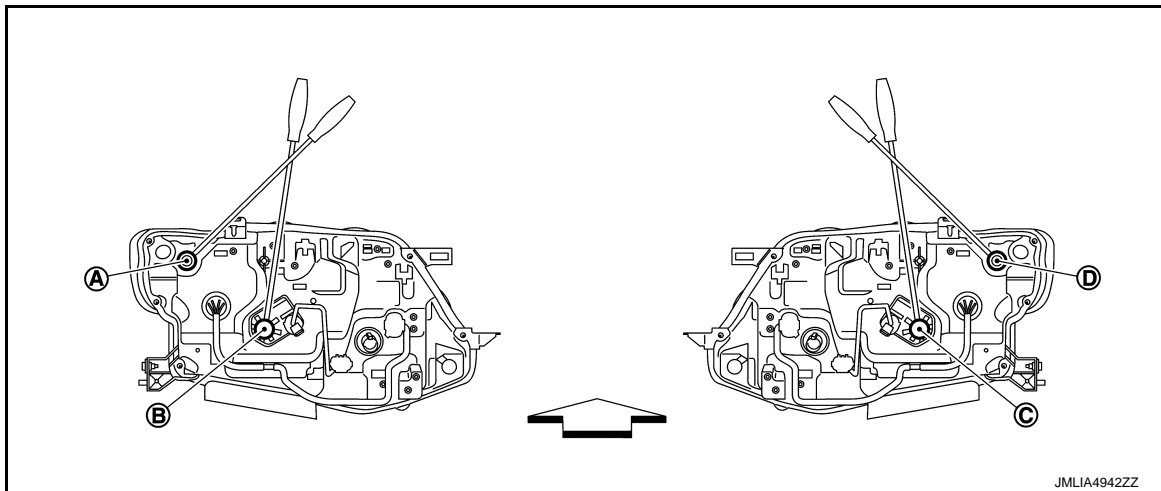
- Wipe out dirt on the headlamp.

##### CAUTION:

**Never use organic solvent (thinner, gasoline etc.).**

- Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW



(A) Headlamp LH (INSIDE/OUTSIDE) adjustment screw

(B) Headlamp LH (UP/DOWN) adjustment screw

(C) Headlamp RH (UP/DOWN) adjustment screw

(D) Headlamp RH (INSIDE/OUTSIDE) adjustment screw

← : Vehicle front

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| (A)              | Headlamp LH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |
| (B)              | Headlamp LH (UP/DOWN)        | Clockwise            | UP               |
|                  |                              | Counterclockwise     | DOWN             |
| (C)              | Headlamp RH (UP/DOWN)        | Clockwise            | UP               |
|                  |                              | Counterclockwise     | DOWN             |

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| ①                | Headlamp RH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |

## LHD MODELS : Aiming Adjustment Procedure

INFOID:00000001078877

1. Place the screen.

### NOTE:

- Stop the vehicle at the perpendicular angle to the wall.
- Set the screen so that it is perpendicular to a level road surface.

2. Face the vehicle squarely toward the screen and make the distance between the headlamp center and the screen 10 m (32.8 ft).

3. Start the engine and illuminate the headlamp (LO).

### CAUTION:

**Never cover lens surface with tape, etc. because it is made from plastic.**

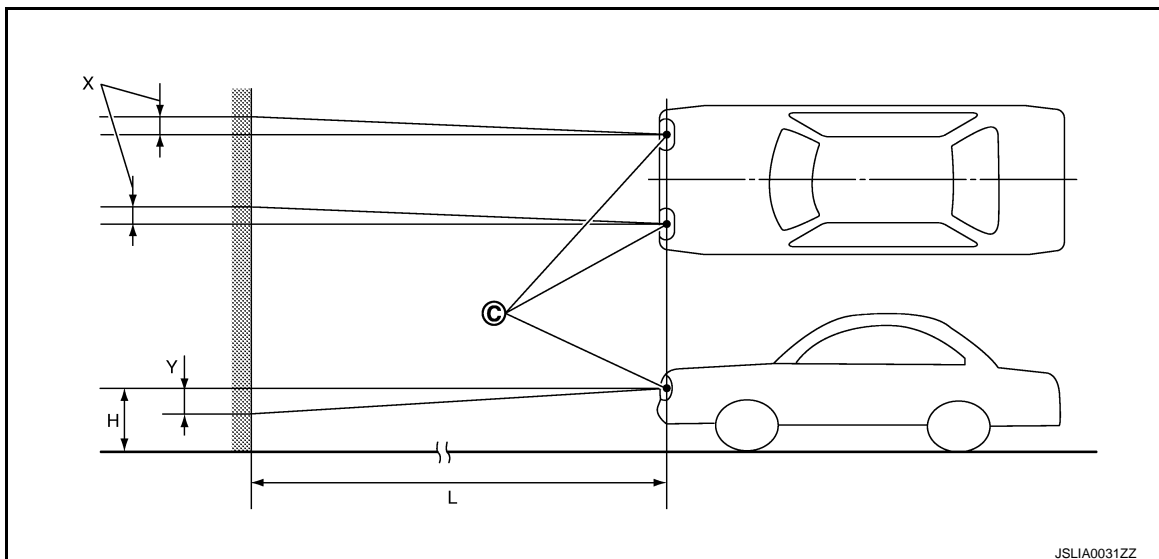
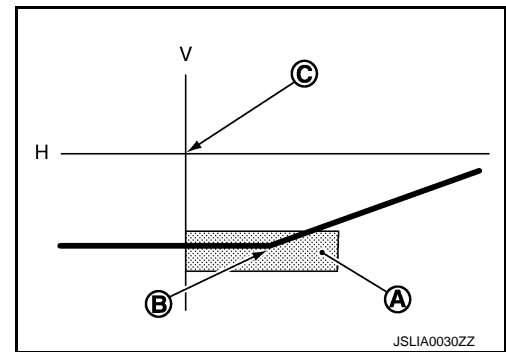
### NOTE:

Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

4. Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

Low beam distribution on the screen

- ① Aiming adjustment area
- ② Elbow point
- ③ Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp



- ③ Vertical center line of headlamp H. Horizontal center line of headlamp L. Distance from headlamp center to screen
- X. Aiming adjustment area (Lateral) Y. Aiming adjustment area (Vertical)

**Distance from headlamp center to screen (L) : 10 m (32.8 ft)**

# HEADLAMP AIMING ADJUSTMENT

[LED HEADLAMP]

< PERIODIC MAINTENANCE >

Unit: mm (in)

| Aiming adjustment area   |            |   |
|--|------------|---|
| Vertical direction (Y)<br>(Lower side from headlamp center height) |            | Lateral direction (X)<br>(Right side from headlamp center line) |
| Highest light axis   | 100 (3.94) | 0 - 100 (3.94)  |
| Target light axis  | 100 (3.94) |   |
| Lowest light axis  | 130 (5.12) |   |

## RHD MODELS

### RHD MODELS : Description

INFOID:0000000010788878

### PREPARATION BEFORE ADJUSTING

#### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming adjustment if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

#### NOTE:

Never remove the temporary tire, jack and on-vehicle tool.

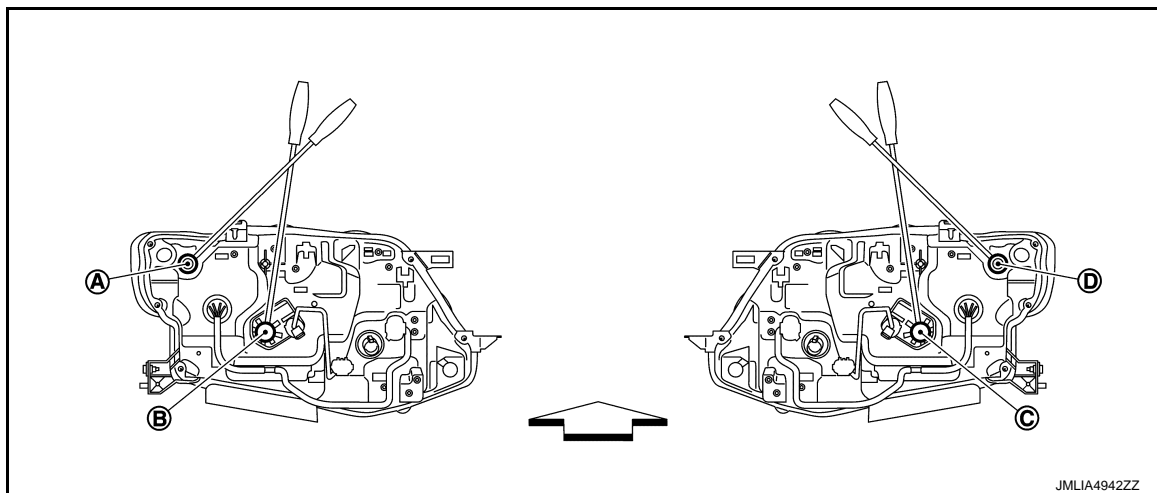
- Wipe out dirt on the headlamp.

#### CAUTION:

Never use organic solvent (thinner, gasoline etc.).

- Ride alone on the driver seat.

### AIMING ADJUSTMENT SCREW



(A) Headlamp LH (INSIDE/OUTSIDE) adjustment screw

(B) Headlamp LH (UP/DOWN) adjustment screw

(C) Headlamp RH (UP/DOWN) adjustment screw

(D) Headlamp RH (INSIDE/OUTSIDE) adjustment screw

↔ : Vehicle front

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| (A)              | Headlamp LH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| Ⓑ                | Headlamp LH (UP/DOWN)        | Clockwise            | UP               |
|                  |                              | Counterclockwise     | DOWN             |
| Ⓒ                | Headlamp RH (UP/DOWN)        | Clockwise            | UP               |
|                  |                              | Counterclockwise     | DOWN             |
| Ⓓ                | Headlamp RH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |

## RHD MODELS : Aiming Adjustment Procedure

INFOID:00000001078879

1. Place the screen.

### NOTE:

- Stop the vehicle at the perpendicular angle to the wall.
- Set the screen so that it is perpendicular to a level load surface.

2. Face the vehicle squarely toward the screen and make the distance between the headlamp center and the screen 10 m (32.8 ft).

3. Start the engine and illuminate the headlamp (LO).

### CAUTION:

**Never cover lens surface with tape, etc. because it is made from plastic.**

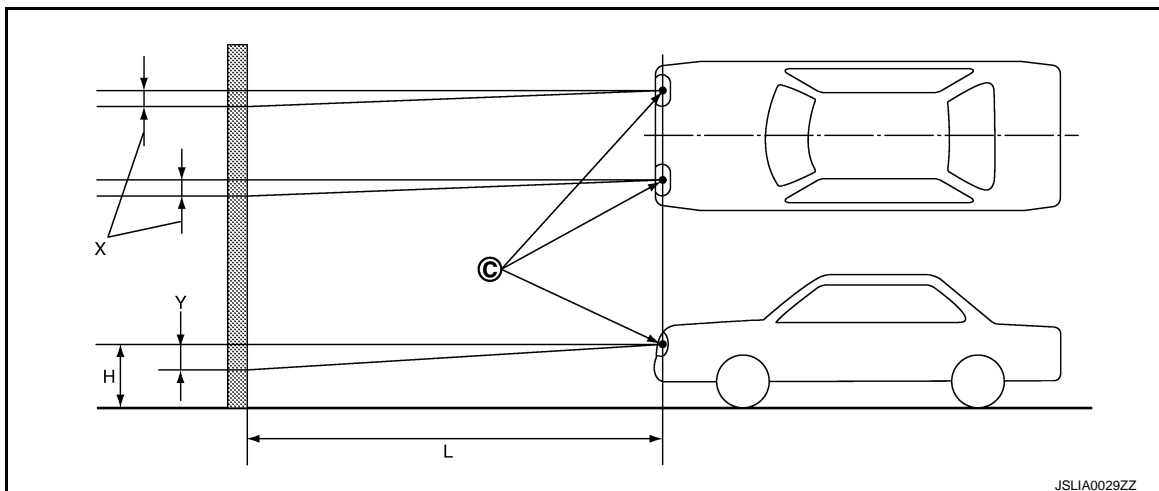
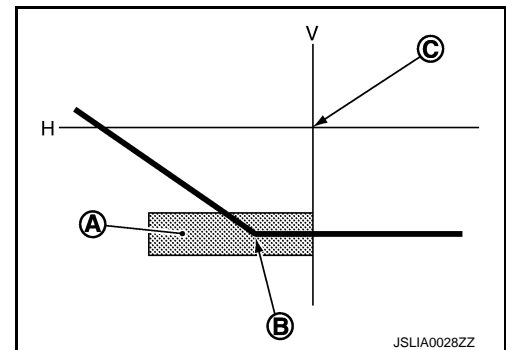
### NOTE:

Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

4. Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

Low beam distribution on the screen

- Ⓐ Aiming adjustment area
- Ⓑ Elbow point
- Ⓒ Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp



- Ⓒ Vertical center line of headlamp
- H. Horizontal center line of headlamp
- L. Distance from headlamp center to screen
- X. Aiming adjustment area (Lateral)
- Y. Aiming adjustment area (Vertical)

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

Distance from headlamp center to screen (L) : 10 m (32.8 ft)

Unit: mm (in)

| Aiming adjustment area   |            |  |
|--|------------|--|
| Vertical direction (Y)<br>(Lower side from headlamp center height) |            | Lateral direction (X)<br>(Left side from headlamp center line) |
| Highest light axis   | 100 (3.94) | 0 - 100 (3.94)   |
| Target light axis  | 100 (3.94) |  |
| Lowest light axis  | 130 (5.12) |  |



# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

## FRONT FOG LAMP AIMING ADJUSTMENT

### Description

INFOID:0000000010788880

### PREPARATION BEFORE ADJUSTING

#### NOTE:

For details, refer to the regulations in your own country.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

#### NOTE:

Never remove the temporary tire, jack and on-vehicle tool.

- Wipe out dirt on the headlamp.

#### CAUTION:

**Never use organic solvent (thinner, gasoline etc.).**

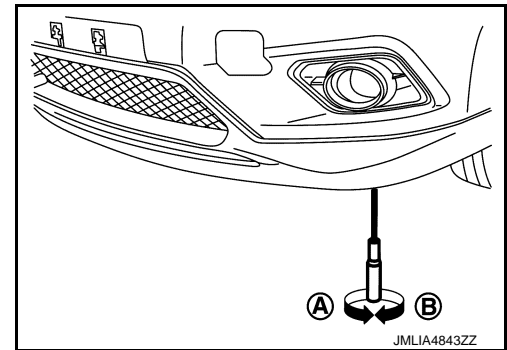
- Ride alone on the driver seat.

### AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment.

Ⓐ: DOWN

Ⓑ: UP



### Aiming Adjustment Procedure

INFOID:0000000010788881

1. Place the screen.

#### NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.

2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.

3. Start the engine. Turn the front fog lamp ON.

#### CAUTION:

**Never cover the lens surface with a tape etc. The lens is made of resin.**

#### NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.

4. Adjust the cutoff line height Ⓐ with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and Ⓐ becomes 150 mm (5.90 in).

Front fog lamp light distribution on the screen

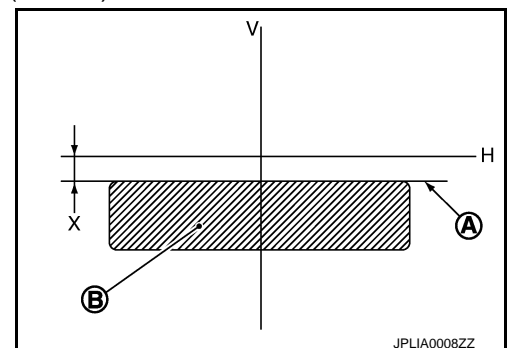
Ⓐ : Cutoff line

Ⓑ : High illuminance area

H : Horizontal center line of front fog lamp

V : Vertical center line of front fog lamp

X : Cutoff line height



# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

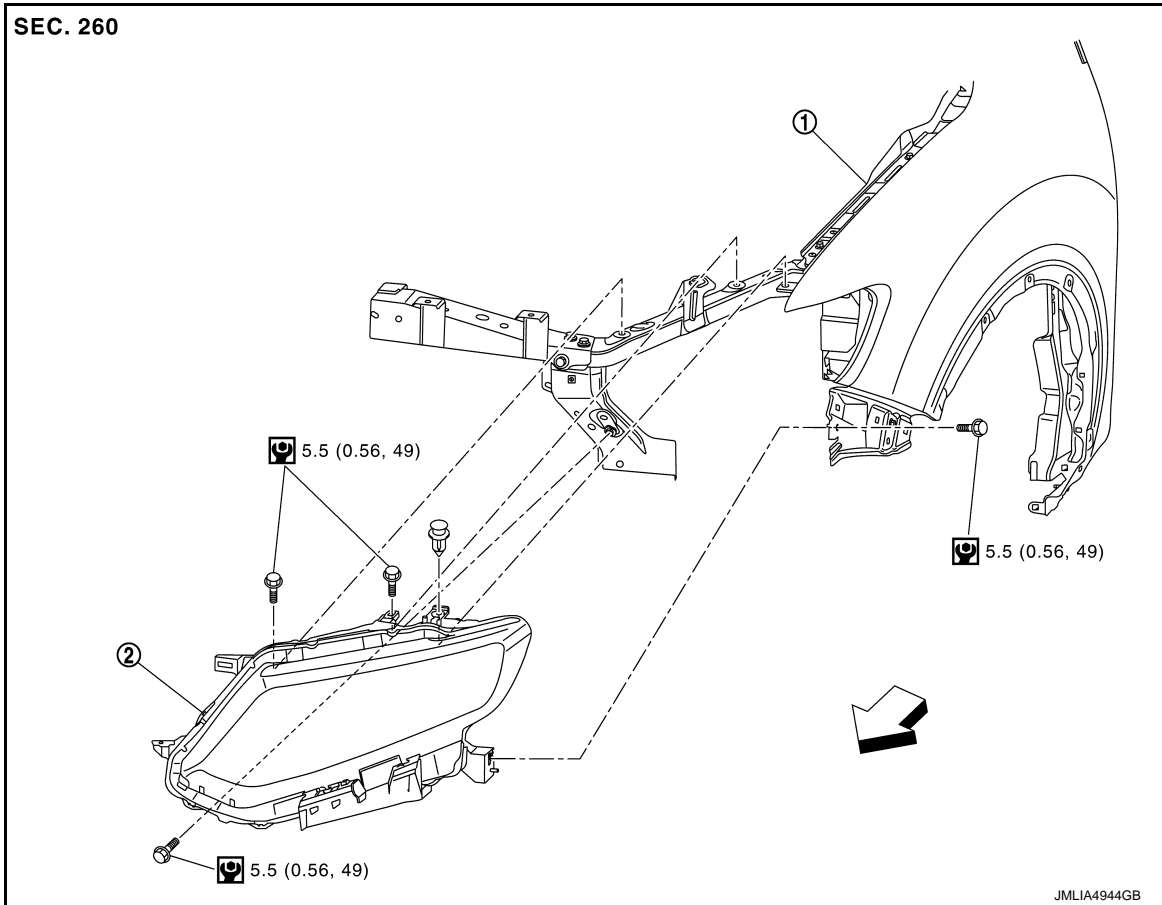
## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View

INFOID:000000001078882

#### REMOVAL



① Front fender panel

② Front combination lamp

⇐ : Vehicle front

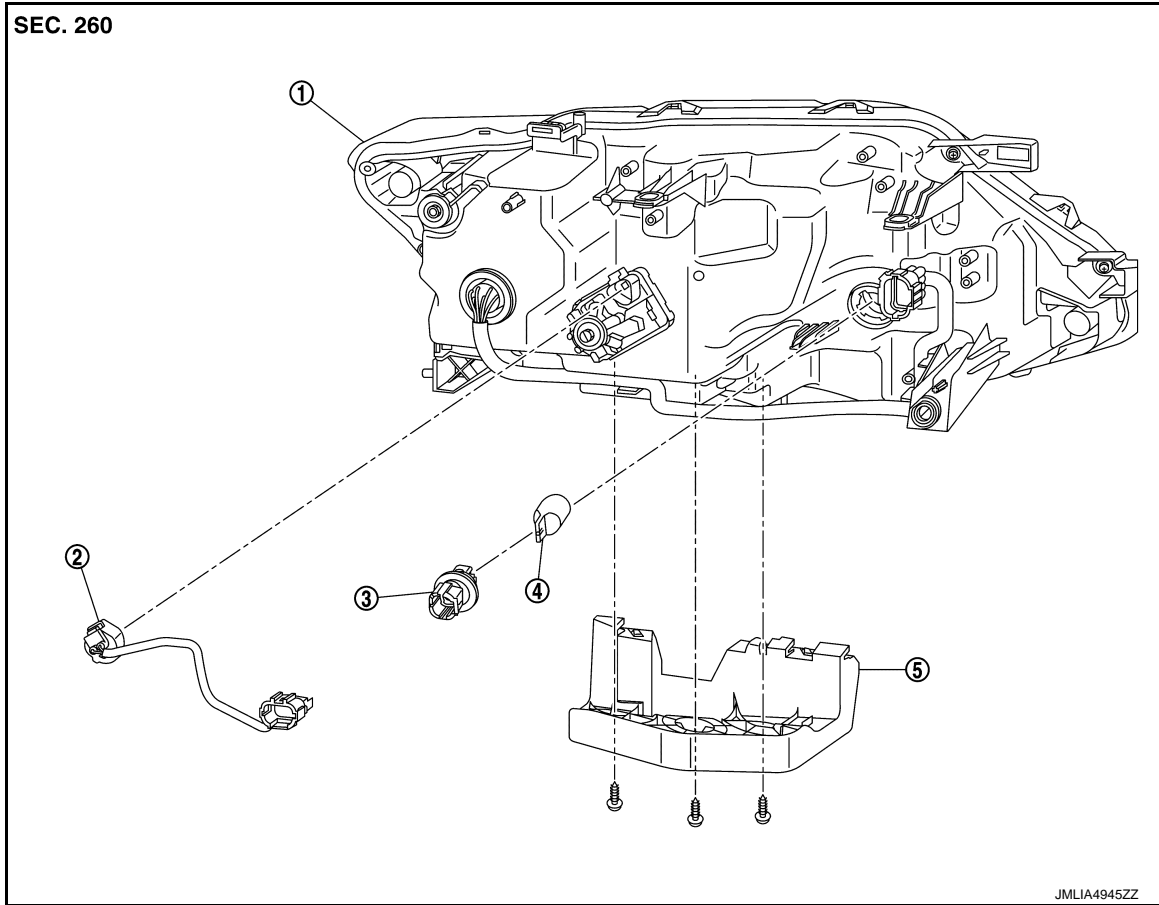
🔧 : N·m (kg·m, in·lb)

#### DISASSEMBLY

# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]



- |                                  |                                  |                                      |
|----------------------------------|----------------------------------|--------------------------------------|
| ① Front combination lamp housing | ② Front combination lamp harness | ③ Front turn signal lamp bulb socket |
| ④ Front turn signal lamp bulb    | ⑤ Front combination lamp bracket |                                      |

## Removal and Installation

INFOID:0000000010788883

### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Remove front bumper fascia. Refer to [EXT-15, "Removal and Installation"](#).
2. Remove front combination lamp mounting bolts and clip.
3. Remove harness clip of front combination lamp bracket.
4. Pull out front combination lamp forward the vehicle.
5. Disconnect front combination lamp harness connectors and then remove front combination lamp.

### INSTALLATION

Note the following item, and then install in the reverse order of removal.

### CAUTION:

After installation, perform aiming adjustment. Refer to the following.

- LHD MODELS: Refer to [EXL-184, "LHD MODELS : Description"](#).
- RHD MODELS: Refer to [EXL-186, "RHD MODELS : Description"](#).

## Replacement

INFOID:0000000010788884

### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).
- After installing the bulb, install the bulb socket securely for watertightness.

# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

## HEADLAMP BULB (HI)

### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace front combination lamp as a set. Refer to [EXL-191, "Removal and Installation"](#).

## HEADLAMP BULB (LO)

### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace front combination lamp as a set. Refer to [EXL-191, "Removal and Installation"](#).

## DAYTIME RUNNING LIGHT/ PARKING LAMP BULB

### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace front combination lamp as a set. Refer to [EXL-191, "Removal and Installation"](#).

## FRONT TURN SIGNAL LAMP BULB

### LH side

1. Remove air duct 1. Refer to the following.
  - MR20DD: Refer to [EM-31, "Removal and Installation"](#).
  - QR25DE: Refer to [EM-175, "Removal and Installation"](#).
  - R9M: Refer to [EM-308, "Removal and Installation"](#).
2. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
3. Remove front turn signal lamp bulb from turn signal lamp bulb socket.

### RH side

1. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
2. Remove front turn signal lamp bulb from turn signal lamp bulb socket.

## Disassembly and Assembly

INFOID:0000000010788885

### DISASSEMBLY

1. Remove front combination lamp bracket fixing screws, and then remove front combination lamp bracket.
2. Disconnect front combination lamp harness.
3. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
4. Remove front turn signal lamp bulb from front turn signal lamp bulb socket.

### ASSEMBLY

Note the following items, and then install in the reverse order of removal.

### CAUTION:

- After installing the bulb, install the bulb socket securely watertightness.
- After installation, perform aiming adjustment. Refer to following.
- LHD MODELS: Refer to [EXL-184, "LHD MODELS : Description"](#).
- RHD MODELS: Refer to [EXL-186, "RHD MODELS : Description"](#).

# FRONT FOG LAMP

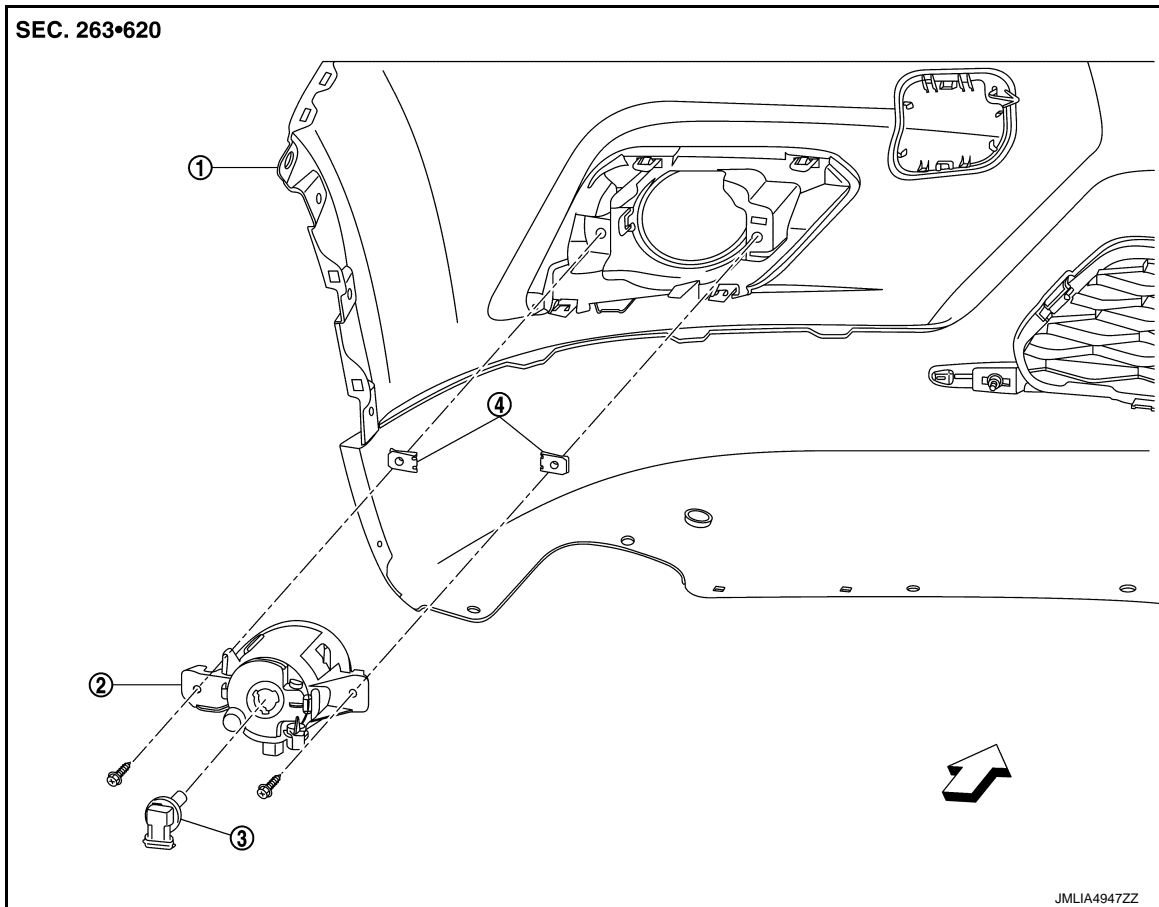
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## FRONT FOG LAMP

### Exploded View

INFOID:0000000010788886



① Front bumper fascia

② Front fog lamp

③ Front fog lamp bulb

④ Spring nut

⇐ : Vehicle front

### Removal and Installation

INFOID:0000000010788887

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Remove front fender protector to make work space. Refer to [EXT-35, "FENDER PROTECTOR : Removal and Installation"](#).
2. Disconnect front fog lamp harness connector.
3. Remove front fog lamp fixing screws, and then remove front fog lamp.

#### INSTALLATION

Note the following item, and then install in the reverse order of removal.

#### CAUTION:

After installation, perform aiming adjustment. Refer to [EXL-189, "Description"](#).

### Replacement

INFOID:0000000010788888

#### CAUTION:

## FRONT FOG LAMP

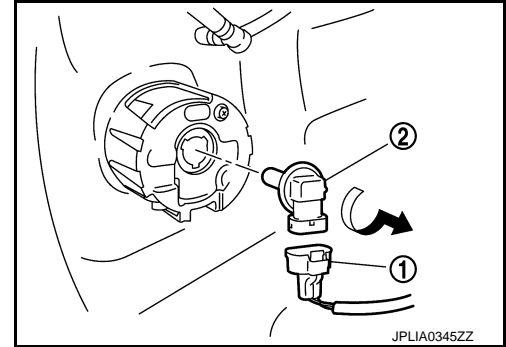
### < REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

### FRONT FOG LAMP BULB

1. Remove fender protector to make work space. Refer to [EXT-35, "FENDER PROTECTOR : Removal and Installation"](#).
2. Disconnect front fog lamp harness connector ①.
3. Rotate front fog lamp bulb ② counterclockwise and unlock it.



## LIGHT & RAIN SENSOR

### Exploded View

INFOID:0000000011008687

Refer to [WW-109, "Exploded View"](#).

### Removal and Installation

INFOID:0000000010788889

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

Remove light & rain sensor. Refer to [WW-109, "Removal and Installation"](#).

#### INSTALLATION

Install in the reverse order of removal.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

## LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

---

### LIGHTING & TURN SIGNAL SWITCH

#### Removal and Installation

INFOID:0000000010788890

#### **CAUTION:**

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

Remove lighting & turn signal switch (combination switch). Refer to [BCS-122, "Removal and Installation"](#).

#### INSTALLATION

Install in the reverse order of removal.



## HAZARD SWITCH

## Removal and Installation

INFOID:000000010788891

**CAUTION:**

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

## REMOVAL

1. Remove center ventilator grille. Refer to following.
  - LHD MODELS: Refer to [IP-14, "Removal and Installation"](#).
  - RHD MODELS: Refer to [IP-41, "Removal and Installation"](#).
2. Disengage fixing pawls, and then remove hazard switch from center ventilator grille.

## INSTALLATION

Install in the reverse order of removal.

A

B

C

D

E

F

G

H

I

J

K

EXL

M

N

O

P

## SIDE TURN SIGNAL LAMP

[LED HEADLAMP]

< REMOVAL AND INSTALLATION >

### SIDE TURN SIGNAL LAMP

#### Exploded View

INFOID:0000000010788892

Refer to [MIR-27, "Exploded View"](#).

#### Removal and Installation

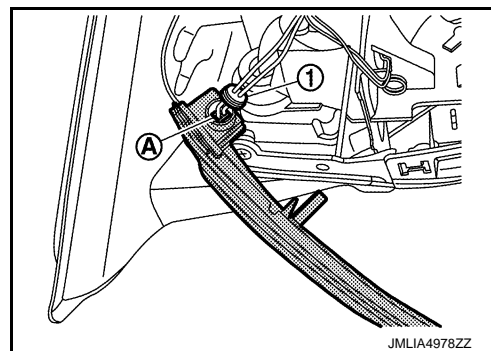
INFOID:0000000010788893

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Remove door mirror cover. Refer to [MIR-30, "DOOR MIRROR COVER : Removal and Installation"](#).
2. Remove side turn signal lamp fixing screws.
3. Remove seal packing ① and disconnect side turn signal lamp harness connector ②, and then remove side turn signal lamp from door mirror housing.



#### INSTALLATION

Install in the reverse order of removal.

#### Replacement

INFOID:0000000010788894

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### SIDE TURN SIGNAL LAMP BULB

#### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace side turn signal lamp as a set. Refer to [EXL-198, "Removal and Installation"](#).

# HEIGHT SENSOR

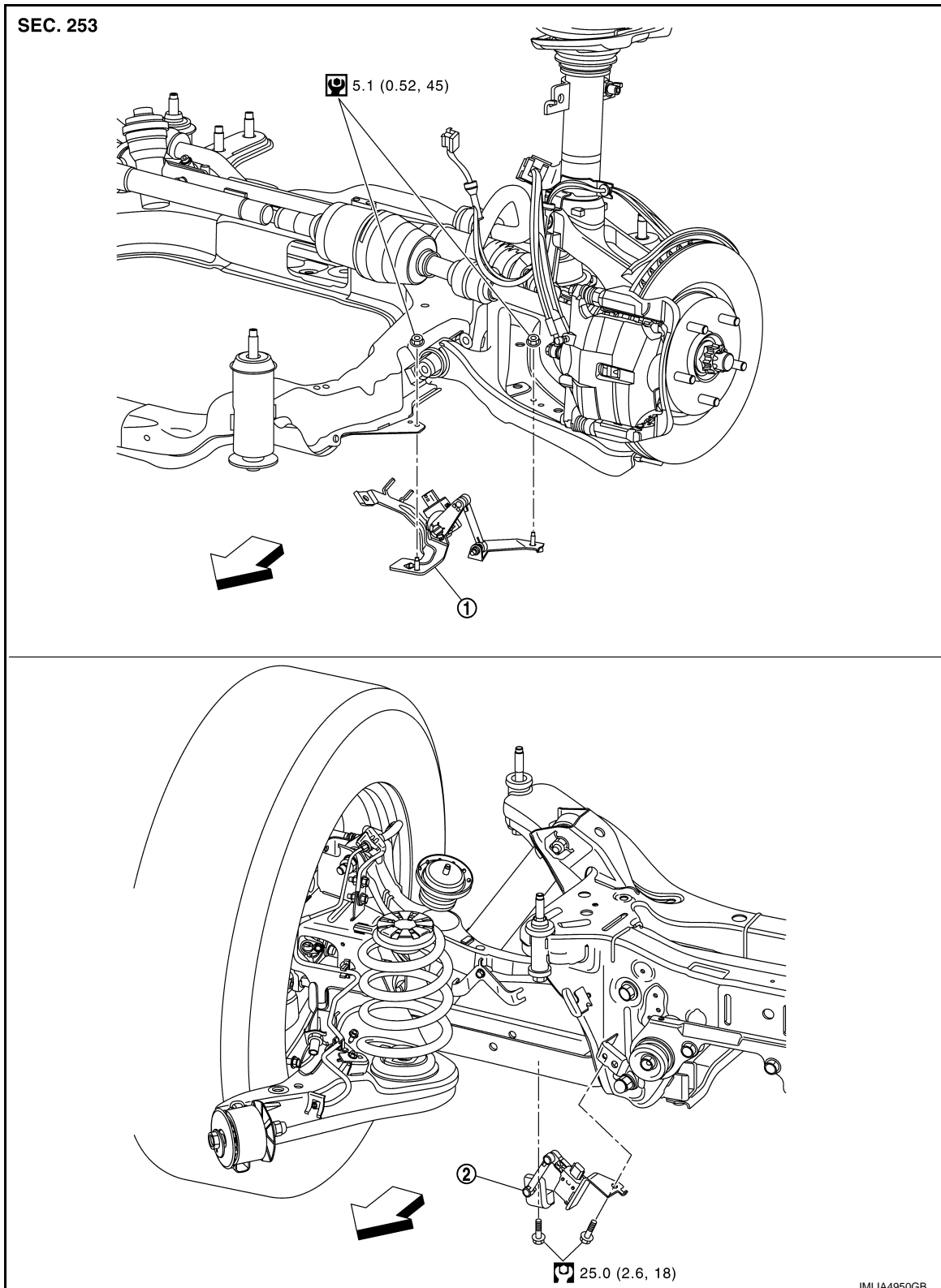
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## HEIGHT SENSOR

Exploded View

INFOID:0000000010788895





① Front height sensor  
(with 3 row seat models)

② Rear height sensor

← : Vehicle front

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

 : N·m (kg-m, in-lb)

 : N·m (kg-m, ft-lb)

## FRONT HEIGHT SENSOR

### FRONT HEIGHT SENSOR : Removal and Installation

INFOID:0000000011008443

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Disconnect front height sensor harness connector.
2. Remove front height sensor mounting nuts, and then remove rear height sensor.

#### INSTALLATION

Note the following item, and then install in the reverse order of removal.

#### CAUTION:

Be sure to perform "SENSOR INITIALIZE" when removing the rear height sensor. Refer to [EXL-99, "Description"](#).

## REAR HEIGHT SENSOR

### REAR HEIGHT SENSOR : Removal and Installation

INFOID:0000000010788896

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Disconnect rear height sensor harness connector.
2. Remove rear height sensor mounting bolts, and then remove rear height sensor.

#### INSTALLATION

Note the following item, and then install in the reverse order of removal.

#### CAUTION:

Be sure to perform "SENSOR INITIALIZE" when removing the rear height sensor. Refer to [EXL-99, "Description"](#).

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

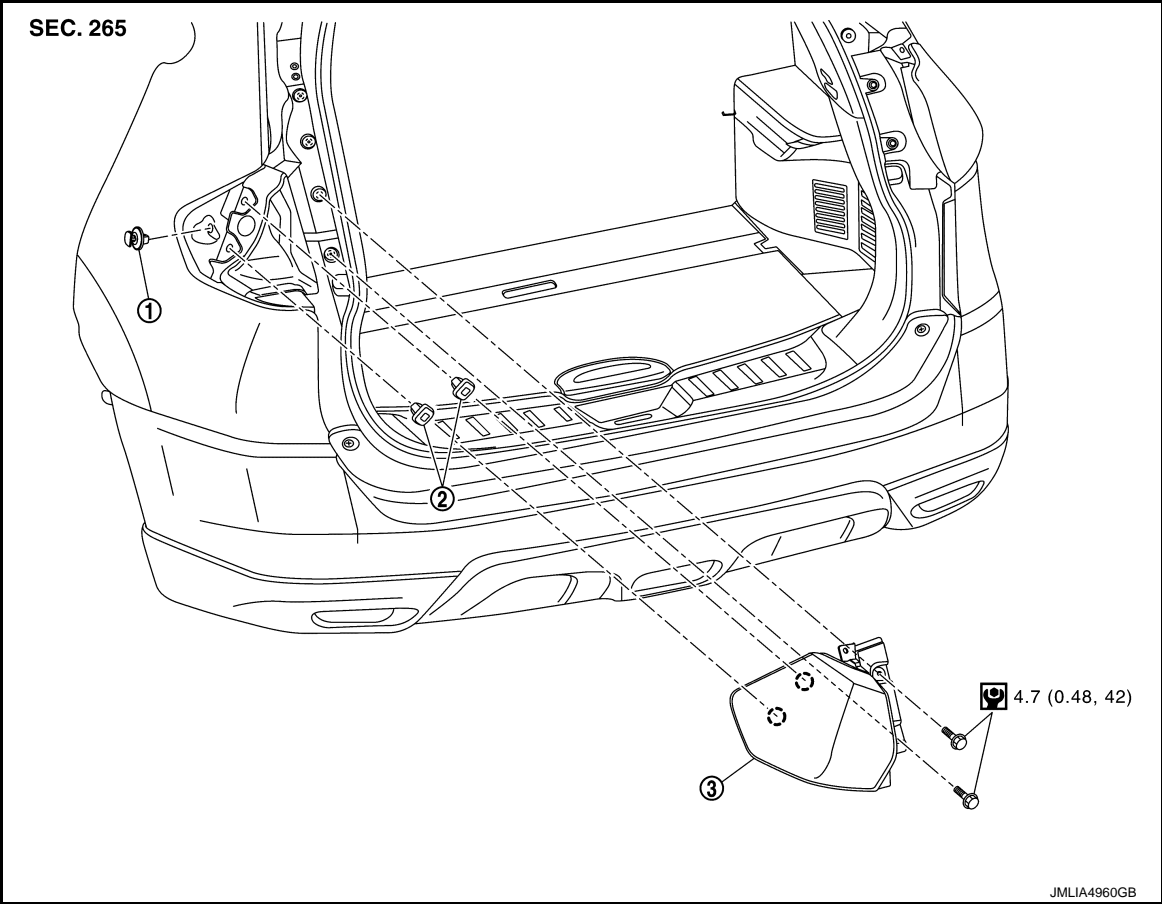
REAR COMBINATION LAMP

Exploded View

INFOID:0000000010788897

REMOVAL

Body Side



① Clip

② Grommet

③ Rear combination lamp  
(body side)

⊖ : Clip

⊖ : N·m (kg·m, in·lb)

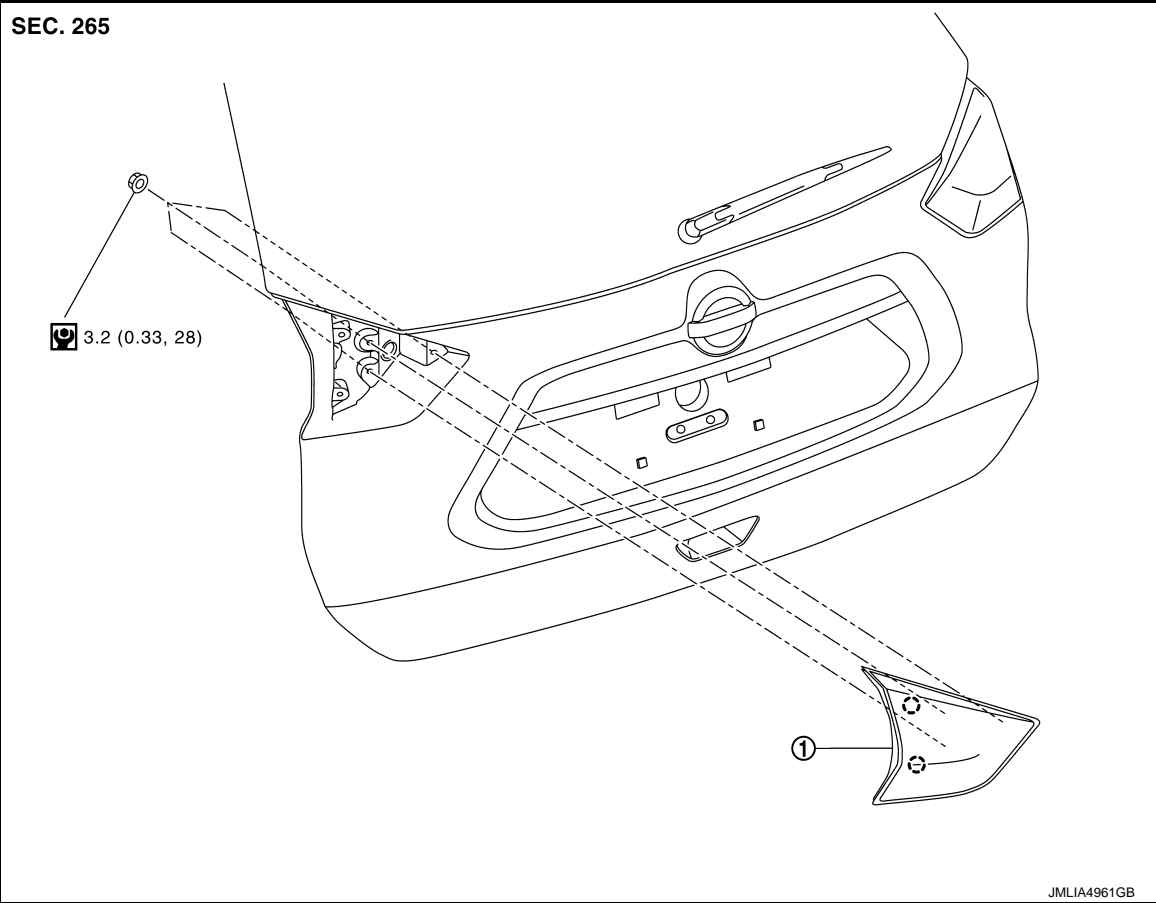
Back Door Side

## REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

SEC. 265



① Rear combination lamp  
(back door side)

○ : Clip

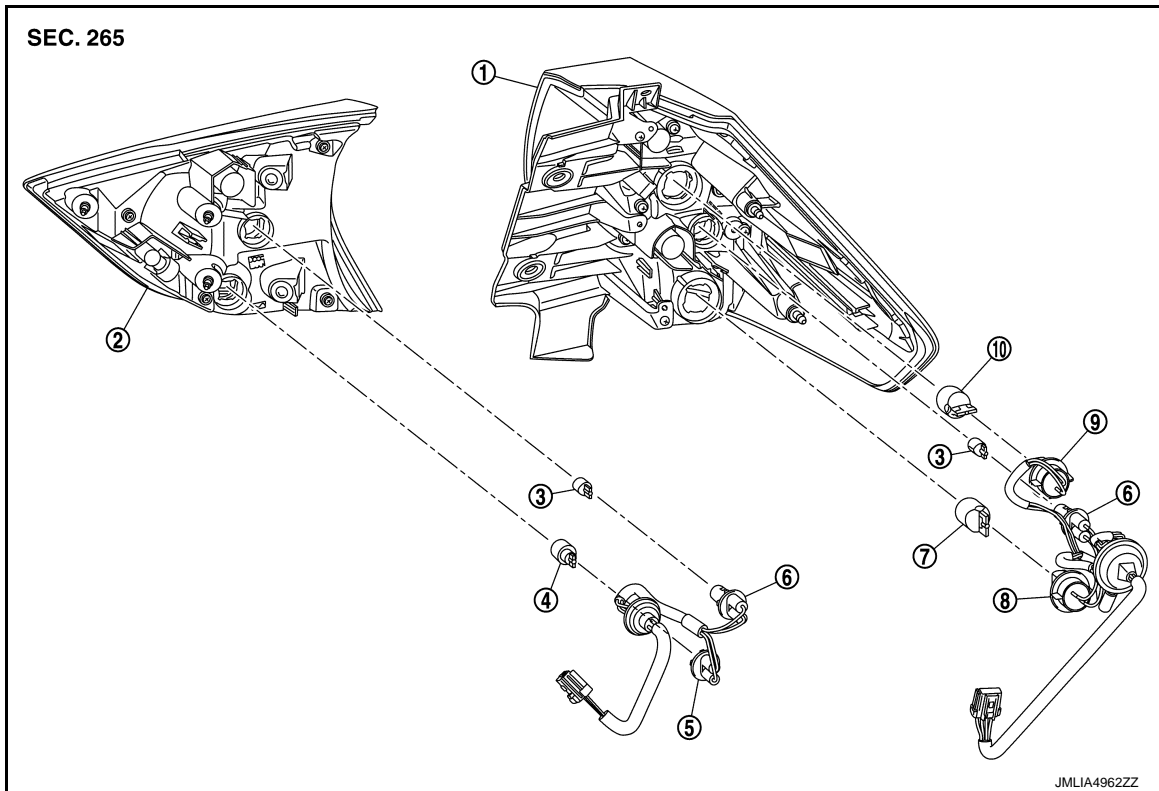
⊙ : N-m (kg-m, in-lb)

DISASSEMBLY

# REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]



- |                                     |  |                         |
|-------------------------------------|--|-------------------------|
| ① Rear combination lamp (body side) | ② Rear combination lamp (back door side) | ③ Tail lamp bulb        |
| ④ Back-up lamp bulb                 | ⑤ Back-up lamp bulb socket               | ⑥ Tail lamp bulb socket |
| ⑦ Rear turn signal lamp bulb        | ⑧ Rear turn signal lamp bulb socket      | ⑨ Stop lamp bulb socket |
| ⑩ Stop lamp bulb                    |  |                         |

## REAR COMBINATION LAMP (BODY SIDE)

### REAR COMBINATION LAMP (BODY SIDE) : Removal and Installation

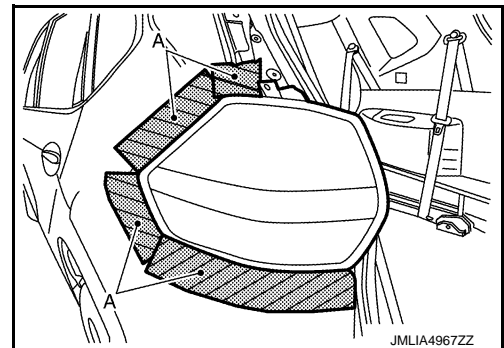
INFOID:0000000010788898

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Fully open back door.
2. Remove rear spoiler. Refer to [EXT-64, "Removal and Installation"](#).
3. Remove rear combination lamp (body side) mounting bolts.
4. Apply protective tapes (A) on the part to protect it from damage.



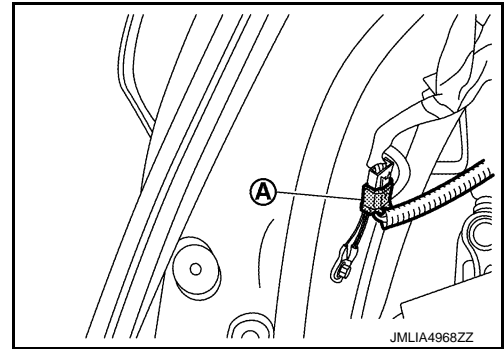
5. Remove luggage side lower finisher. Refer to [INT-43, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).

## REAR COMBINATION LAMP


### < REMOVAL AND INSTALLATION >

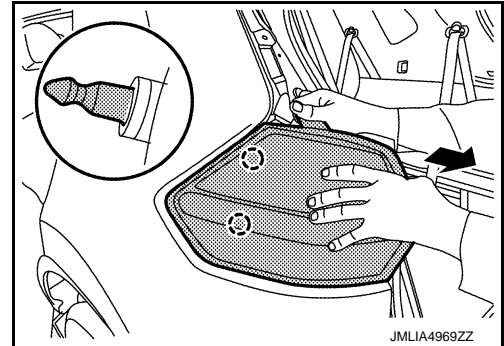
[LED HEADLAMP]

6. Disconnect rear combination lamp (body side) harness connector (A).



7. Pull rear combination lamp (body side) toward vehicle rear to disengage fixing clips, and then remove rear combination lamp (body side).

 : Clip



### INSTALLATION

Install in the reverse order of removal.

### REAR COMBINATION LAMP (BODY SIDE) : Replacement

INFOID:000000001078899

#### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

### TAIL LAMP BULB

1. Remove rear combination lamp (body side). Refer to [EXL-203, "REAR COMBINATION LAMP \(BODY SIDE\) : Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise, and then remove tail lamp bulb socket.
3. Remove tail lamp bulb from tail lamp bulb socket.

### STOP LAMP BULB

1. Remove rear combination lamp (body side). Refer to [EXL-203, "REAR COMBINATION LAMP \(BODY SIDE\) : Removal and Installation"](#).
2. Rotate stop lamp bulb socket counterclockwise, and then remove stop lamp bulb socket.
3. Remove stop lamp bulb from stop lamp bulb socket.

### REAR TURN SIGNAL LAMP BULB

1. Remove rear combination lamp (body side). Refer to [EXL-203, "REAR COMBINATION LAMP \(BODY SIDE\) : Removal and Installation"](#).
2. Rotate rear turn signal lamp bulb socket counterclockwise, and then remove rear turn signal lamp bulb socket.
3. Remove rear turn signal lamp bulb from rear turn signal lamp bulb socket.

### REAR COMBINATION LAMP (BACK DOOR SIDE)



# REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## REAR COMBINATION LAMP (BACK DOOR SIDE) : Removal and Installation

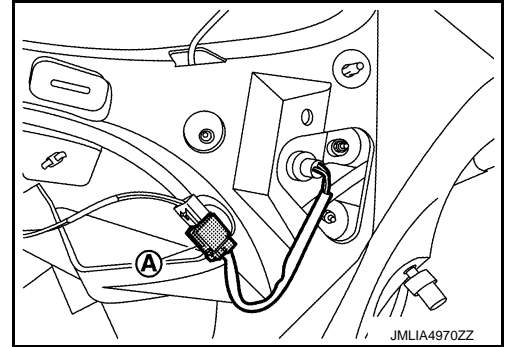
INFOID:0000000010788900

### CAUTION:

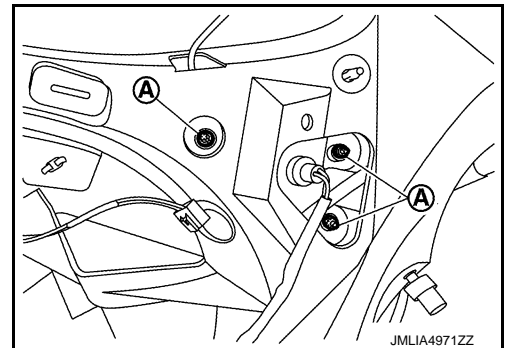
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

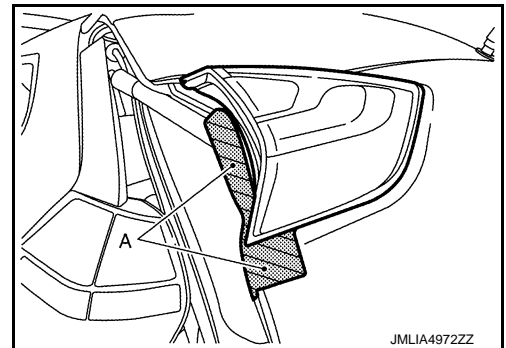
1. Fully open back door.
2. Remove back door inner finisher. Refer to [INT-47, "Removal and Installation"](#).
3. Disconnect rear combination lamp (back door side) harness connector (A).




4. Remove rear combination lamp (back door side) mounting nuts (A).

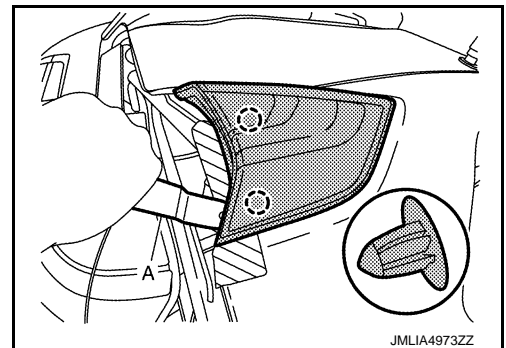


5. Apply protective tape (A) on the part to protect it from damage.



6. Disengage rear combination lamp (back door side) fixing clips using a remover tool (A), and then remove rear combination lamp (back door side).

 : Clip



### INSTALLATION

## REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

Install in the reverse order of removal.

### REAR COMBINATION LAMP (BACK DOOR SIDE) : Replacement

INFOID:000000010788901

#### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

#### TAIL LAMP BULB

1. Remove rear combination lamp (back door side). Refer to [EXL-205, "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise, and then remove tail lamp bulb socket.
3. Remove tail lamp bulb from tail lamp bulb socket.

#### BACK-UP LAMP BULB

1. Remove rear combination lamp (back door side). Refer to [EXL-205, "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Removal and Installation"](#).
2. Rotate back-up lamp bulb socket counterclockwise, and then remove back-up lamp bulb socket.
3. Remove back-up lamp bulb from back-up lamp bulb socket.

# HIGH-MOUNTED STOP LAMP

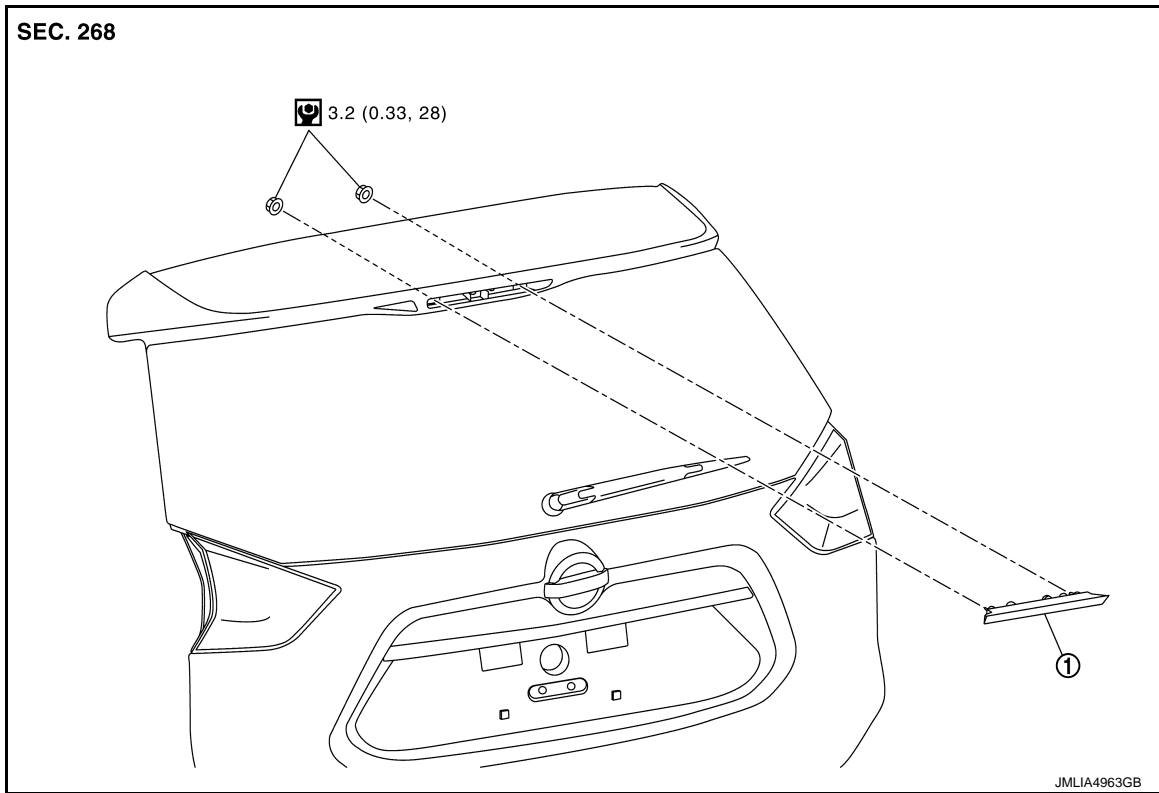
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000010788902



① High-mounted stop lamp

Ⓐ : N·m (kg-m, in-lb)

## Removal and Installation

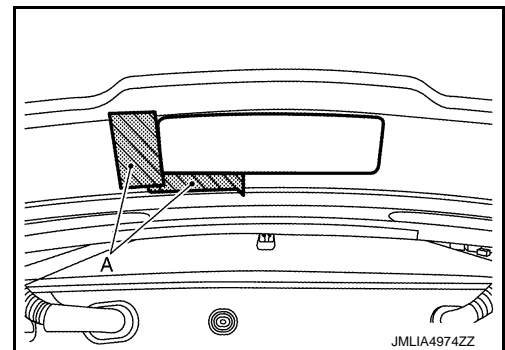
INFOID:0000000010788903

### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Fully open back door.
2. Apply protective tapes (A) on the part to protect it from damage.

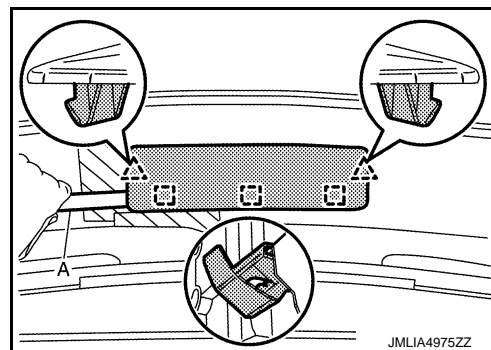
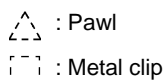


## HIGH-MOUNTED STOP LAMP

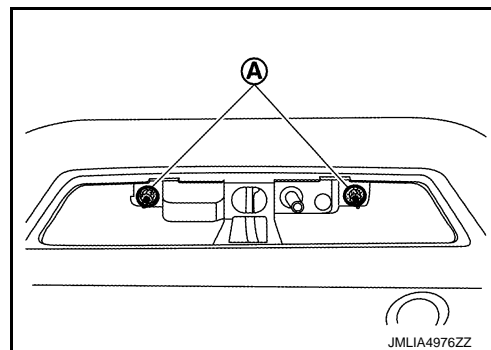
[LED HEADLAMP]

### < REMOVAL AND INSTALLATION >

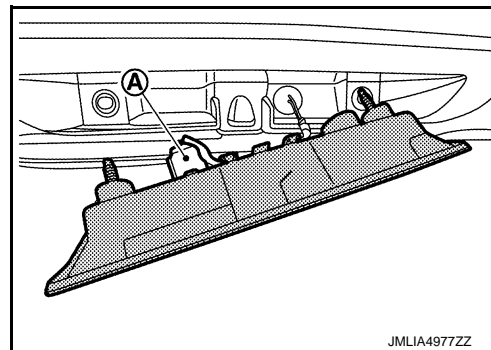
3. Disengage back door cover fixing metal clips and pawls using a remover tool (A), and then remove back door cover.



4. Remove high-mounted stop lamp mounting nuts (A).



5. Disconnect high-mounted stop lamp harness connector (A), and then remove high-mounted stop lamp.



### INSTALLATION

Install in the reverse order of removal.

### Replacement

INFOID:0000000010788904

#### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

### HIGH-MOUNTED STOP LAMP BULB

#### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace high-mounted stop lamp unit as a set. Refer to [EXL-207, "Removal and Installation"](#).

# LICENSE PLATE LAMP

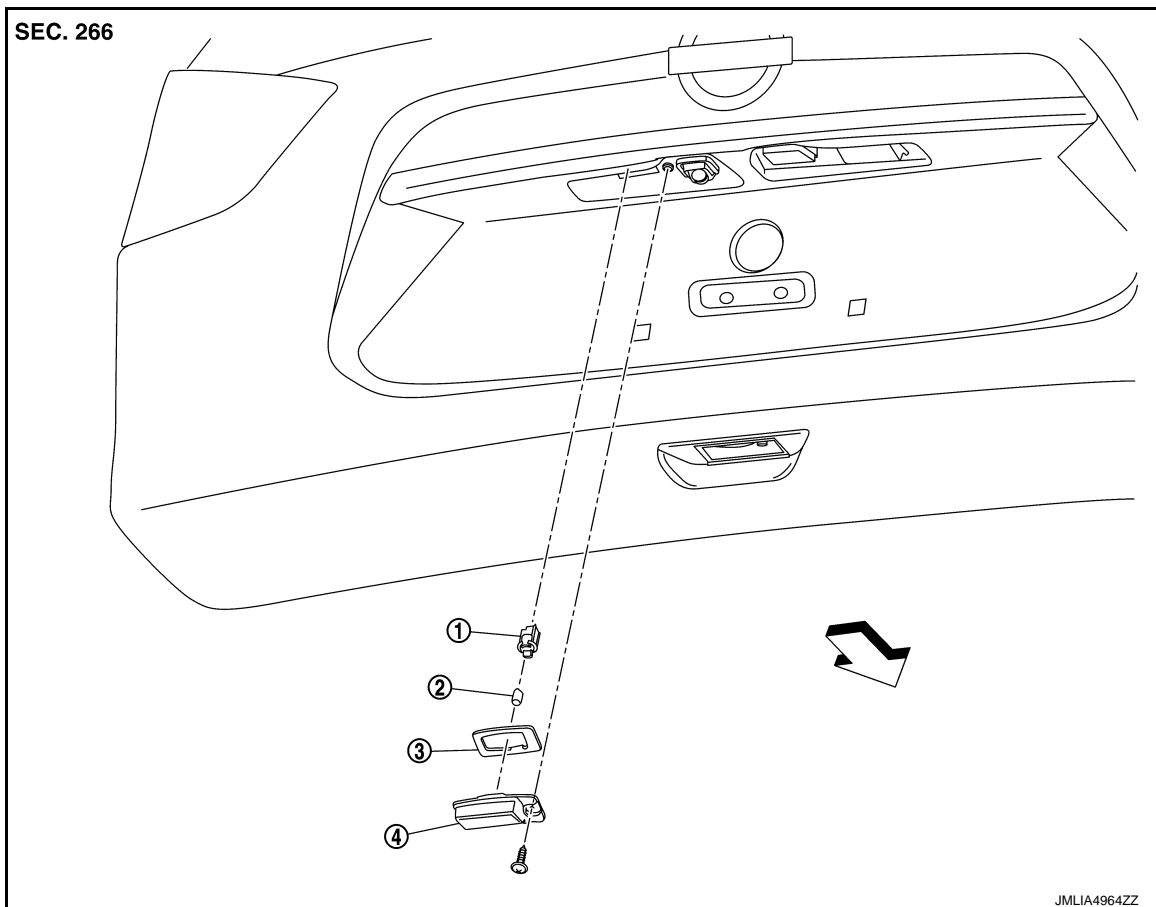
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## LICENSE PLATE LAMP

Exploded View

INFOID:0000000010788905



- ① License plate lamp bulb socket      ② License plate lamp bulb      ③ Seal packing  
④ License plate lamp housing  
↶ : Vehicle front

## Removal and Installation

INFOID:0000000010788906

### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Remove back door finisher cap. Refer to [EXT-66, "Removal and Installation"](#).
2. Remove license plate lamp fixing screw.
3. Disengage license plate lamp housing fixing portion from back door.
4. Disconnect license plate lamp harness connector, and then remove license plate lamp.

### INSTALLATION

Install in the reverse order of removal.

## Replacement

INFOID:0000000010788907

### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

## LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned OFF.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

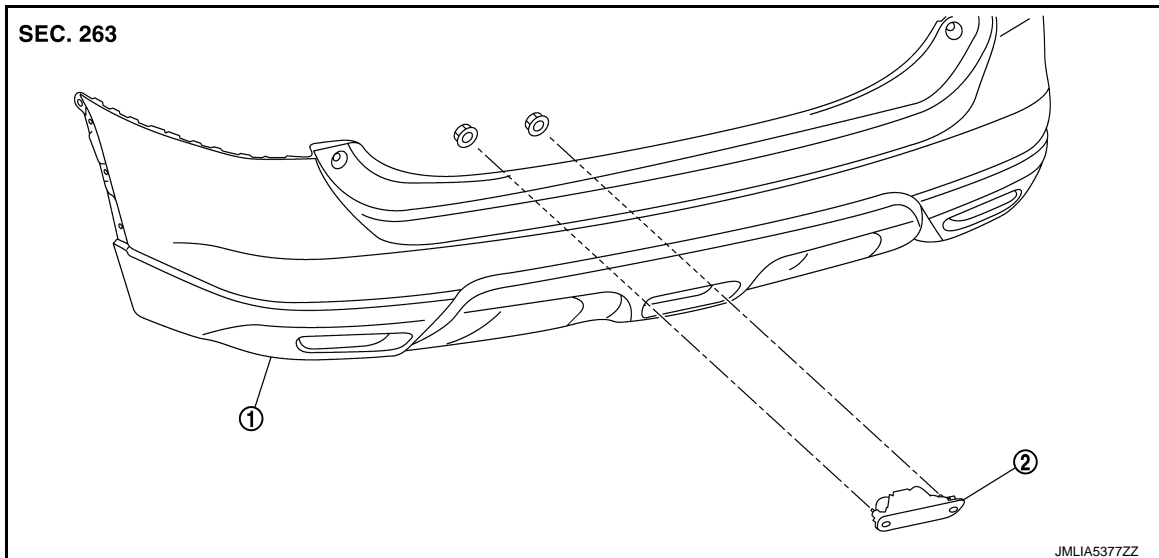
### LICENSE PLATE LAMP BULB

1. Remove license plate lamp. Refer to [EXL-209, "Removal and Installation"](#).
2. Rotate license plate lamp bulb socket counterclockwise and unlock it.
3. Remove license plate lamp bulb from license plate lamp bulb socket.

## REAR FOG LAMP

### Exploded View

INFOID:0000000010788908



① Rear bumper fascia

② Rear fog lamp

### Removal and Installation

INFOID:0000000010788909

#### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Remove rear bumper fascia. Refer to [EXT-18, "Removal and Installation"](#).
2. Remove rear fog lamp mounting nuts.
3. Remove rear fog lamp from rear bumper fascia.

#### INSTALLATION

Install in the reverse order of removal.

### Replacement

INFOID:0000000010788910

#### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-9, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

#### REAR FOG LAMP BULB

1. Remove rear bumper fascia. Refer to [EXT-18, "Removal and Installation"](#).
2. Disconnect rear fog lamp bulb harness connector.
3. Rotate rear fog lamp bulb socket counterclockwise and unlock it.
4. Remove rear fog lamp bulb from rear fog lamp bulb socket.

## REAR REFLEX REFLECTOR

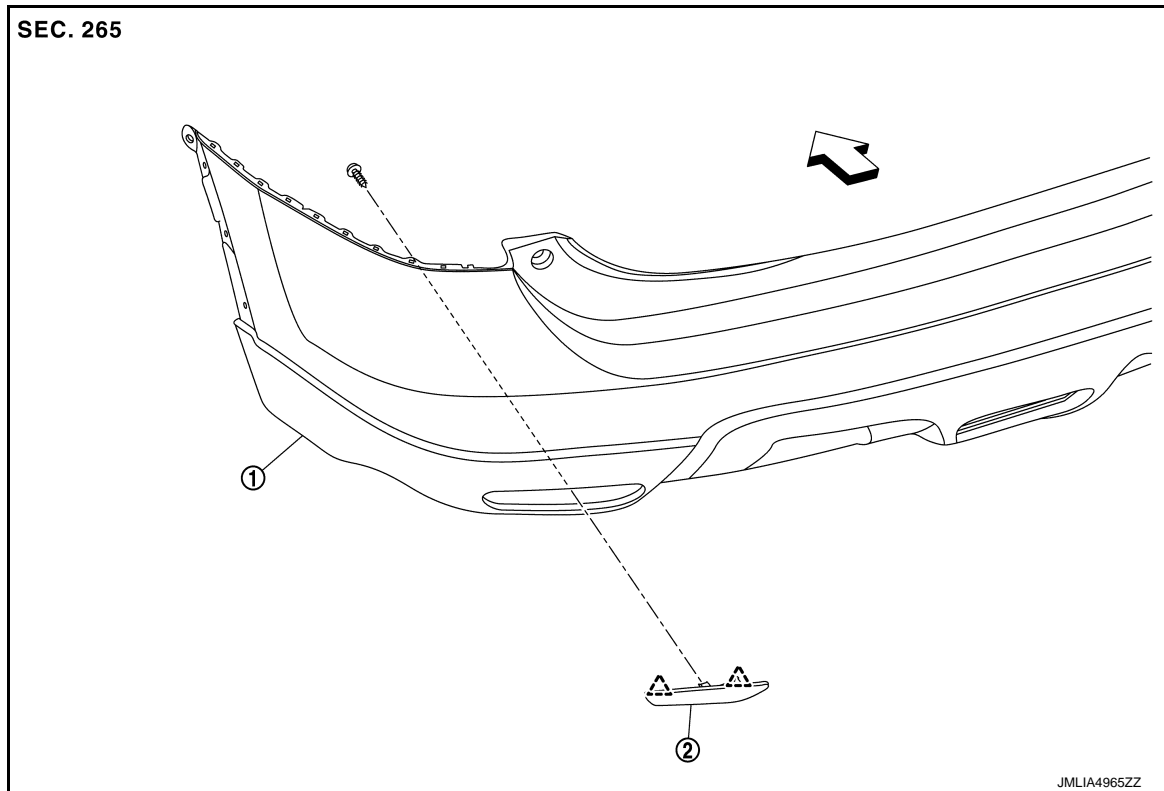
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

### REAR REFLEX REFLECTOR

Exploded View

INFOID:0000000010788911



### Removal and Installation

INFOID:0000000010788912

#### REMOVAL

1. Remove rear bumper fascia. Refer to [EXT-18, "Removal and Installation"](#).
2. Remove rear reflex reflector fixing screw and pawls, and then remove rear reflex reflector.

#### INSTALLATION

Install in the reverse order of removal.



## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[LED HEADLAMP]

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Bulb Specifications

INFOID:0000000010788913

| Item   |                                       | Type          | Wattage (W) |
|--|---------------------------------------|---------------|-------------|
| Front combination lamp                       | Headlamp (Hi)                         | LED           | —           |
|  | Headlamp (Lo)                         | LED           | —           |
|  | Parking lamp<br>daytime running light | LED           | —           |
|  | Front turn signal lamp                | WY21W (Amber) | 21          |
| Front fog lamp                               |                                       | H11           | 55          |
| Side turn signal lamp (built in door mirror) |                                       | LED           | —           |
| Rear combination lamp                        | Stop lamp                             | W21W          | 21          |
|  | Tail lamp                             | W5W           | 5           |
|  | Rear turn signal lamp                 | WY21W         | 21          |
|  | Back-up lamp                          | W16W          | 16          |
| Rear fog lamp                                |                                       | W21W          | 21          |
| License plate lamp                           |                                       | W5W           | 5           |
| High-mounted stop lamp                       |                                       | LED           | —           |

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## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000010792452

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

**Always observe the following items for preventing accidental activation.**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

**Always observe the following items for preventing accidental activation.**

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

#### Precautions for Removing Battery Terminal

INFOID:0000000010792459

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

#### **NOTE:**

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

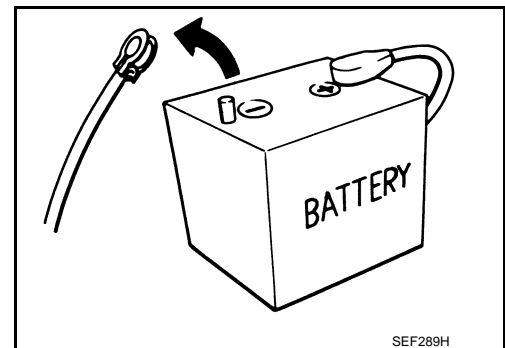
#### **NOTE:**

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

#### **NOTE:**

The removal of 12V battery may cause a DTC detection error.



#### HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.  
For vehicles parked by ignition switch OFF, refer to Instruction 2.

#### INSTRUCTION 1

1. Open the hood.

## PRECAUTIONS

[HALOGEN HEADLAMP]

### < PRECAUTION >

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

|            |              |
|------------|--------------|
| D4D engine | : 20 minutes |
| HRA2DDT    | : 12 minutes |
| K9K engine | : 4 minutes  |
| M9R engine | : 4 minutes  |
| R9M engine | : 4 minutes  |
| V9X engine | : 4 minutes  |

#### **CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

5. Remove 12V battery terminal.

#### **CAUTION:**

**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

### INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

#### **NOTE:**

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

#### **CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

6. Remove 12V battery terminal.

#### **CAUTION:**

**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

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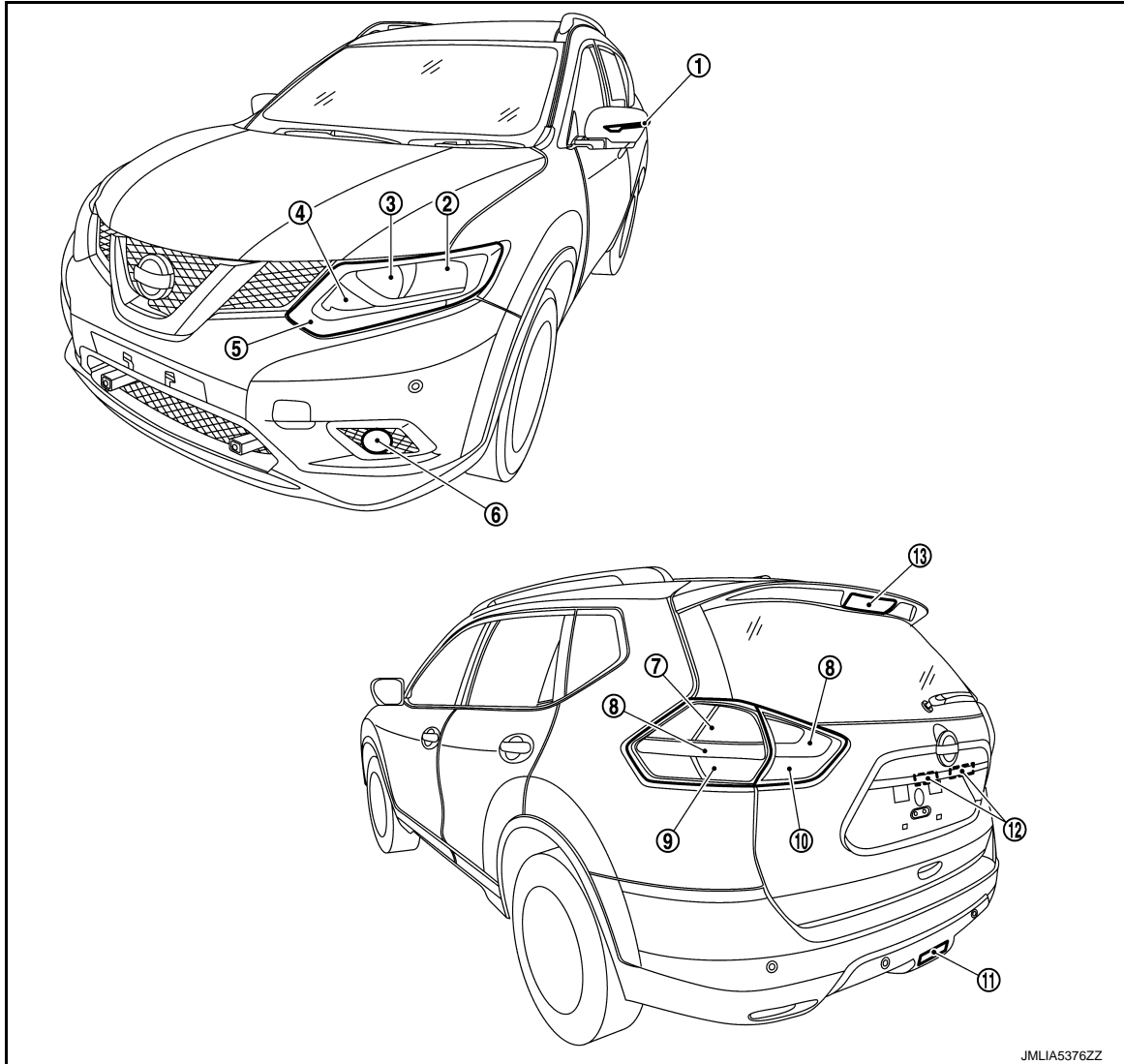
## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Exterior Lamp Appearance

INFOID:0000000010789776

#### Exterior Lamp Appearance



- |                          |                                      |                                |
|--------------------------|--------------------------------------|--------------------------------|
| ① Side turn signal lamp  | ② Headlamp (Lo)                      | ③ Headlamp (Hi)                |
| ④ Front turn signal lamp | ⑤ Parking lamp/daytime running light | ⑥ Front fog lamp (if equipped) |
| ⑦ Stop lamp              | ⑧ Tail lamp                          | ⑨ Rear turn signal lamp        |
| ⑩ Back-up lamp           | ⑪ Rear fog lamp (if equipped)        | ⑫ License plate lamp           |
| ⑬ High-mounted stop lamp |                                      |                                |

#### Bulb Specifications

INFOID:0000000011008547

#### Bulb Specifications

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Item                   |  | Type          | Wattage (W) |
|------------------------|--|---------------|-------------|
| Front combination lamp | Headlamp (Hi)                          | H9            | 65          |
|                        | Headlamp (Lo)                          | H11           | 55          |
|                        | Parking lamp/<br>daytime running light | LED           | —           |
|                        | Front turn signal lamp                 | WY21W (Amber) | 21          |
| Front fog lamp         |  | H11           | 55          |
| Side turn signal lamp  |  | LED           | —           |
| Rear combination lamp  | Stop lamp                              | W21W          | 21          |
|                        | Tail lamp                              | W5W           | 5           |
|                        | Rear turn signal lamp                  | WY21W         | 21          |
|                        | Back-up lamp                           | W16W          | 16          |
| Rear fog lamp          |  | W21W          | 21          |
| License plate lamp     |  | W5W           | 5           |
| High-mounted stop lamp |  | LED           | —           |

## Component Parts Location

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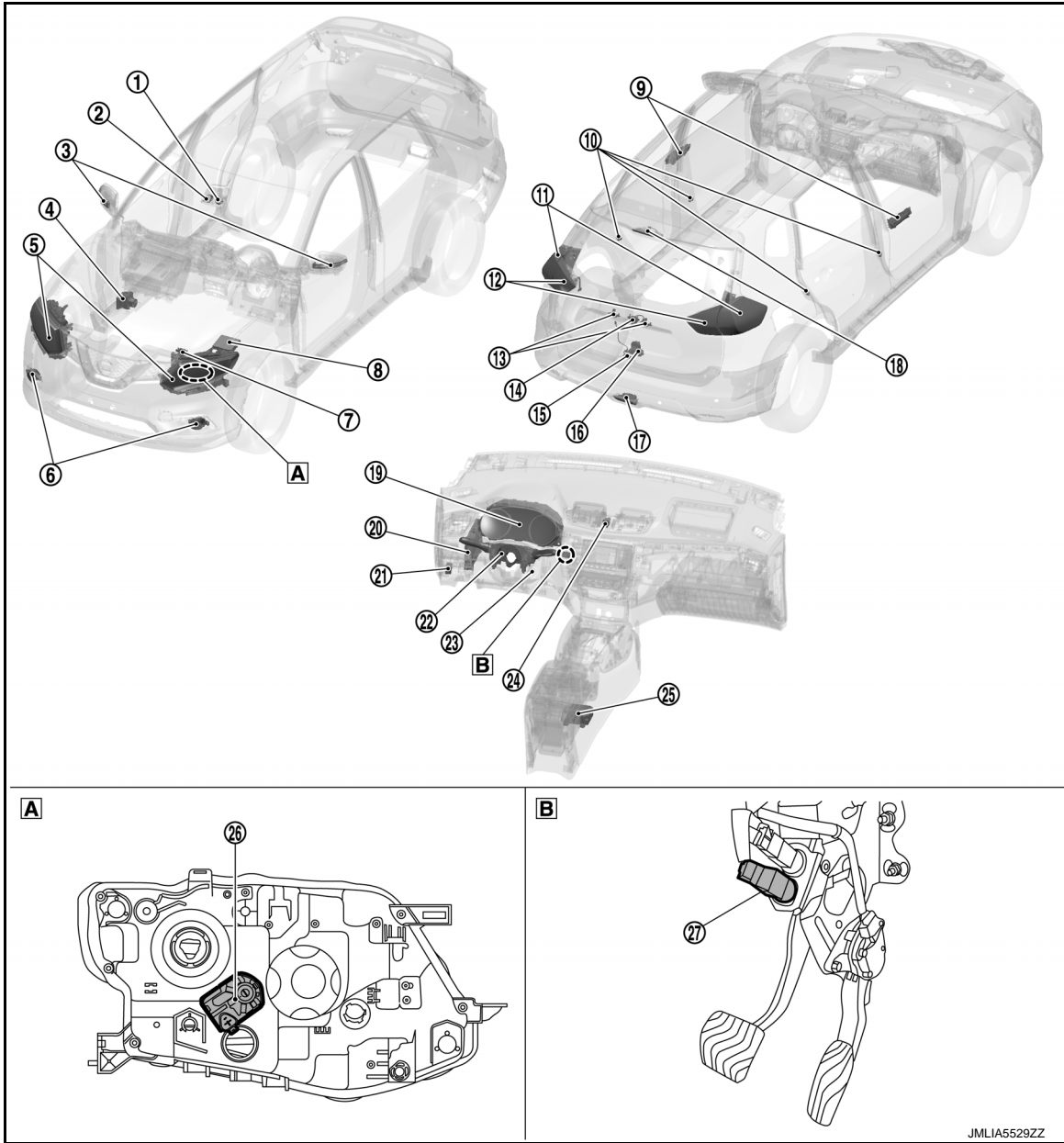
## LHD MODELS

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# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]



**A** Front combination lamp (back)

**B** Brake pedal

| No. | Component                                       | Function   |
|-----|---|--|
| ①   | Light & rain sensor                             | Refer to <a href="#">EXL-224, "Light &amp; Rain Sensor"</a> .  |
| ②   | Front camera unit*1                             | <ul style="list-style-type: none"> <li>Judges the vehicle status from each signal in order to control the high beam assist control.</li> <li>Refer to <a href="#">DAS-10, "Component Parts Location"</a> for detailed installation location.</li> </ul>                                |
| ③   | Side turn signal lamp                           | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ④   | ABS actuator and electric unit (control unit)*2 | <ul style="list-style-type: none"> <li>When the forward emergency braking operates, a request is transmitted to BCM (CAN communication) to turn ON the stop lamp.</li> <li>Refer to <a href="#">BRC-228, "Component Parts Location"</a> for detailed installation location.</li> </ul> |

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| No. | Component                              |  | Function   |
|-----|--|--|--|
| ⑤   | Front combination lamp                 | Headlamp (HI) (Halogen headlamp)       | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
|     |  | Headlamp (LO) (Halogen headlamp)       |  |
|     |  | Parking lamp / Day-time running light  |  |
|     |  | Front turn signal lamp                 |  |
| ⑥   | Front fog lamp* <sup>3</sup>           |  | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑦   | ECM                                    |  | <ul style="list-style-type: none"> <li>ECM transmits engine status signal and Stop/Start status signal (with Stop/Start system) to BCM via CAN communication.</li> <li>Refer to <a href="#">EC-28, "ENGINE CONTROL SYSTEM : Component Parts Location"</a> (MR20DD), <a href="#">EC-440, "Component Parts Location"</a> (QR25DE) or <a href="#">EC-812, "Component Parts Location"</a> (R9M) for detailed installation location.</li> </ul>             |
| ⑧   | IPDM E/R                               |  | <ul style="list-style-type: none"> <li>Controls the integrated smart FET, and supplies voltage to the load according to the request from BCM via CAN communication.</li> <li>Refer to <a href="#">PCS-5, "Component Parts Location"</a> for detailed installation location.</li> </ul>   |
| ⑨   | Door request switch* <sup>4</sup>      |  | Refer to <a href="#">DLK-341, "DOOR LOCK SYSTEM : Door Request Switch"</a> .   |
| ⑩   | Door switch                            |  | Refer to <a href="#">DLK-342, "DOOR LOCK SYSTEM : Door Switch"</a> (with Intelligent Key) or <a href="#">DLK-796, "Door Switch"</a> (without Intelligent Key).   |
| ⑪   | Rear combination lamp (body side)      | Tail lamp                              | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
|     |  | Stop lamp                              |  |
|     |  | Rear turn signal lamp                  |  |
| ⑫   | Rear combination lamp (back door side) | Tail lamp                              | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑬   | License plate lamp                     |  | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑭   | Hands free sensor* <sup>5</sup>        |  | Refer to <a href="#">DLK-342, "DOOR LOCK SYSTEM : Hands Free Sensor"</a> .   |
| ⑮   | Back door opener switch assembly       | Back door opener switch                | Refer to <a href="#">DLK-340, "DOOR LOCK SYSTEM : Back Door Opener Switch Assembly"</a> (with Intelligent Key) or <a href="#">DLK-795, "Back Door Opener Switch Assembly"</a> (without Intelligent Key).   |
|     |  | Back door request switch* <sup>4</sup> |  |
| ⑯   | Back door lock assembly                | Back door switch                       | Refer to <a href="#">DLK-340, "DOOR LOCK SYSTEM : Back Door Lock Assembly"</a> (without Intelligent Key) or <a href="#">DLK-795, "Back Door Lock Assembly"</a> (without Intelligent Key).  |
| ⑰   | Rear fog lamp                          |  | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑱   | High-mounted stop lamp                 |  | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑲   | Combination meter                      |  | <ul style="list-style-type: none"> <li>Turns the indicator lamp and warning (information display/buzzer) ON/OFF according to the request from BCM via CAN communication.</li> <li>Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM via CAN communication.</li> <li>Combination meter transmits vehicle speed signal to BCM via CAN communication.</li> </ul> |

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# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| No. | Component                     |                       | Function   |
|-----|-------------------------------|-----------------------|--|
| ⑳   | BCM                           |                       | <ul style="list-style-type: none"> <li>• Detects each switch condition by the combination switch reading function.</li> <li>• Exterior lamp ON/OFF is judged from each signal, and then a request is transmitted to IPDM E/R (CAN communication) to turn each smart FET ON/OFF.</li> <li>• It also transmits a request to the combination meter (CAN communication) to turn indicator lamp and warning (information display/buzzer) ON/OFF.</li> <li>• Blinks the turn signal lamp and hazard warning lamp according to the each switch condition.</li> <li>• Requests the turn signal indicator lamp blink to the combination meter via CAN communication.</li> <li>• Requests the turn signal operating sound ON to the combination meter via CAN communication.</li> <li>• Judges the vehicle status from each signal, and illuminates the stop lamp and high-mounted stop lamp.</li> <li>• Judges the vehicle status from each signal, and illuminates the rear fog lamp.</li> <li>• Refer to <a href="#">BCS-6, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ㉑   | Headlamp aiming switch        |                       | Refer to <a href="#">EXL-224, "Headlamp Aiming Switch"</a> .   |
| ㉒   | Combination switch            |                       | Refer to <a href="#">BCS-13, "COMBINATION SWITCH READING SYSTEM : System Description"</a> .  |
| ㉓   | Ignition key cylinder*6       | Key switch            | Refer to <a href="#">DLK-796, "Ignition Key Cylinder"</a> .  |
| ㉔   | Hazard switch                 |                       | Refer to <a href="#">EXL-224, "Hazard Switch"</a> .  |
| ㉕   | Air bag diagnosis sensor unit |                       | <ul style="list-style-type: none"> <li>• When the air bag operates, a request is transmitted to BCM (CAN communication) to blinks the hazard warning lamp.</li> <li>• Refer to <a href="#">SRC-6, "Component Parts Location"</a> for detailed installation location.</li> </ul>  |
| ㉖   | Front combination lamp        | Headlamp aiming motor | Refer to <a href="#">EXL-223, "FRONT COMBINATION LAMP : Headlamp Aiming Motor"</a> .   |
| ㉗   | Stop lamp switch              |                       | Refer to <a href="#">EXL-224, "Stop Lamp Switch"</a> .   |

\*1: With high beam assist system

\*2: With forward emergency braking

\*3: With front fog lamp

\*4: With Intelligent Key

\*5: With hands free sensor

\*6: Without Intelligent Key

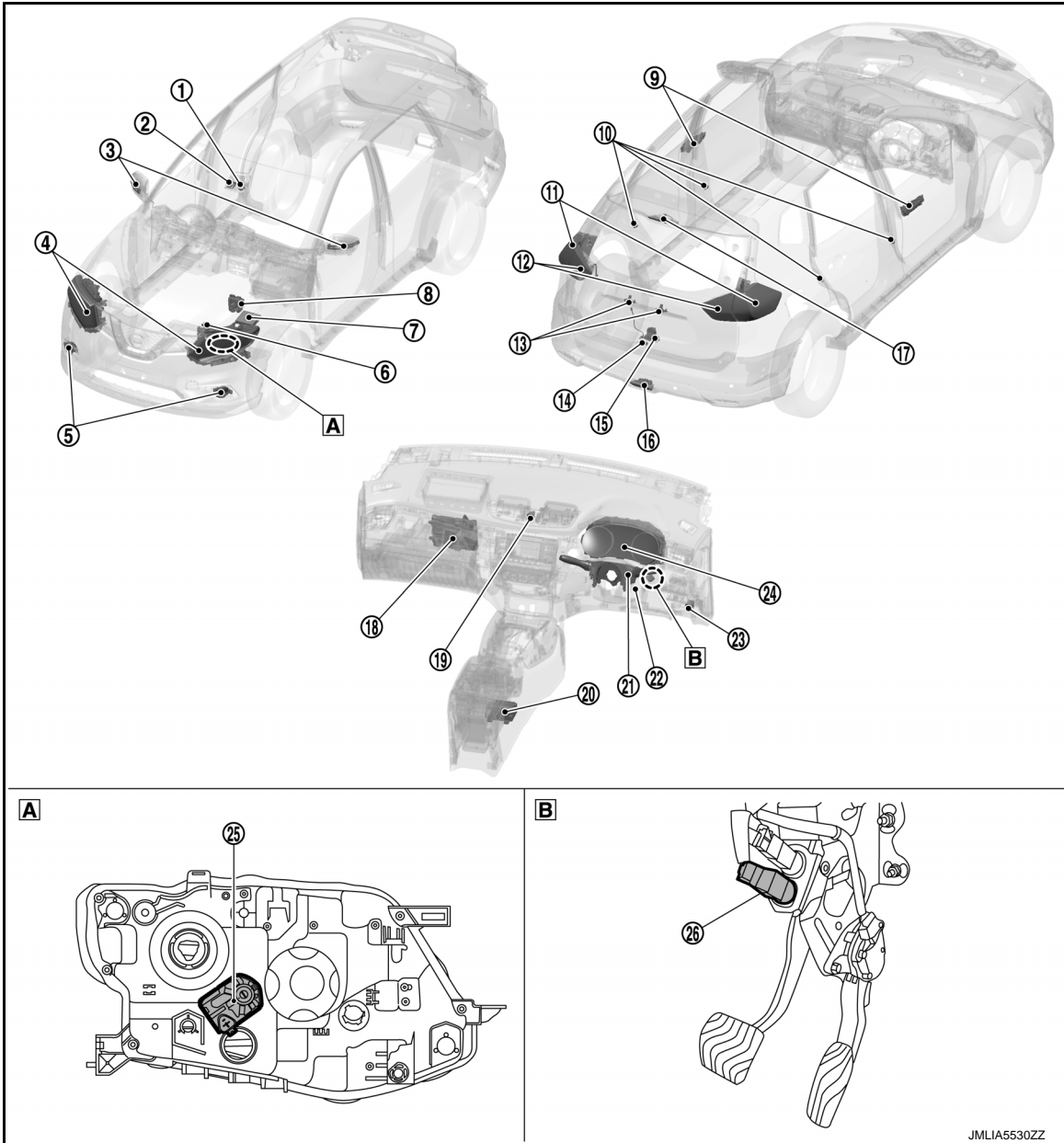
RHD MODELS



# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]



**A** Front combination lamp (back)

**B** Brake pedal

| No. | Component                       | Function  |
|-----|---------------------------------|---|
| ①   | Light & rain sensor             | Refer to <a href="#">EXL-224, "Light &amp; Rain Sensor"</a> .   |
| ②   | Front camera unit* <sup>1</sup> | <ul style="list-style-type: none"> <li>Judges the vehicle status from each signal in order to control the high beam assist control.</li> <li>Refer to <a href="#">DAS-10, "Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ③   | Side turn signal lamp           | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .   |

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| No. | Component                                       |                                       | Function   |
|-----|---|---------------------------------------|--|
| ④   | Front combination lamp                          | Headlamp (HI) (Halogen headlamp)      | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
|     |   | Headlamp (LO) (Halogen headlamp)      |  |
|     |   | Parking lamp / Day-time running light |  |
|     |   | Front turn signal lamp                |  |
| ⑤   | Front fog lamp*2                                |                                       | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑥   | ECM   |                                       | <ul style="list-style-type: none"> <li>ECM transmits engine status signal and Stop/Start status signal to BCM via CAN communication.</li> <li>Refer to <a href="#">EC-812, "Component Parts Location"</a> for detailed installation location.</li> </ul>                               |
| ⑦   | IPDM E/R  |                                       | <ul style="list-style-type: none"> <li>Controls the integrated smart FET, and supplies voltage to the load according to the request from BCM via CAN communication.</li> <li>Refer to <a href="#">PCS-5, "Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ⑧   | ABS actuator and electric unit (control unit)*3 |                                       | <ul style="list-style-type: none"> <li>When the forward emergency braking operates, a request is transmitted to BCM (CAN communication) to turn ON the stop lamp.</li> <li>Refer to <a href="#">BRC-228, "Component Parts Location"</a> for detailed installation location.</li> </ul> |
| ⑨   | Door request switch*4                           |                                       | Refer to <a href="#">DLK-32, "DOOR LOCK SYSTEM : Door Request Switch"</a> .  |
| ⑩   | Door switch                                     |                                       | Refer to <a href="#">DLK-32, "DOOR LOCK SYSTEM : Door Switch"</a> (with Intelligent Key) or <a href="#">DLK-645, "Door Switch"</a> (without Intelligent Key).  |
| ⑪   | Rear combination lamp (body side)               | Tail lamp                             | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
|     |   | Stop lamp                             |  |
|     |   | Rear turn signal lamp                 |  |
| ⑫   | Rear combination lamp (back door side)          | Tail lamp                             | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑬   | License plate lamp                              |                                       | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑭   | Back door opener switch assembly                | Back door opener switch               | Refer to <a href="#">DLK-30, "DOOR LOCK SYSTEM : Back Door Opener Switch Assembly"</a> (with Intelligent Key) or <a href="#">DLK-644, "Back Door Opener Switch Assembly"</a> (without Intelligent Key).  |
|     |   | Back door request switch*4            |  |
| ⑮   | Back door lock assembly                         | Back door switch                      | Refer to <a href="#">DLK-30, "DOOR LOCK SYSTEM : Back Door Lock Assembly"</a> (with Intelligent Key) or <a href="#">DLK-644, "Back Door Lock Assembly"</a> (without Intelligent Key).  |
| ⑯   | Rear fog lamp                                   |                                       | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |
| ⑰   | High-mounted stop lamp                          |                                       | Refer to <a href="#">EXL-216, "Exterior Lamp Appearance"</a> and <a href="#">EXL-216, "Bulb Specifications"</a> .  |

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| No.  | Component                     |                       | Function   |
|------|-------------------------------|-----------------------|--|
| (18) | BCM                           |                       | <ul style="list-style-type: none"> <li>• Detects each switch condition by the combination switch reading function.</li> <li>• Exterior lamp ON/OFF is judged from each signal, and then a request is transmitted to IPDM E/R (CAN communication) to turn each smart FET ON/OFF.</li> <li>• It also transmits a request to the combination meter (CAN communication) to turn indicator lamp and warning (information display/buzzer) ON/OFF.</li> <li>• Blinks the turn signal lamp and hazard warning lamp according to the each switch condition.</li> <li>• Requests the turn signal indicator lamp blink to the combination meter via CAN communication.</li> <li>• Requests the turn signal operating sound ON to the combination meter via CAN communication.</li> <li>• Judges the vehicle status from each signal, and illuminates the stop lamp and high-mounted stop lamp.</li> <li>• Judges the vehicle status from each signal, and illuminates the rear fog lamp.</li> <li>• Refer to <a href="#">BCS-6, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.</li> </ul> |
| (19) | Hazard switch                 |                       | Refer to <a href="#">EXL-224, "Hazard Switch"</a> .  |
| (20) | Air bag diagnosis sensor unit |                       | <ul style="list-style-type: none"> <li>• When the air bag operates, a request is transmitted to BCM (CAN communication) to blinks the hazard warning lamp.</li> <li>• Refer to <a href="#">SRC-6, "Component Parts Location"</a> for detailed installation location.</li> </ul>  |
| (21) | Combination switch            |                       | Refer to <a href="#">BCS-13, "COMBINATION SWITCH READING SYSTEM : System Description"</a> .  |
| (22) | Ignition key cylinder*5       | Key switch            | Refer to <a href="#">DLK-645, "Ignition Key Cylinder"</a> .  |
| (23) | Headlamp aiming switch        |                       | Refer to <a href="#">EXL-224, "Headlamp Aiming Switch"</a> .   |
| (24) | Combination meter             |                       | <ul style="list-style-type: none"> <li>• Turns the indicator lamp and warning (information display/buzzer) ON/OFF according to the request from BCM via CAN communication.</li> <li>• Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM via CAN communication.</li> <li>• Combination meter transmits vehicle speed signal to BCM via CAN communication.</li> </ul>   |
| (25) | Front combination lamp        | Headlamp aiming motor | Refer to <a href="#">EXL-223, "FRONT COMBINATION LAMP : Headlamp Aiming Motor"</a> .   |
| (26) | Stop lamp switch              |                       | Refer to <a href="#">EXL-224, "Stop Lamp Switch"</a> .   |

\*1: With high beam assist system

\*2: With front fog lamp

\*3: With forward emergency braking

\*4: With Intelligent Key

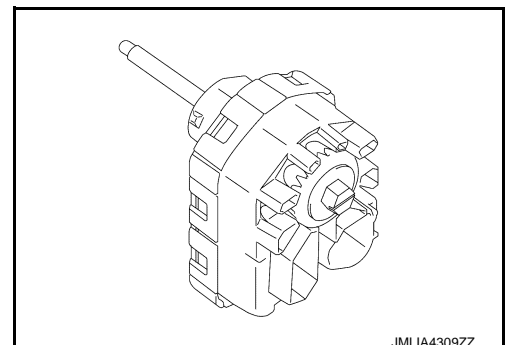
\*5: Without Intelligent Key

## FRONT COMBINATION LAMP

### FRONT COMBINATION LAMP : Headlamp Aiming Motor

INFOID:000000010789779

- Headlamp aiming motor is integrated in the front combination lamp.
- Headlamp aiming motor adjusts the headlamp light axis upward and downward according to input drive signal from headlamp aiming switch.



# COMPONENT PARTS

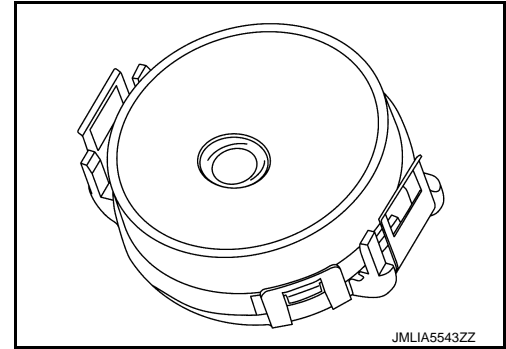
## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

### Light & Rain Sensor

INFOID:0000000011008684

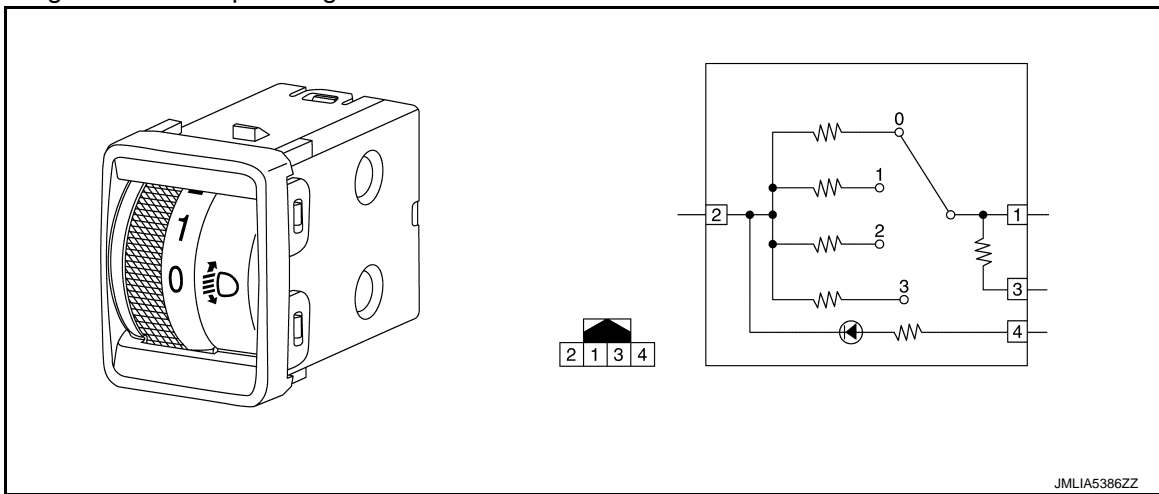
- The light & rain sensor detects the outside ambient light level, forward light level and sensor conditions.
- Based on ambient light level (day/night detection), forward light level (tunnel detection) and sensor conditions it judges ON/OFF condition for exterior lamps.
- And it transmits exterior lamp ON/OFF request to the BCM by the light & rain sensor serial link.
- BCM controls each function depending on the signals. And it detects the light & rain sensor serial link error and the light & rain sensor malfunction.



### Headlamp Aiming Switch

INFOID:0000000010789781

Adjusts height of headlamp aiming.



### Hazard Switch

INFOID:0000000010789782

Inputs the hazard switch ON/OFF signal to BCM.

|   | Switch                      | OFF | ON |
|---|-----------------------------|-----|----|
| 1 | Ground                      |     | ●  |
| 2 | Hazard switch ON/OFF signal |     | ●  |
| 3 | Illumination +              | ●   |    |
|   |                             | ●   |    |
| 4 | Illumination -              | ●   |    |

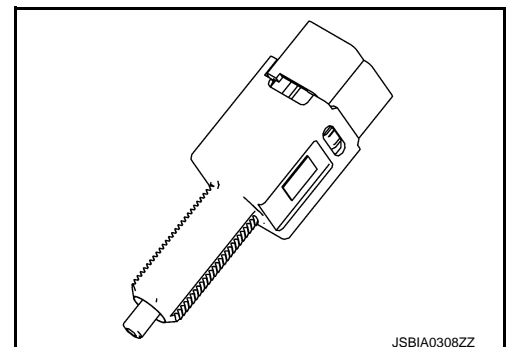
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### Stop Lamp Switch

INFOID:0000000010789783

- Stop lamp switch is installed to brake pedal bracket.
- BCM detects the brake pedal status from the ON/OFF signal that is input from the switch.

| Brake pedal | Stop lamp switch |
|-------------|------------------|
| Released    | OFF              |
| Depressed   | ON               |



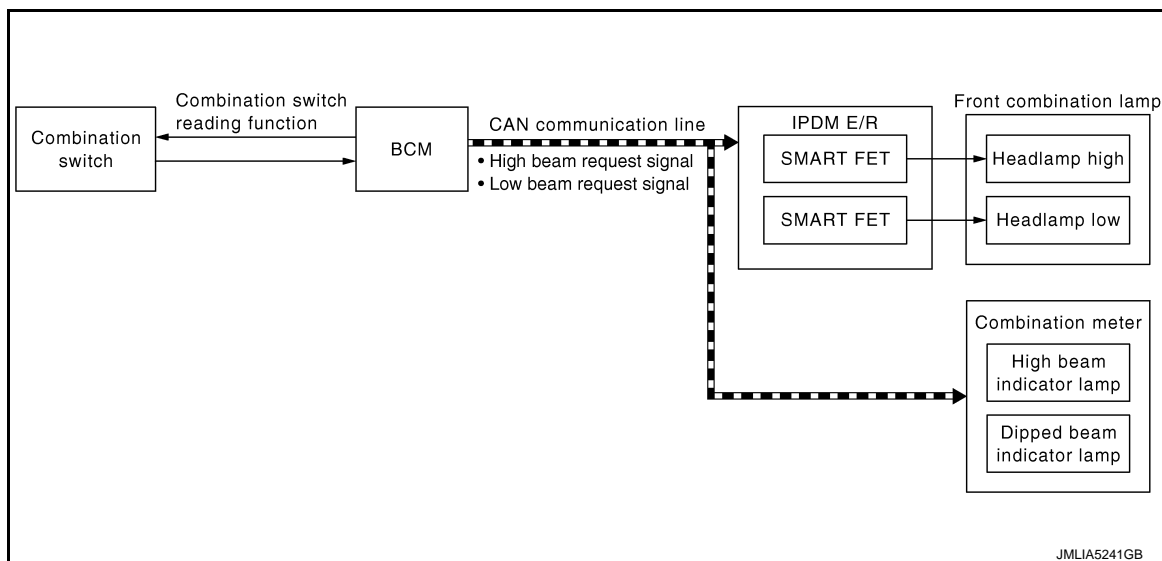
## SYSTEM

## HEADLAMP SYSTEM

## HEADLAMP SYSTEM : System Description

INFOID:0000000010789784

## SYSTEM DIAGRAM



## OUTLINE

Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and smart FET control function of IPDM E/R.

## HEADLAMP (LO) OPERATION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM transmits the low beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (LO) ON condition.

Headlamp (LO) ON condition (When any of the following conditions are satisfied)

- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-228, "AUTO LIGHT SYSTEM : System Description".](#))
- Lighting switch PASS
- IPDM E/R turns the integrated smart FET ON according to low beam request signal and supplies power supply to headlamp (LO).
- Combination meter turns the dipped beam indicator lamp ON according to the low beam request signal.

## HEADLAMP (HI) OPERATION

- BCM transmits the high beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (HI) ON condition.

Headlamp (HI) ON condition (When any of the following conditions are satisfied)

- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO (Only when the illumination judgment by auto light system is ON and the illumination judgment by high beam assist system is ON. For details, refer to [EXL-228, "AUTO LIGHT SYSTEM : System Description".](#))
- Lighting switch PASS
- IPDM E/R turns the integrated headlamp high smart FET ON according to high beam request signal and supplies power supply to headlamp (HI).
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.

## FOLLOW ME HOME FUNCTION

When the driver is moving to the house entrance from the own vehicle, headlamp is kept still ON by the follow me home function of BCM.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

- When BCM detects the input of lighting switch PASS while all of the following conditions are satisfied, it transmits the low beam request signal for a period of time to IPDM E/R and the combination meter through CAN communication.

Follow me home ON condition (When all of the following conditions are satisfied)

- Ignition switch OFF
- Lighting switch OFF or AUTO
- IPDM E/R turns the integrated smart FET ON according to low beam request signal and supplies power supply to headlamp (LO).
- Combination meter turns the dipped beam indicator lamp ON according to the low beam request signal.
- When in any of following conditions, follow me home function can be cancelled while follow me home function is operating.

Follow me home OFF condition (When any of the following conditions are satisfied)

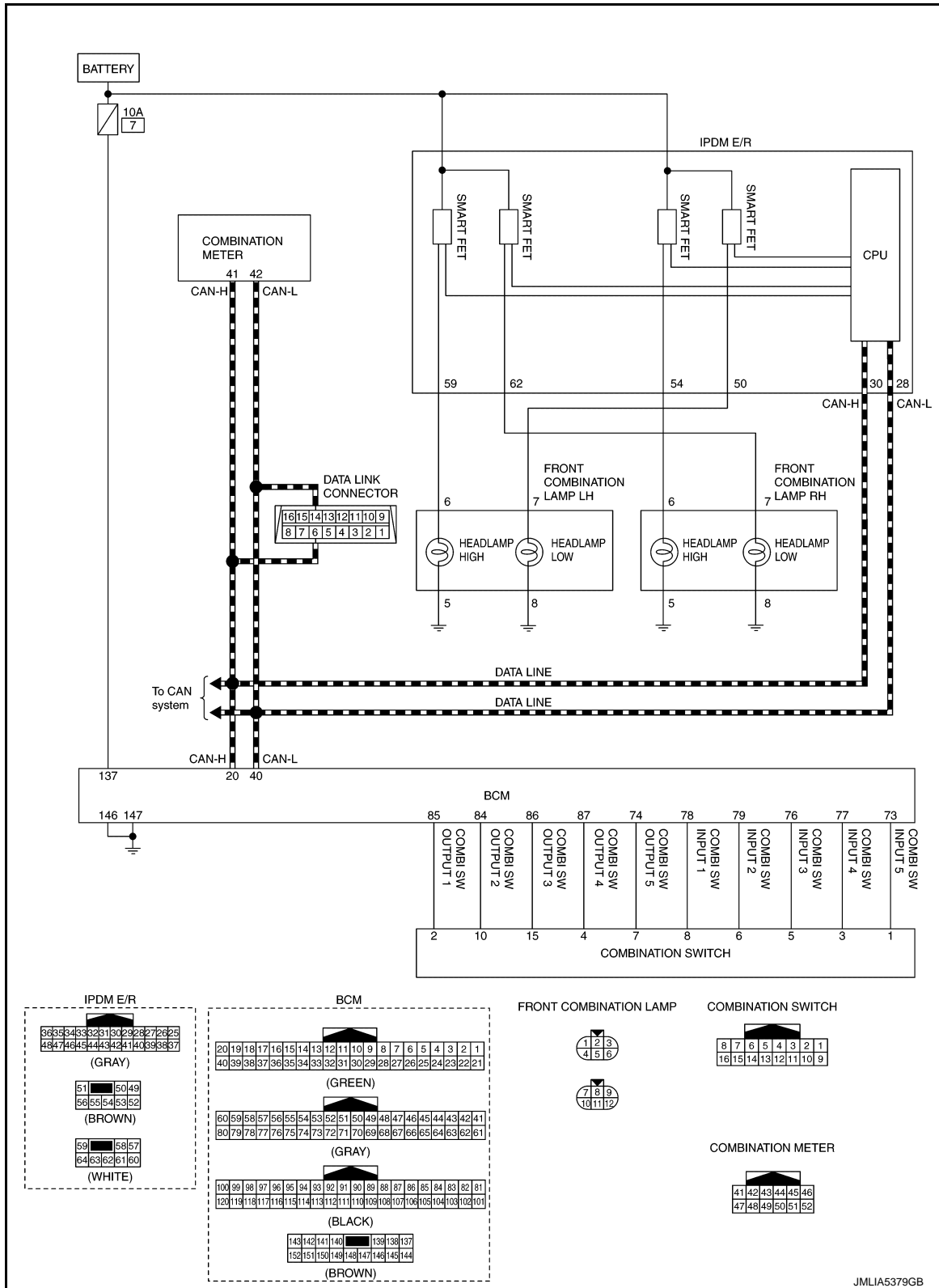
- Ignition switch other than OFF
- Lighting switch other than OFF or AUTO
- Follow me home operating time is expired

### NOTE:

- Flash-to-pass operation illumination time for 1 time can be extended to approximately 30 seconds during operation of follow me home function.
- Flash-to-pass operation can be illuminated continuously for approximately 60 seconds (flash-to-pass operation, 2 times), approximately 90 seconds (flash-to-pass operation, 3 times), and a maximum of approximately 120 seconds (flash-to-pass operation, 4 times).

## HEADLAMP SYSTEM : Circuit Diagram

INFOID:000000010789785



## HEADLAMP SYSTEM : Fail-safe

INFOID:000000010789786

## FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

| DTC   | CONSULT display description |                      | Fail-safe  |
|-------|-----------------------------|----------------------|--|
| B20CE | HL (HI) LH PWR SPLY CIRC    | [CIRC SHORT TO GRND] | Shuts off the power supply to the headlamp (HI) LH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied. |
| B20CF | HL (HI) RH PWR SPLY CIRC    | [CIRC SHORT TO GRND] | Shuts off the power supply to the headlamp (HI) RH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied. |
| B20D0 | HL (LO) LH PWR SPLY CIRC    | [CIRC SHORT TO GRND] | Shuts off the power supply to the headlamp (LO) LH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied. |
| B20D1 | HL (LO) RH PWR SPLY CIRC    | [CIRC SHORT TO GRND] | Shuts off the power supply to the headlamp (LO) RH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied. |

### CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

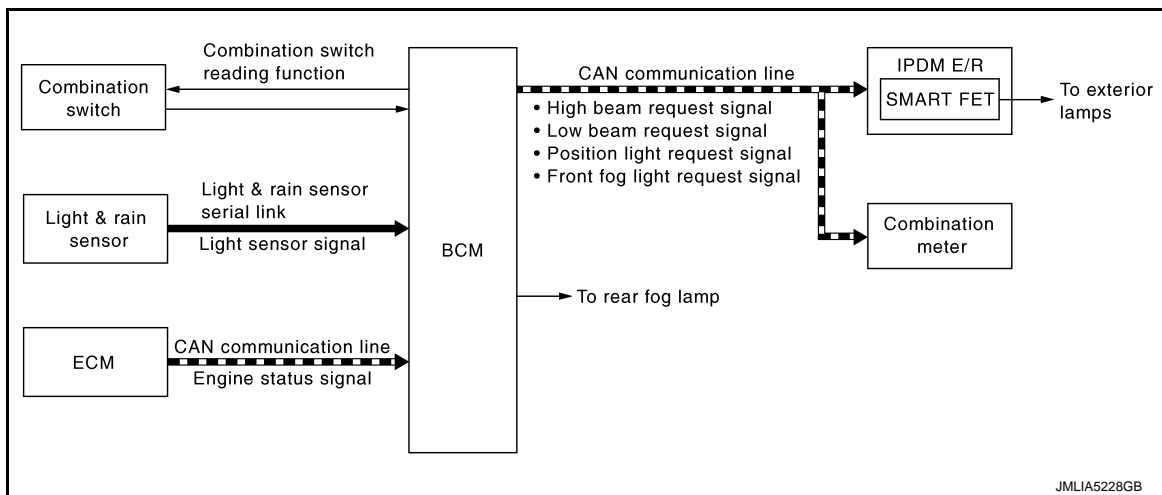
| Control part | Fail-safe operation  |
|--------------|--|
| Headlamp     | <ul style="list-style-type: none"> <li>• Turns ON the headlamp (LO) when the ignition switch is turned ON.</li> <li>• Turns OFF the headlamp (LO) when the ignition switch is turned OFF.</li> <li>• Headlamp (HI): OFF</li> </ul> |

## AUTO LIGHT SYSTEM

### AUTO LIGHT SYSTEM : System Description

INFOID:0000000010789787

### SYSTEM DIAGRAM



### OUTLINE

- Auto light system is controlled by each function of BCM and IPDM E/R.

Control by BCM

- Combination switch reading function
- Auto light function
- Fog override function

Control by IPDM E/R

- Smart FET control function
- Auto light system has the auto light function and fog override function.
- Auto light function automatically turns ON/OFF the exterior lamps\*, depending on the outside brightness.



- Fog override function turns ON the exterior lamps regardless of outside brightness, when front fog lamp switch is turned from OFF to ON or rear fog lamp switch is turned from OFF to ON while ignition switch is in ON position and lighting switch is in AUTO position.

\*: Headlamp (LO/HI), front fog lamp, rear fog lamp, parking lamp, license plate lamp and tail lamp.

**NOTE:**

- Headlamp (HI) depend on the combination switch condition and the illumination judgment of high beam assist system. For details, refer to [EXL-231. "HIGH BEAM ASSIST SYSTEM : System Description"](#).
- Front fog lamp does not turn ON automatically, but automatically turns OFF (only when the fog override function setting is OFF).
- Rear fog lamp does not turn ON automatically, but automatically turns OFF (only when the fog override function setting is OFF).

**AUTO LIGHT FUNCTION**

- BCM detects the combination switch condition with the combination switch reading function.
- BCM detects the engine condition by the engine status signal received from ECM via CAN communication.
- BCM receives exterior lamp ON/OFF requests from the light & rain sensor by light & rain sensor serial link.
- BCM judges the ON/OFF status of the exterior lamp according to ON/OFF requests from light & rain sensor and the vehicle condition.
- BCM transmits each request signal to IPDM E/R via CAN communication according to ON/OFF condition by the auto light function.

**NOTE:**

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to [EXL-255. "HEADLAMP : CONSULT Function \(BCM - HEAD LAMP\) \(Halogen Headlamp\)"](#).

**FOG OVERRIDE FUNCTION**

When front fog lamp switch is turned from OFF to ON or rear fog lamp switch is turned from OFF to ON while ignition switch is in ON position and lighting switch is in AUTO position, BCM turns ON exterior lamps\* regardless of outside brightness.

\*: Headlamp (LO/HI), front fog lamp, rear fog lamp, parking lamp, license plate lamp and tail lamp.

**NOTE:**

- Headlamp (HI) depend on the combination switch condition and the illumination judgment of high beam assist system. For details, refer to [EXL-231. "HIGH BEAM ASSIST SYSTEM : System Description"](#).
- Front fog lamp and rear fog lamp depend on the each fog lamp switch operation.
- ON/OFF of fog override function can be changed using CONSULT. Refer to [INL-21. "INT LAMP : CONSULT Function \(BCM - INT LAMP\)"](#).

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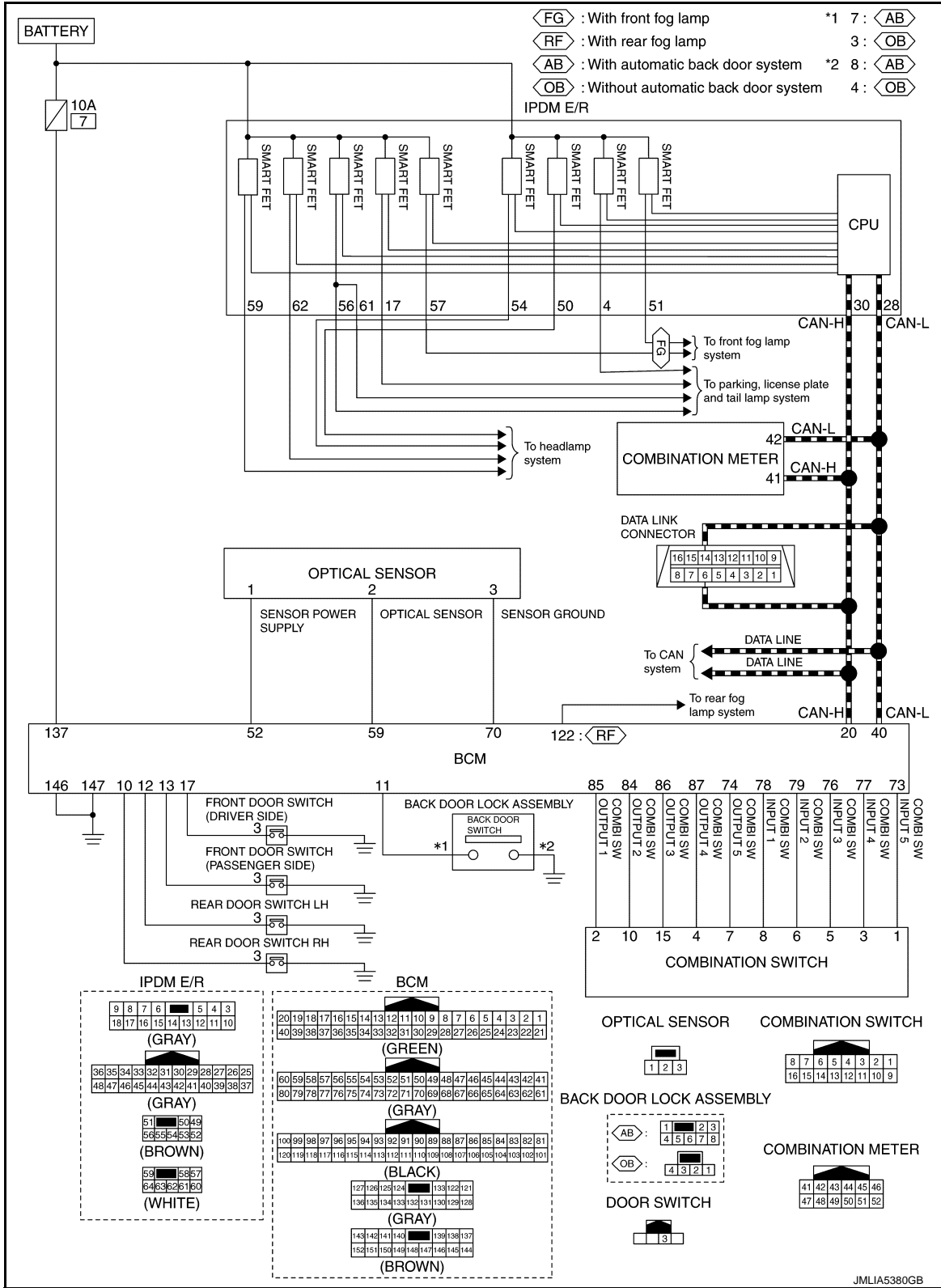
# SYSTEM

## < SYSTEM DESCRIPTION >

**[HALOGEN HEADLAMP]**

### AUTO LIGHT SYSTEM : Circuit Diagram

INFOID:0000000010789788



JMLIA5380GB

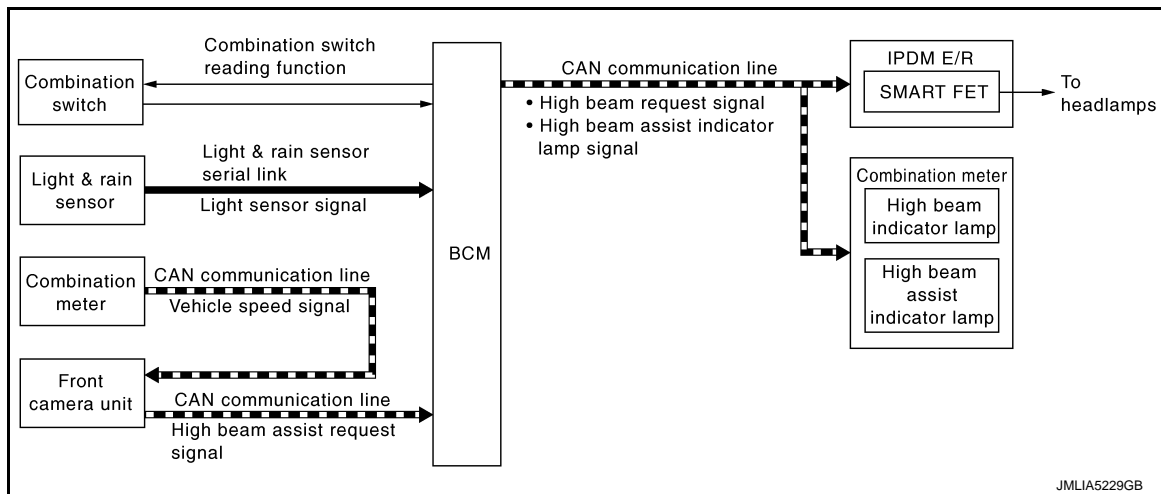
# HIGH BEAM ASSIST SYSTEM

# EXL-230

## HIGH BEAM ASSIST SYSTEM : System Description

INFOID:0000000011008680

## SYSTEM DIAGRAM



## OUTLINE

- High beam assist system is a system that can reduce the driver's switch operation load. The system automatically switches the headlamp to the low beam mode when a vehicle ahead or an oncoming vehicle appears, while driving the vehicle with the headlamps in high beam mode at night.
- When the high beam assist system operation permission conditions are satisfied, the high beam assist indicator lamp in the combination meter turns ON and informs that the high beam assist is in operation.
- High beam assist system is controlled by each function of BCM, front camera unit and IPDM E/R.

## Control by BCM

- Combination switch reading function
- Auto light function
- High beam assist control function
- Headlamp control function

## Control by IPDM E/R

- Smart FET control function

## Control by Front camera unit

- High beam assist control function

## OPERATION DESCRIPTION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM transmits the high beam assist indicator lamp signal to the combination meter via CAN communication, when the high beam assist system operation permission conditions are satisfied.

## High beam assist system operation permission conditions

- Lighting switch HI with the lighting switch AUTO and ignition switch ON (Only when the illuminating judgment by auto light function is ON. For details, refer to [EXL-228, "AUTO LIGHT SYSTEM : System Description"](#).)
- Combination meter turns the high beam assist indicator lamp ON according to the high beam assist indicator lamp signal.
- Front camera unit detects the vehicle status and ambient status that are required for high beam assist control with the following signals.
  - Vehicle speed signal (received from combination meter via CAN communication)
  - Ambient light signal (detect from front camera unit)
  - Image sensor signal (detect from front camera unit)
- Front camera unit judges the current recommended beam according to the vehicle status and ambient condition, and transmits the high beam assist request signal (headlamp HI operation / headlamp LO operation) to BCM via CAN communication.
- BCM switches the headlamp LO operation / headlamp HI operation according to high beam assist request signal, while the high beam assist system operation permission conditions are satisfied. For headlamp operation, refer to [EXL-225, "HEADLAMP SYSTEM : System Description"](#).

## RECOMMENDED BEAM JUDGMENT BY FRONT CAMERA UNIT

### Headlamp HI Operation Request

Front camera unit requests the headlamp HI operation to BCM when all of following conditions are satisfied.

- Detects the vehicle speed is approx. 40 km/h or more.
- Recognizes the ambient condition is dark.
- Recognizes there is no oncoming vehicle or no vehicle ahead in front of the vehicle.

### Headlamp LO Operation Request

Front camera unit requests the headlamp LO operation to BCM when either of following conditions is satisfied.

- Detects the vehicle speed is approx. 30 km/h or less.
- Recognizes the ambient condition is bright.
- Recognizes there is oncoming vehicle or vehicle ahead in front of the vehicle.

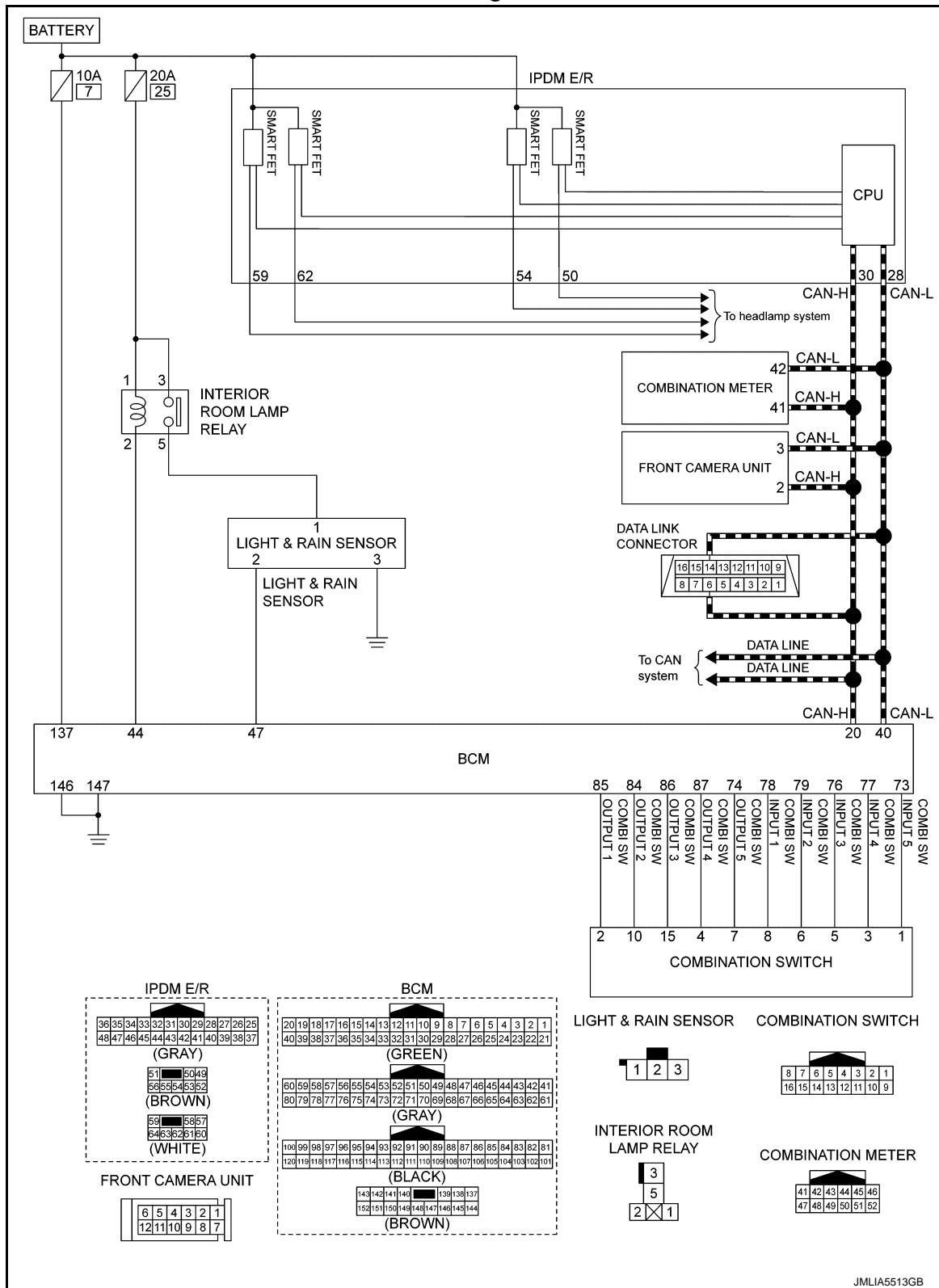
# SYSTEM

## < SYSTEM DESCRIPTION >

**[HALOGEN HEADLAMP]**

### HIGH BEAM ASSIST SYSTEM : Circuit Diagram

INFOID:0000000011008682



## HIGH BEAM ASSIST SYSTEM : Fail-safe

INFOID:0000000011008681

## FRONT CAMERA UNIT TEMPORARY OPERATION CANCELLATION

- Temporary disabled status at high temperature
- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the system malfunction in information display.

### < SYSTEM DESCRIPTION >

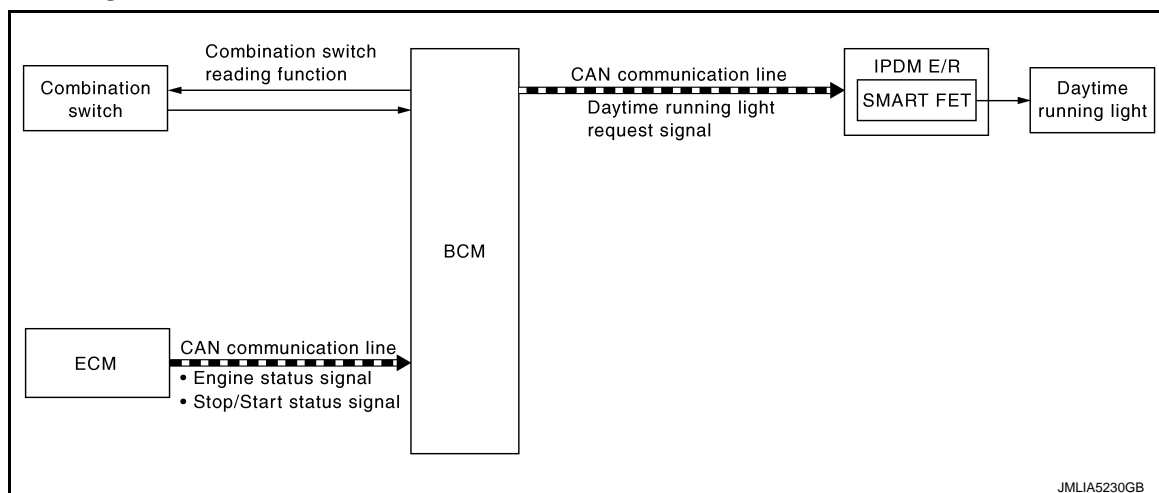
- When interior temperature is reduced, the system will resume operation automatically.
- When vehicle front identification is difficult
- When vehicle front identification is difficult due to soiling of windshield glass and strong light shining from the front, operation may be canceled temporarily. At this time, a warning is displayed on the vehicle information display in the combination meter.
- Normal operation recovers when conditions improve.

### DAYTIME RUNNING LIGHT SYSTEM

### DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:000000010789789

### SYSTEM DIAGRAM



### OUTLINE

Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and smart FET control function of IPDM E/R.

### DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the engine status signal and Stop/Start status signal\* (received from ECM via CAN communication).
- BCM transmits the daytime running light request signal to IPDM E/R via CAN communication according to the daytime running light ON condition.

#### Daytime running light ON condition

- Engine running and any following conditions are satisfied.
- Lighting switch OFF
- Lighting switch AUTO (Only when the illumination judgment by auto light system is OFF. For details, refer to [EXL-228, "AUTO LIGHT SYSTEM : System Description"](#).)
- IPDM E/R turns the integrated smart FET ON, and turns the daytime running light ON according to the daytime running light request signal.

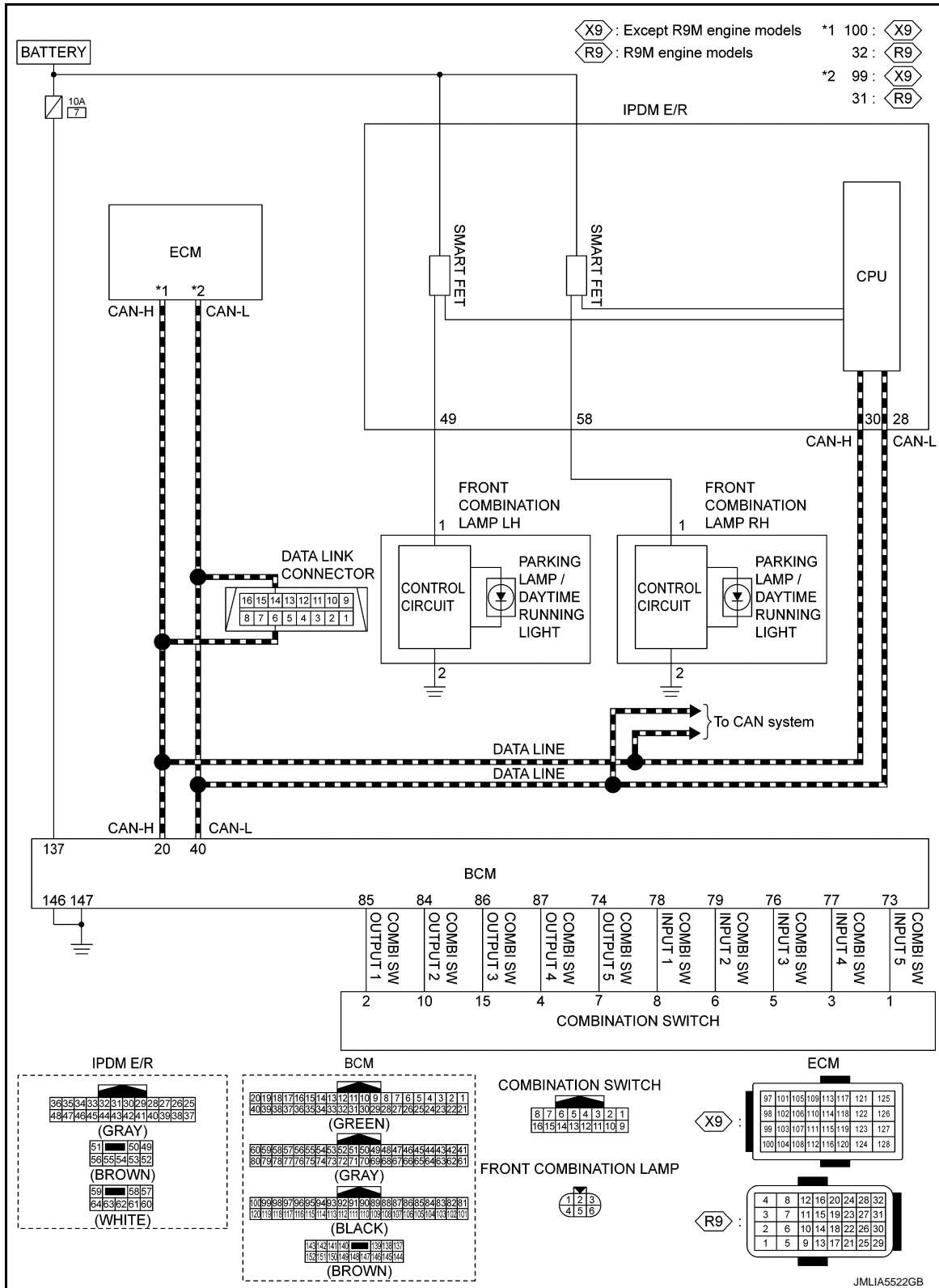
#### NOTE:

When the engine is stopped by the Stop/Start system, the operation of daytime running light system is not canceled.\*

\*: With Stop/Start system

### DAYTIME RUNNING LIGHT SYSTEM : Circuit Diagram

INFOID:000000010789790



# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

| DTC   | CONSULT display description |                      | Fail-safe  |
|-------|-----------------------------|----------------------|--|
| B1231 | DTRL RH PWR SPLY CIRC       | [CIRC SHORT TO GRND] | Shuts off the power supply to the daytime running light RH power supply circuit until the daytime running light ON conditions are no longer satisfied. |
| B20CB | DTRL LH PWR SPLY CIRC       | [CIRC SHORT TO GRND] | Shuts off the power supply to the daytime running light LH power supply circuit until the daytime running light ON conditions are no longer satisfied. |

### CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

| Control part          | Fail-safe operation        |
|-----------------------|----------------------------|
| Daytime running light | Daytime running light: OFF |

## HEADLAMP AIMING CONTROL (MANUAL)

### HEADLAMP AIMING CONTROL (MANUAL) : System Description

INFOID:0000000010789792

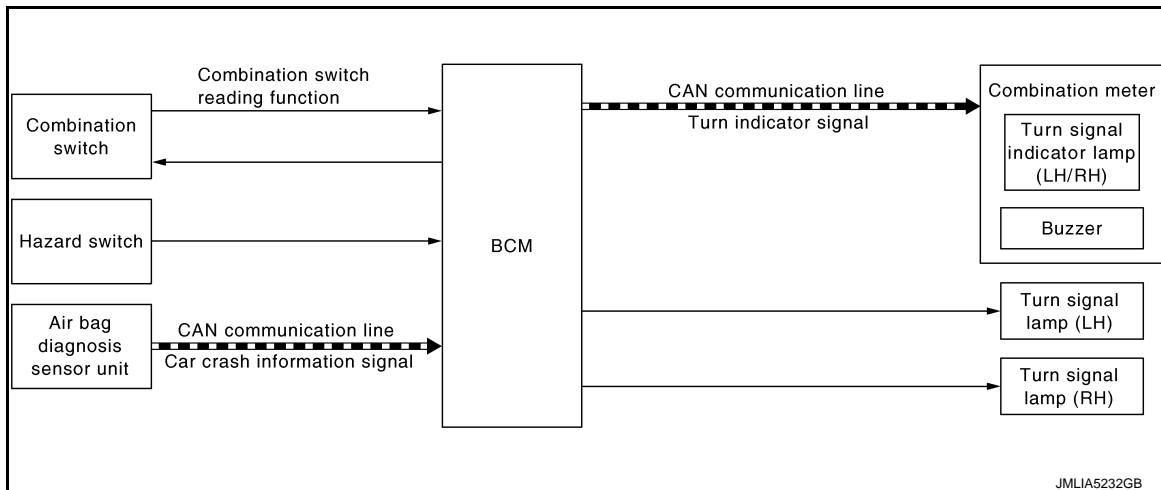
The headlamp levelizer adjusts the headlamp light axis upward and downward with the aiming motor integrated in the front combination lamp.

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000010789793

## SYSTEM DIAGRAM



## OUTLINE

Turn signal lamp and hazard warning lamp is controlled by combination switch reading function and the flasher control function of BCM.

### TURN SIGNAL LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM supplies voltage to the right (left) turn signal lamp circuit when the ignition switch is ON and the turn signal switch is in the right (left) position. BCM blinks the turn signal lamp.

### HAZARD WARNING LAMP OPERATION

BCM supplies voltage to both turn signal lamp circuits when the hazard switch is ON. BCM blinks the hazard warning lamp.

### TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION



# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

- BCM transmits the turn indicator signal to the combination meter using CAN communication while the turn signal lamp and the hazard warning lamp are operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn indicator signal.

### 3-TIME FLASHER FUNCTION

- By a short touch of the turn signal lever, BCM blinks the turn signal lamps 3 times in the selected direction.
- Cancels the operation when short touch of the turn signal lever in the reverse direction during the 3-time flasher function operation.

#### NOTE:

ON/OFF of 3-time flasher function can be changed using CONSULT. Refer to [EXL-257. "FLASHER : CONSULT Function \(BCM - FLASHER\) \(Halogen Headlamp\)"](#).

### HIGH FLASHER OPERATION

- BCM detects the turn signal lamp circuit status from the current value.
- BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

#### NOTE:

The blinking speed is normal while operating the hazard warning lamp.

### AUTO HAZARD FUNCTION

- Air bag diagnosis sensor unit transmits car crash information signal to BCM via CAN communication, when air bag diagnosis sensor unit detects strong impact to the vehicle body while ignition switch is ON.
- When car crash information signal received from air bag diagnosis sensor unit is detected, BCM supplies voltage to each turn signal lamp system and hazard lamp blinks.

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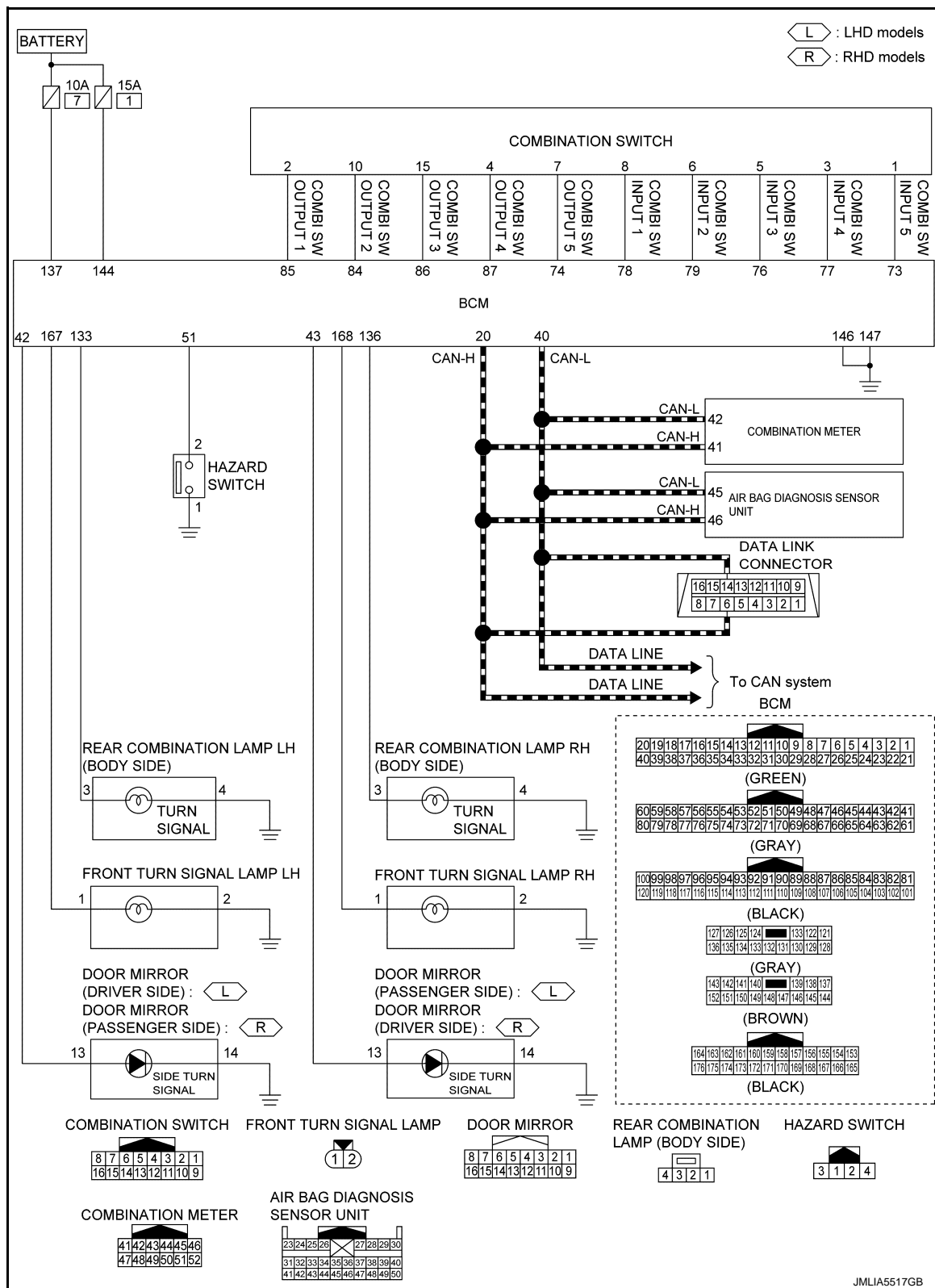
# SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : Circuit Diagram

INFOID:000000010789794

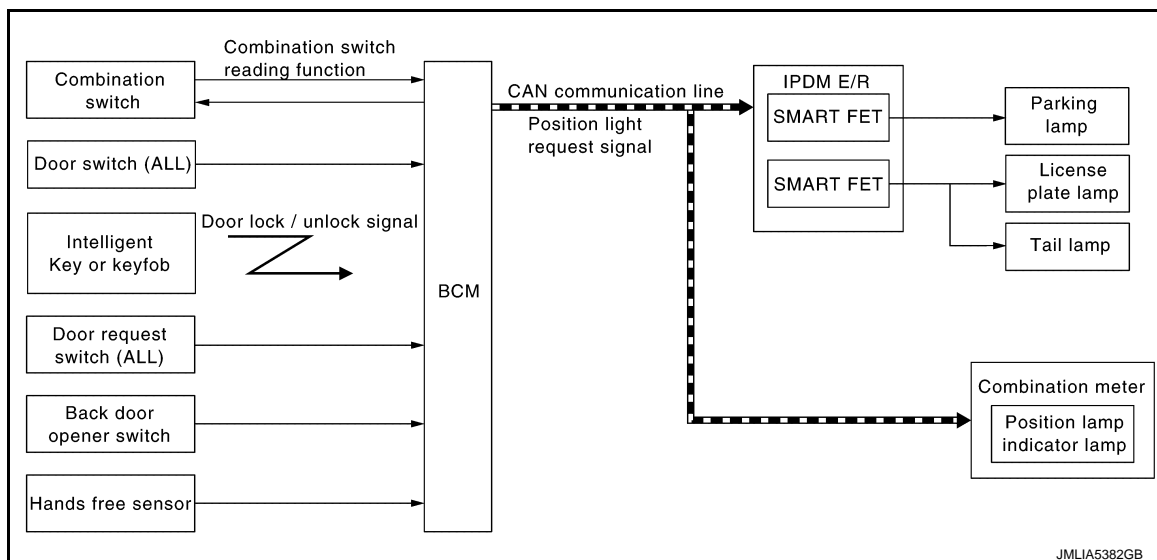


## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM

## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : System Description

INFOID:000000010789795

## SYSTEM DIAGRAM



## OUTLINE

Parking, license plate and tail lamps are controlled by combination switch reading function and parking, license plate and tail lamps control function of BCM, and smart FET control function of IPDM E/R.

## PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the position light request signal to IPDM E/R and the combination meter via CAN communication according to the parking, license plate and tail lamps ON condition.

Parking, license plate and tail lamps ON condition (when any of the following conditions are satisfied)

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-228, "AUTO LIGHT SYSTEM : System Description"](#).)
- IPDM E/R turns the integrated smart FET ON and turns the parking, license plate and tail lamps ON according to the position light request signal.
- Combination meter turns the position lamp indicator lamp ON according to the position light request signal.

**NOTE:**

Parking lamp and daytime running light use a common light source. When the parking, license plate and tail lamps are turned ON while daytime running light is ON, the parking lamp/daytime running light is dimmed.

## FOLLOW ME HOME FUNCTION

When the driver is moving to the house entrance from the own vehicle, parking, license plate and tail lamps are kept still ON by the follow me home function of BCM.

- When BCM detects the input of lighting switch PASS while all of the following conditions are satisfied, it transmits the position light request signal for a period of time to IPDM E/R and the combination meter through CAN communication.

Follow me home ON condition (When all of the following conditions are satisfied)

- Ignition switch OFF
- Lighting switch OFF or AUTO
- IPDM E/R turns the integrated smart FET ON and turns the parking, license plate and tail lamps ON according to the position light request signal.
- Combination meter turns the position lamp indicator lamp ON according to the position light request signal.
- When in any of following conditions, follow me home function can be cancelled while follow me home function is operating.

Follow me home OFF condition (When any of the following conditions are satisfied)

- Ignition switch other than OFF
- Lighting switch other than OFF or AUTO

## &lt; SYSTEM DESCRIPTION &gt;

- Follow me home operating time is expired

**NOTE:**

- Flash-to-pass operation illumination time for 1 time can be extended to approximately 30 seconds during operation of follow me home function.
- Flash-to-pass operation can be illuminated continuously for approximately 60 seconds (flash-to-pass operation, 2 times), approximately 90 seconds (flash-to-pass operation, 3 times), and a maximum of approximately 120 seconds (flash-to-pass operation, 4 times).

## SIGNATURE LIGHT FUNCTION

## Description

The signature light function is a function that turns ON the parking lamp, license plate lamp, and tail lamp for a set period of time when the doors are locked or unlocked from outside the vehicle.

## Operation Description

BCM transmits the position light request signal to IPDM E/R and the combination meter via CAN communication according to the signature light function ON condition.

Signature light function ON condition (Operation when doors are unlocked)

- When all of the following conditions are satisfied, the signature light function operates when door unlock operation is performed from outside the vehicle (Intelligent Key, keyfob, door request switch, back door opener switch, hands free function).
  - Ignition switch: OFF
  - Door open/close status: All door close
  - Door lock status: All door lock
- When any of the following conditions is satisfied while the signature light function is operating, the signature light function stops.
  - Ignition switch: ON
  - Door lock status: All door lock (This only occurs when door lock operation is performed using the door lock and unlock switch, etc. When door lock operation is performed with the Intelligent Key, keyfob or door request switch, the system changes to operation when doors are locked.)
- Since signature light function ON, 30 seconds are passed.

Signature light function ON condition (Operation when doors are locked)

- When all of the following conditions are satisfied, the signature light function operates when door lock operation is performed from outside the vehicle (Intelligent Key, keyfob or door request switch).
  - Ignition switch: OFF
  - Door open/close status: All door close
- When any of the following conditions is satisfied while the signature light function is operating, the signature light function stops.
  - Ignition switch: ON
  - Door open/close status: Any door open
  - Door lock status: Any door unlock or all door unlock (This only occurs when door unlock operation is performed using the door lock and unlock switch etc. When door unlock operation is performed with the Intelligent Key, keyfob, door request switch, back door opener switch or hands free function, the system changes to operation when doors are unlocked.)
- Door open/close status: All door close
- Since signature light function ON, 10 seconds are passed.

**NOTE:**

ON/OFF of signature light function can be changed using CONSULT. Refer to [DLK-74, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\) \(With Intelligent Key System and Super Lock\)"](#), [DLK-384, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\) \(With Intelligent Key System, Without Super Lock\)"](#), [DLK-658, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\) \(Without Intelligent Key System, With Super Lock\)"](#) or [DLK-808, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\) \(Without Intelligent Key System and Super Lock\)"](#).

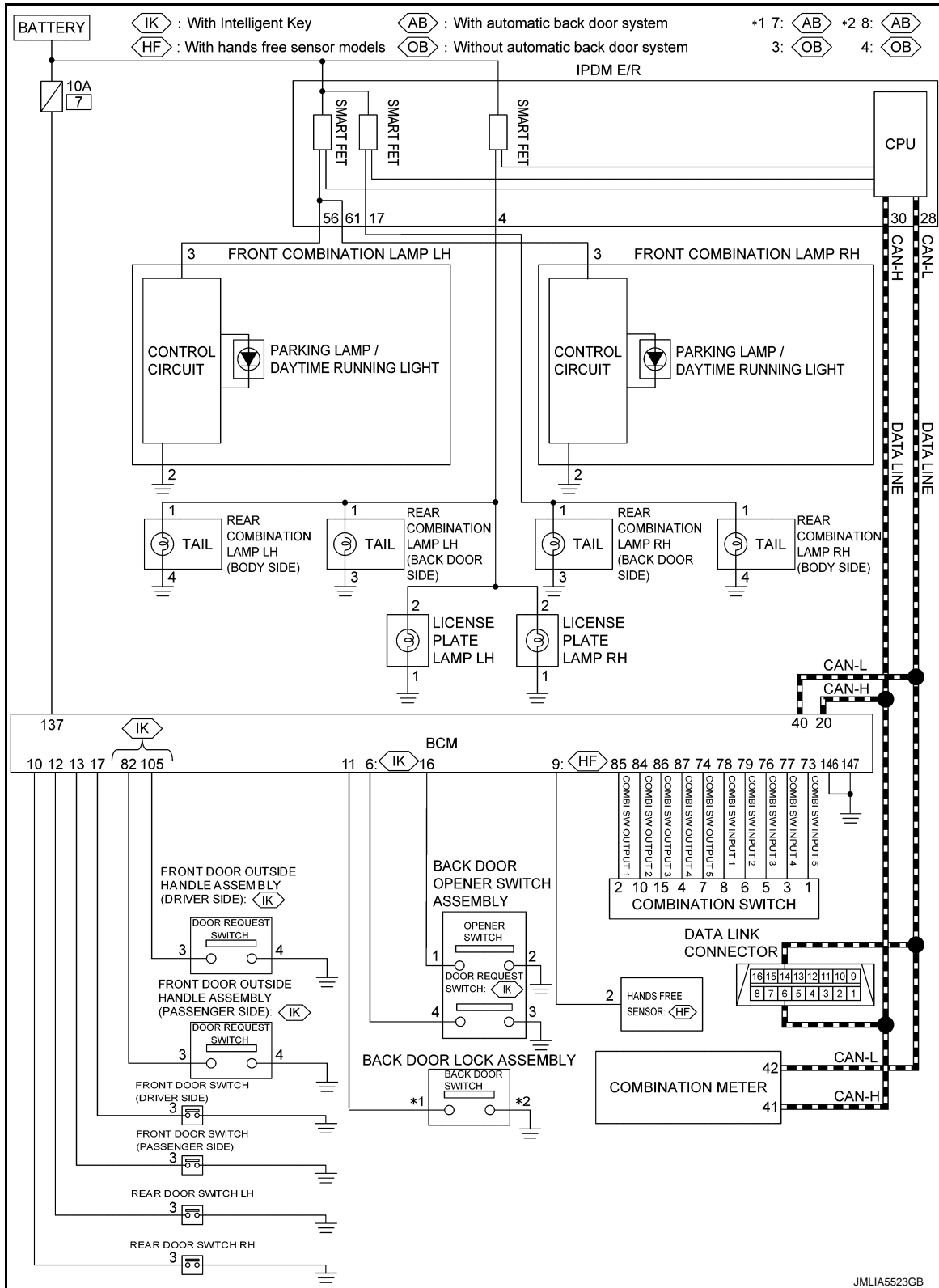
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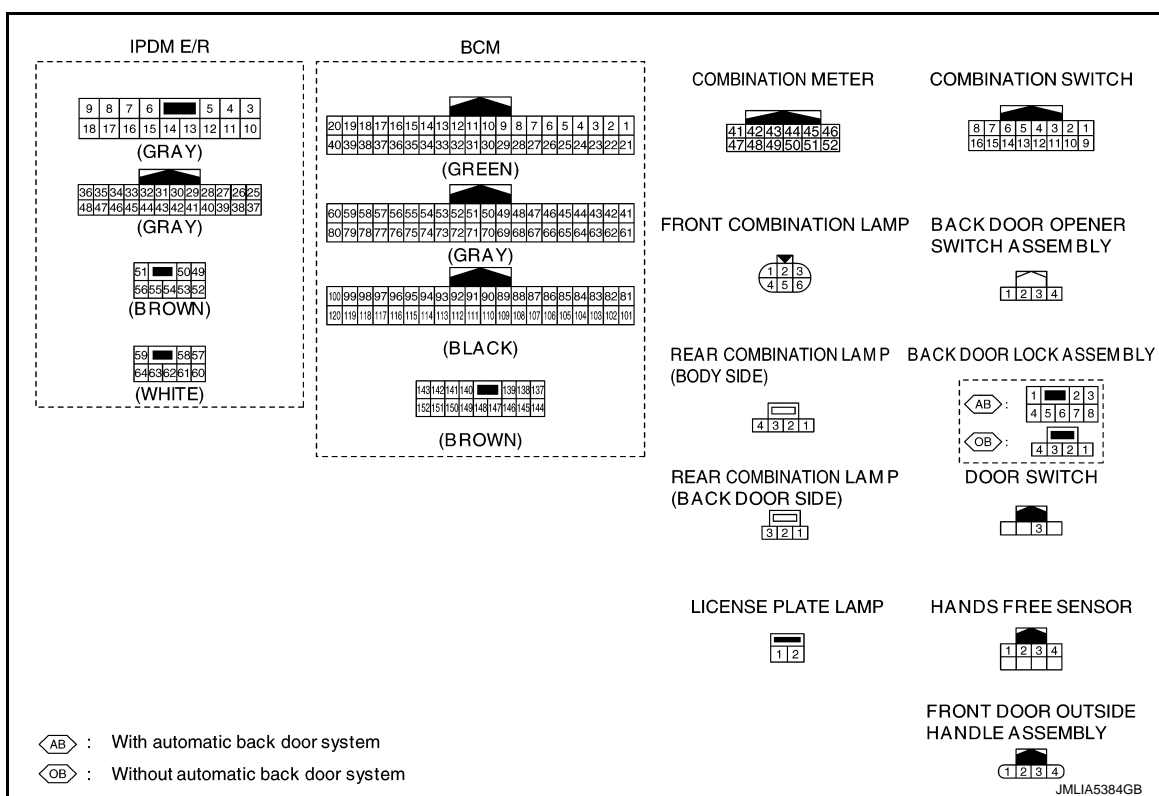
< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : Circuit Diagram

INFOID:000000010789796





## PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : Fail-safe

INFOID:0000000010789797

## FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

| DTC   | CONSULT display description | Fail-safe  |
|-------|-----------------------------|--|
| B20D2 | PARKING LAMP PWR SPLY CIRC  | [CIRC SHORT TO GRND]<br>Shuts off the power supply to the parking lamp (LH/RH) power supply circuit until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.   |
| B20D4 | TAIL LAMP LH PWR SPLY CIRC  | [CIRC SHORT TO GRND]<br>Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied. <ul style="list-style-type: none"> <li>• Tail lamp LH (body side)</li> <li>• Tail lamp LH (back door side)</li> <li>• License plate lamp LH</li> <li>• License plate lamp RH</li> </ul> |
| B20D5 | TAIL LAMP RH PWR SPLY CIRC  | [CIRC SHORT TO GRND]<br>Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied. <ul style="list-style-type: none"> <li>• Tail lamp RH (body side)</li> <li>• Tail lamp RH (back door side)</li> </ul>   |

## CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

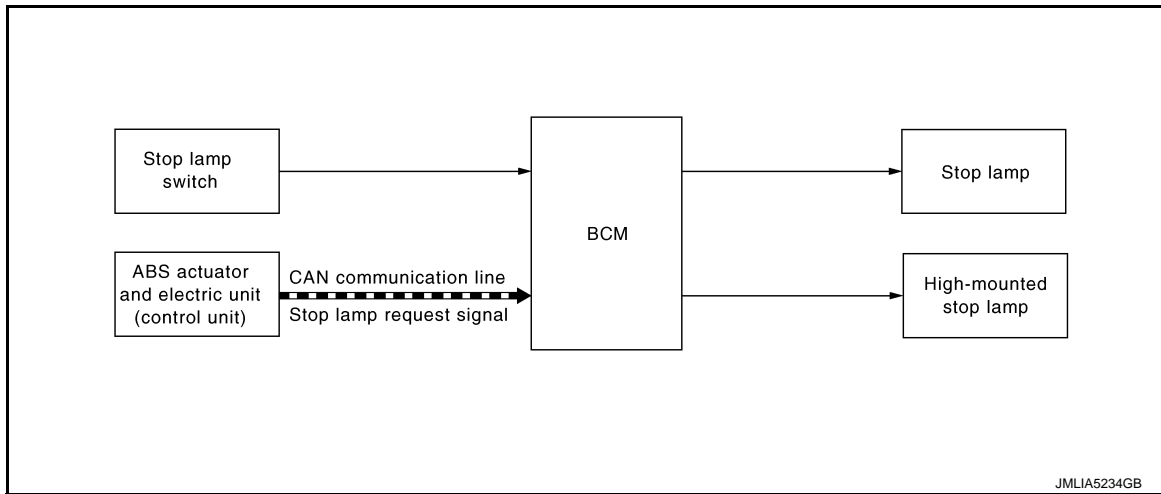
| Control part  | Fail-safe operation  |
|---|--|
| <ul style="list-style-type: none"> <li>• Parking lamp</li> <li>• License plate lamp</li> <li>• Tail lamp</li> </ul> | <ul style="list-style-type: none"> <li>• Turns ON the tail lamp, parking lamp and license plate lamp when the ignition switch is turned ON.</li> <li>• Turns OFF the tail lamp, parking lamp and license plate lamp when the ignition switch is turned OFF.</li> </ul> |

## STOP LAMP SYSTEM

## STOP LAMP SYSTEM : System Description

INFOID:0000000010789798

## SYSTEM DIAGRAM



## OUTLINE

Stop lamp and high-mounted stop lamp is controlled by combination switch reading function and the stop lamp and high-mounted stop lamp control function of BCM, and forward emergency braking function of ABS actuator and electric unit (control unit).

## STOP LAMP AND HIGH-MOUNTED STOP LAMP OPERATION

- BCM detects the brake pedal position status from stop lamp switch.
- BCM supplies voltage to stop lamp and high-mounted stop lamp according to the stop lamp and high-mounted stop lamp ON condition.

Stop lamp and high-mounted stop lamp ON condition

- Brake pedal is depressed

## FORWARD EMERGENCY BRAKING FUNCTION

- When the forward emergency braking operates, the ABS actuator and electric unit (control unit) transmits the stop lamp request signal to BCM via CAN communication. (For details about the forward emergency braking, refer to [BRC-232, "System Description"](#).)
- When BCM receives the stop lamp request signal from the ABS actuator and electric unit (control unit), it supplies power to the stop lamp and high-mounted stop lamp systems, turning ON the stop lamp and high-mounted stop lamp.

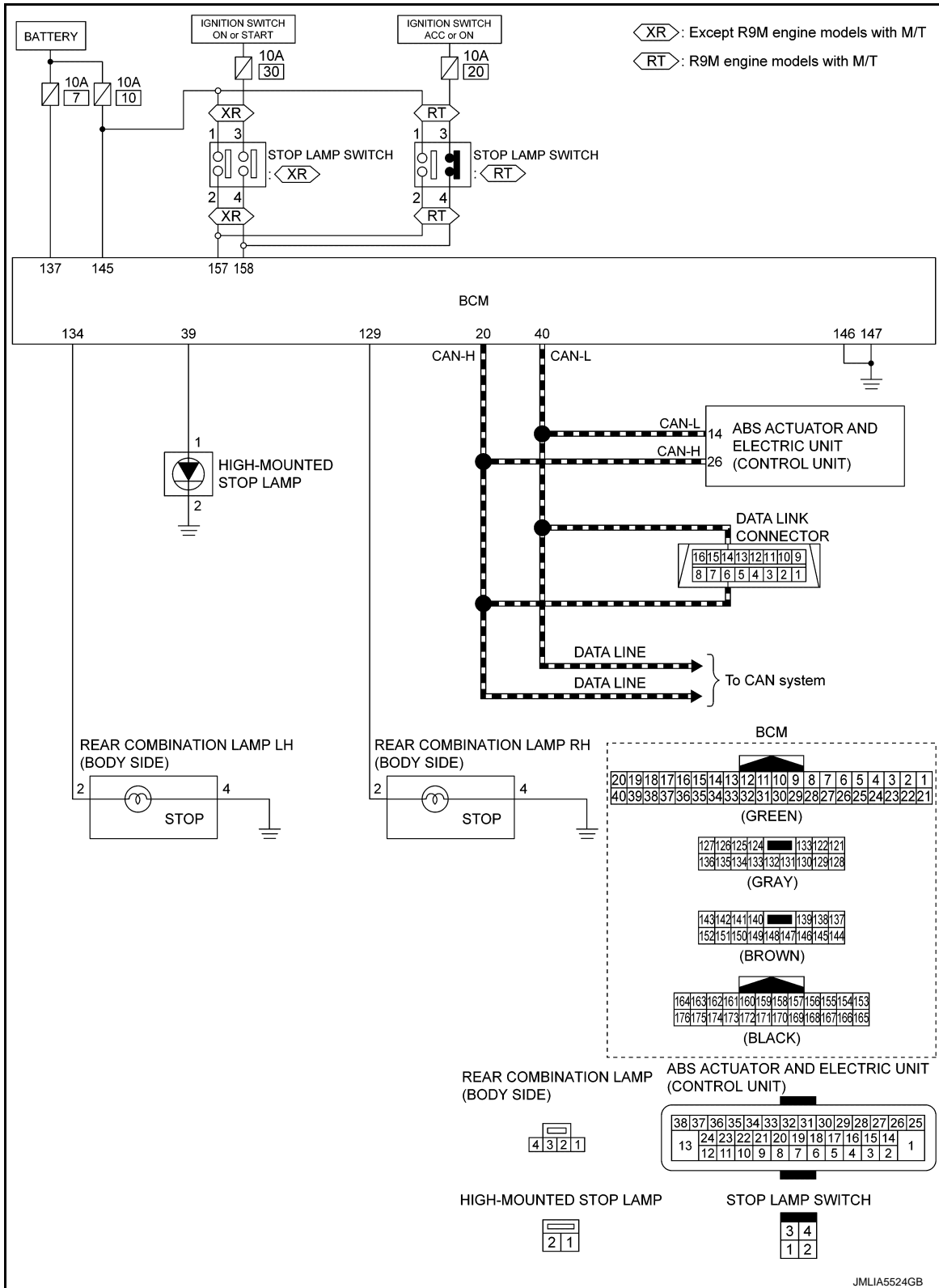
# SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## STOP LAMP SYSTEM : Circuit Diagram

INFOID:000000010789799



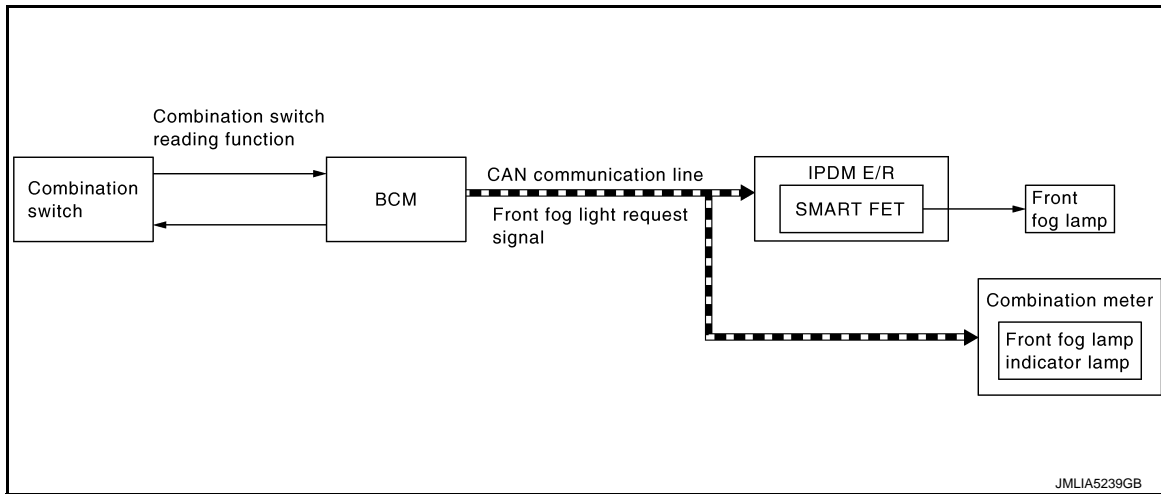
**NOTE:**  
 ABS actuator and electric unit (control unit) is not used.  
**FRONT FOG LAMP SYSTEM**



## FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000010789800

## SYSTEM DIAGRAM



## OUTLINE

Front fog lamp is controlled by combination switch reading function and front fog lamp control function of BCM, and smart FET control function of IPDM E/R.

## FRONT FOG LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the front fog light request signal to IPDM E/R and the combination meter via CAN communication according to the front fog lamp ON condition.

## Front fog lamp ON condition

- Front fog lamp switch is turned from OFF to ON, and any of the following conditions are satisfied.

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-228, "AUTO LIGHT SYSTEM : System Description"](#).)
- IPDM E/R turns the integrated smart FET ON, and turns the front fog lamp ON according to the front fog light request signal.
- Combination meter turns the front fog lamp indicator lamp ON according to the front fog light request signal.

EXL

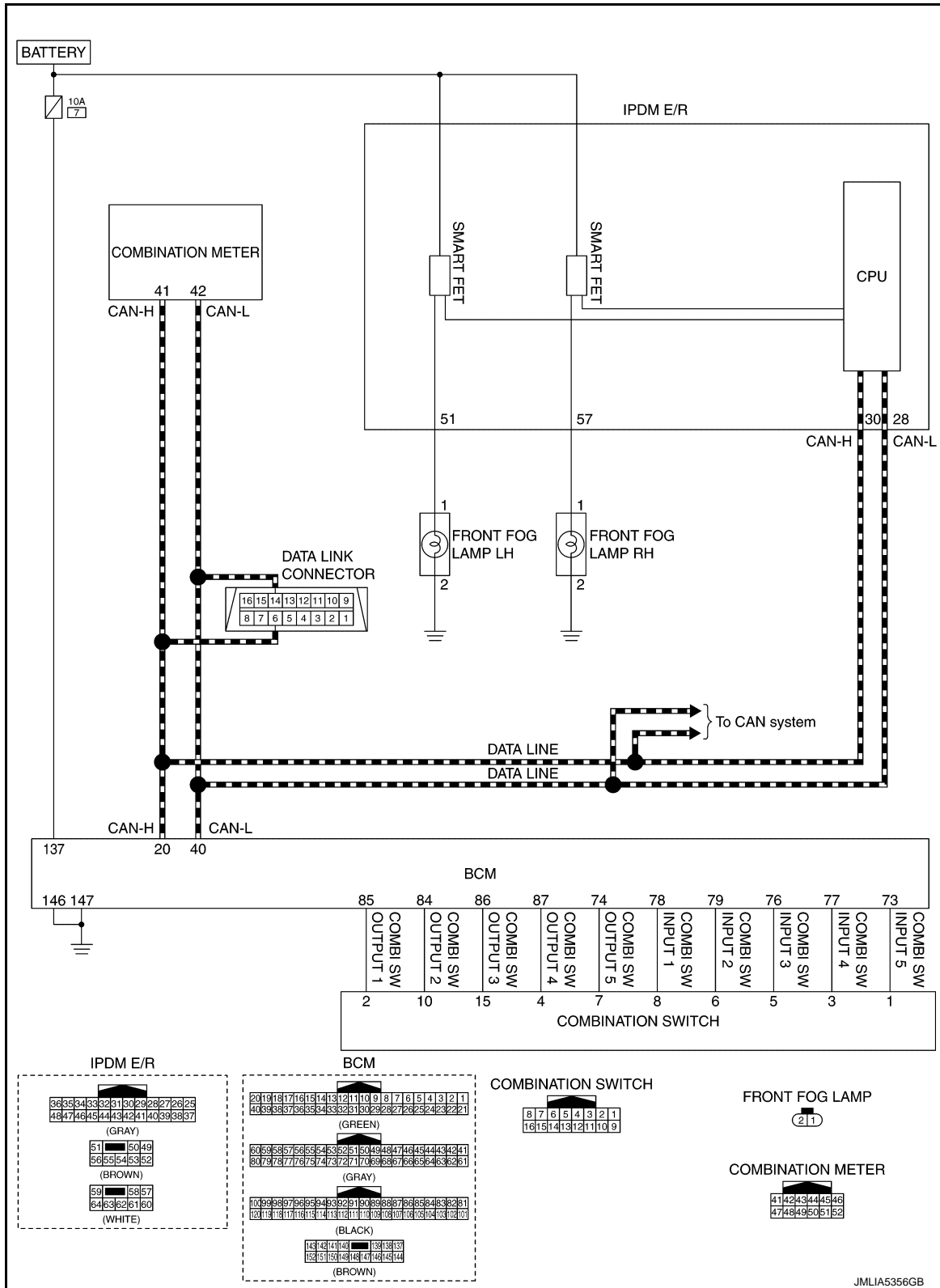
# SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## FRONT FOG LAMP SYSTEM : Circuit Diagram

INFOID:000000010789801



JMLIA5356GB

## FRONT FOG LAMP SYSTEM : Fail-safe

INFOID:000000010789802

### FAIL-SAFE CONTROL BY DTC

IPDM E/R performs fail-safe control when any DTC are detected.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

| DTC   | CONSULT display description  |                      | Fail-safe  |
|-------|------------------------------|----------------------|--|
| B121A | FR FOG LAMP LH PWR SPLY CIRC | [CIRC SHORT TO GRND] | Shuts off the power supply to the front fog lamp LH power supply circuit until the front fog lamp ON conditions are no longer satisfied. |
| B1256 | FR FOG LAMP RH PWR SPLY CIRC | [CIRC SHORT TO GRND] | Shuts off the power supply to the front fog lamp RH power supply circuit until the front fog lamp ON conditions are no longer satisfied. |

### CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

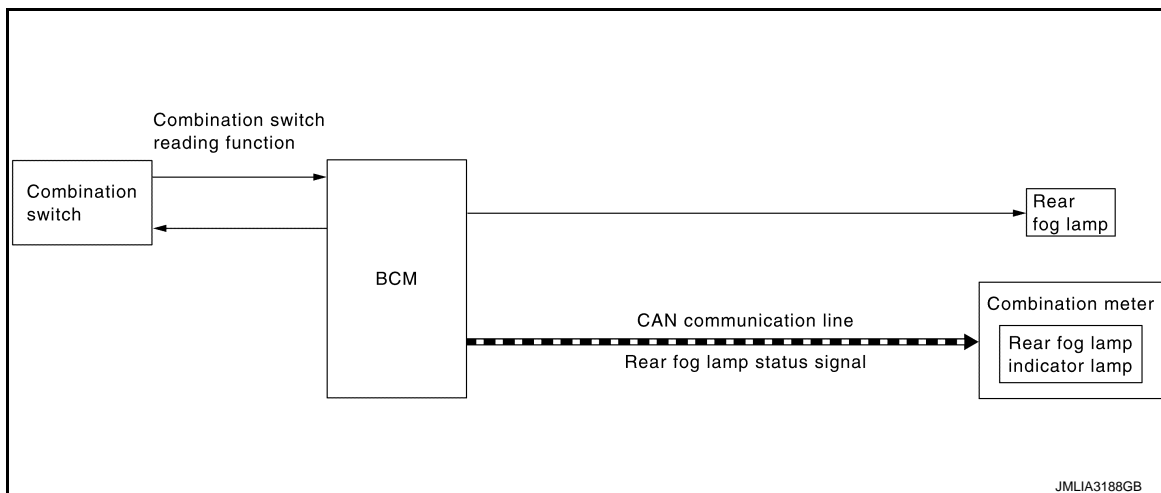
| Control part   | Fail-safe operation |
|----------------|---------------------|
| Front fog lamp | Front fog lamp: OFF |

## REAR FOG LAMP SYSTEM

### REAR FOG LAMP SYSTEM : System Description

INFOID:0000000010789803

### SYSTEM DIAGRAM



### OUTLINE

Rear fog lamp is controlled with the combination switch reading function and the rear fog lamp control function of BCM.

### REAR FOG LAMP OPERATION

- BCM detects the condition of the combination switch by the combination switch reading function.
- BCM supplies voltage to rear fog lamp according to the rear fog lamp ON condition.

Rear fog lamp ON condition

- Rear fog lamp switch is turned from OFF to ON, and any of the following conditions are satisfied.
  - Headlamp ON
  - Front fog lamp ON
  - Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to [EXL-228. "AUTO LIGHT SYSTEM : System Description".](#))
- BCM transmits the rear fog lamp status signal to the combination meter using CAN communication.
- Combination meter turns the rear fog lamp indicator lamp ON according to the rear fog lamp status signal.

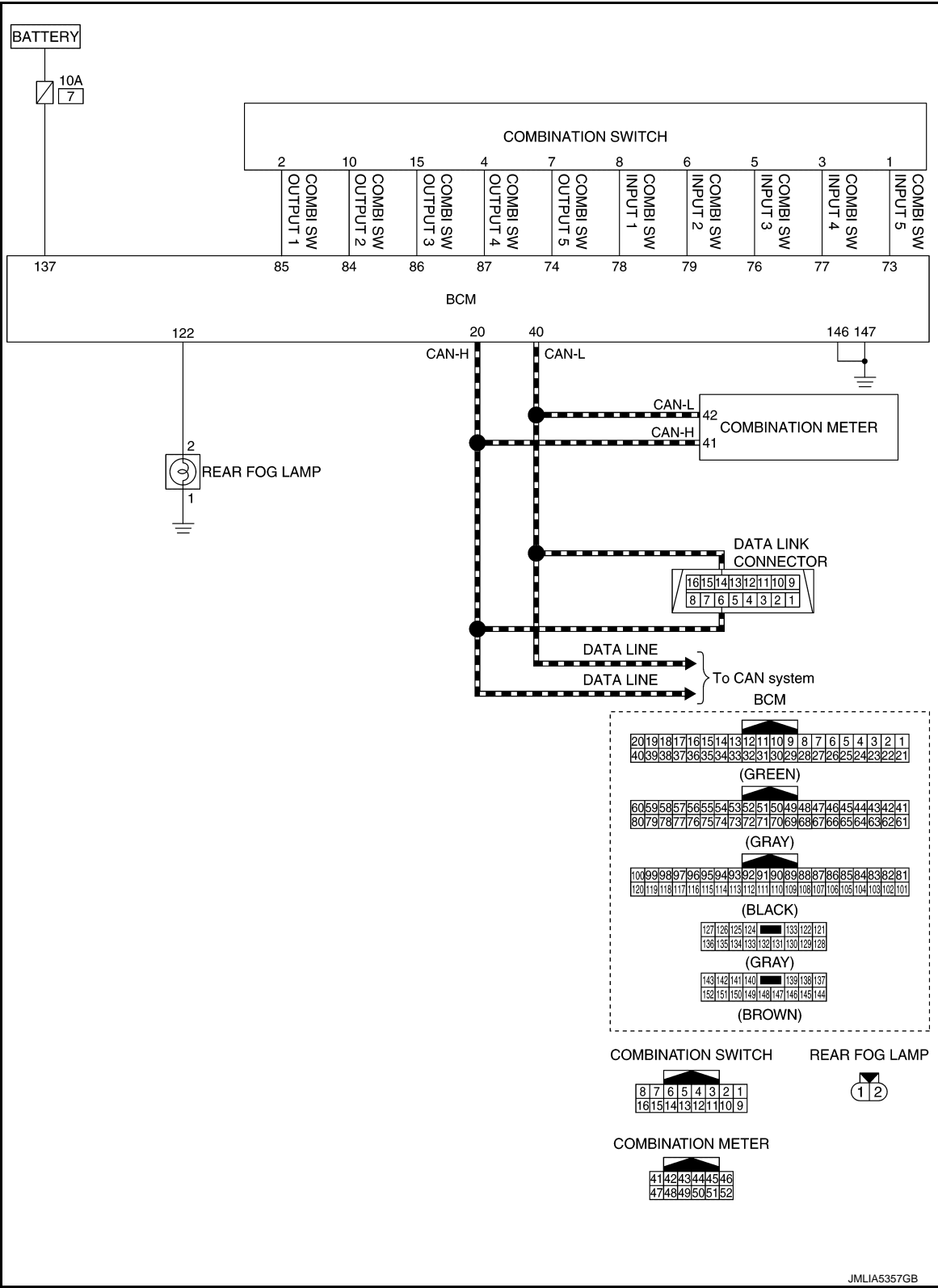
SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

REAR FOG LAMP SYSTEM : Circuit Diagram

INFOID:000000010789804

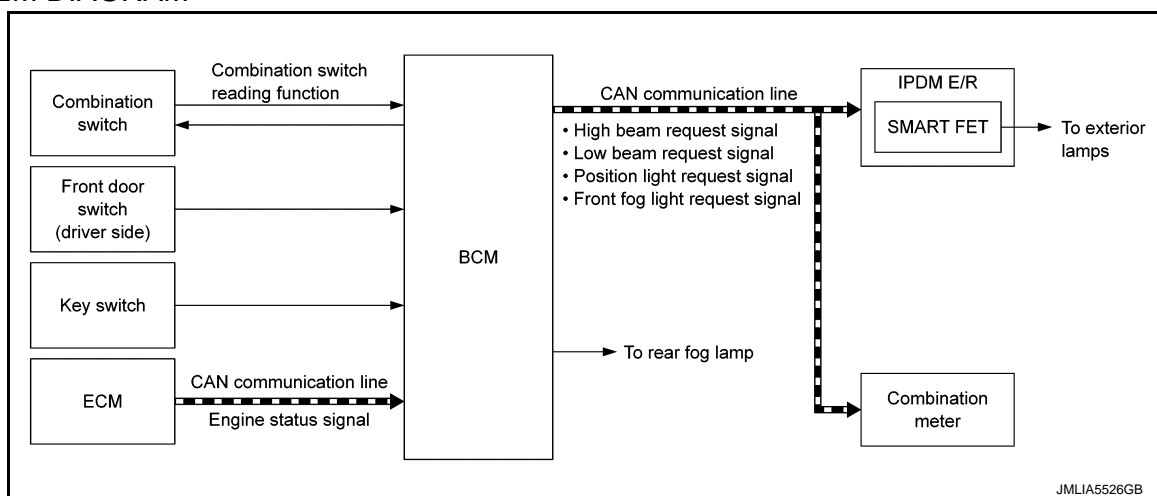


EXTERIOR LAMP BATTERY SAVER SYSTEM

## EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000011008683

## SYSTEM DIAGRAM



## OUTLINE

- Exterior lamp battery saver system is controlled by combination switch reading function and exterior lamp battery saver function of BCM, and smart FET control function of IPDM E/R.
- BCM turns the exterior lamp\* OFF, according to the vehicle status when ignition switch is turned OFF while exterior lamp is ON, for preventing battery discharge.

\*: Headlamp (LO/HI), front fog lamp, rear fog lamp, parking lamp, license plate lamp and tail lamp

## EXTERIOR LAMP BATTERY SAVER ACTIVATION

- BCM turns the exterior lamps OFF (battery saver is activated) when all of the following conditions are satisfied.
  - Exterior lamp: ON
  - Engine status: Running→Stop (ignition switch is turned OFF)
  - Front door switch (driver side) is turned from OFF to ON or key switch is turned from ON to OFF

**NOTE:**

When in any of following conditions (after the exterior lamp battery saver is activated), exterior lamps (except front fog lamp and rear fog lamp) can be turned ON.

- Lighting switch: 1ST or 2ND→OFF or AUTO→1ST or 2ND
- Engine status: Stop→Running

EXL

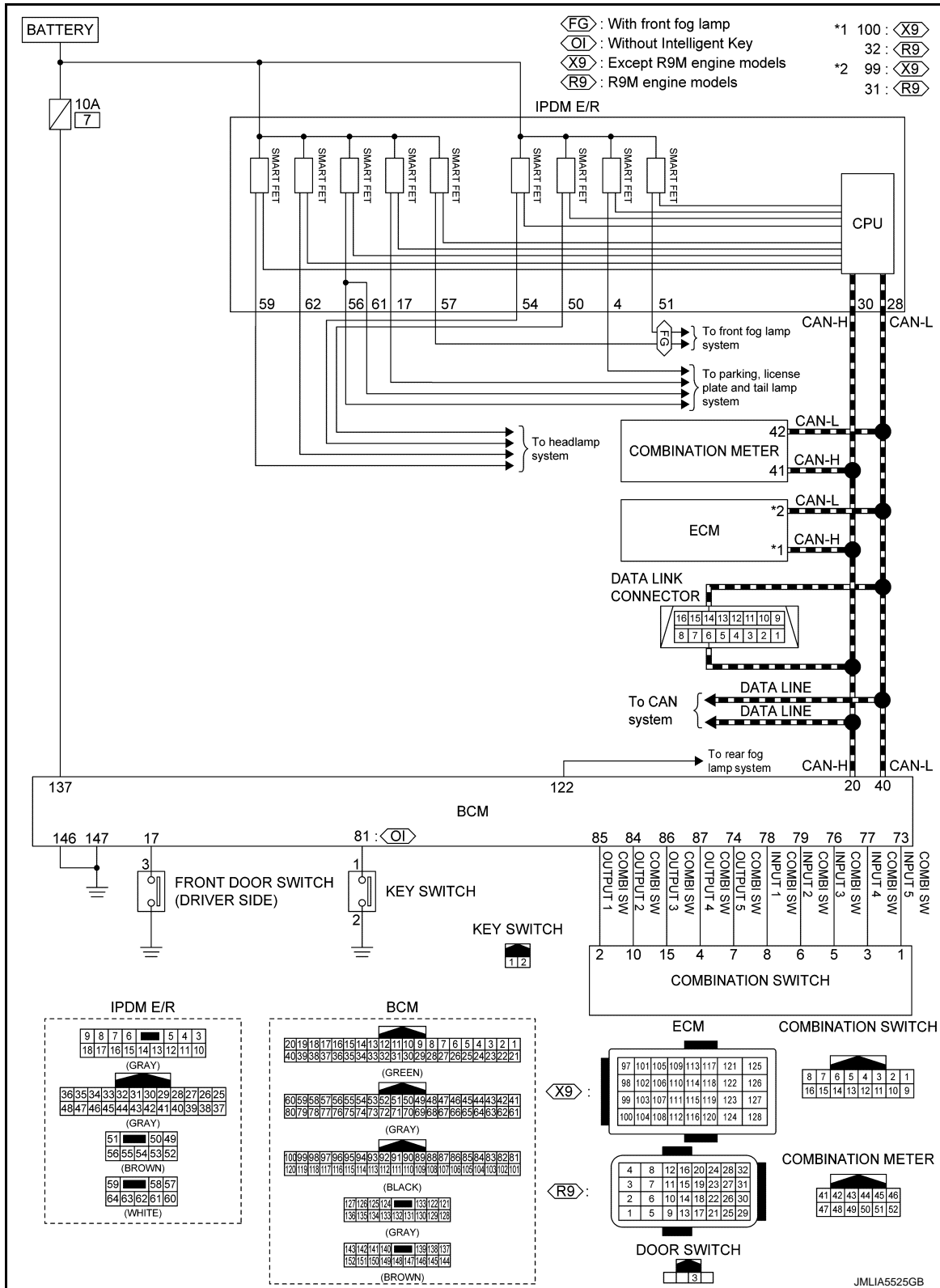
# SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## EXTERIOR LAMP BATTERY SAVER SYSTEM : Circuit Diagram

INFOID:000000010789806

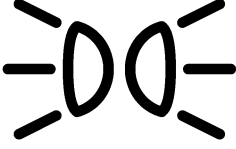


# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

When the driver is exiting the vehicle while ignition is in any position other than ON and lamps are ON, the light reminder warning (information display) displays a warning in the information display to alert the driver.

| Symbol   | Message             |
|--|---------------------|
|  <p>JPNIA1880ZZ</p> | Turn off headlights |

### SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

### SYNCHRONIZATION WITH WARNING CHIME

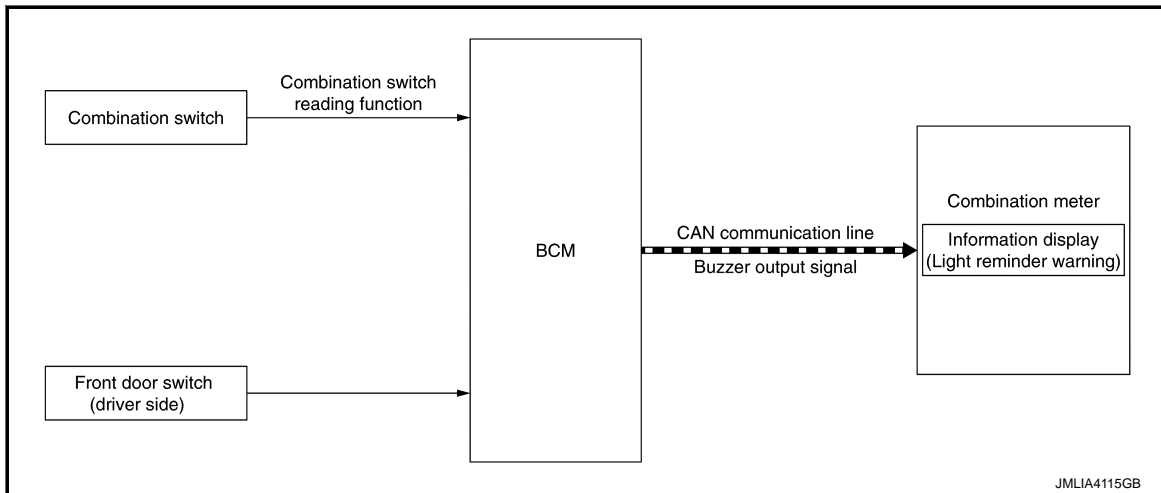
Synchronization is applied.

For warning chime, refer to [WCS-12. "WARNING CHIME : Light Reminder Warning \(Buzzer\)".](#)

### OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to [MWI-19. "METER SYSTEM: Fail-Safe".](#)

### SYSTEM DIAGRAM



### SIGNAL PATH

- BCM reads status of combination switch.
- BCM judges light reminder warning (information display) by lighting switch signal and driver door switch (driver side) signal. BCM transmits buzzer output signal to combination meter via CAN communication.
- When combination meter receives the buzzer output signal, "Light reminder warning" pop-up screen appears in the information display.

### WARNING/INDICATOR OPERATING CONDITION

When all of the following conditions are satisfied.

- Ignition other than ON
- Lighting switch 1ST or 2ND
- Front door (driver side) OPEN [front door switch (driver side) ON]

### WARNING/INDICATOR CANCEL CONDITION

When any of the following conditions are satisfied.

- Ignition ON

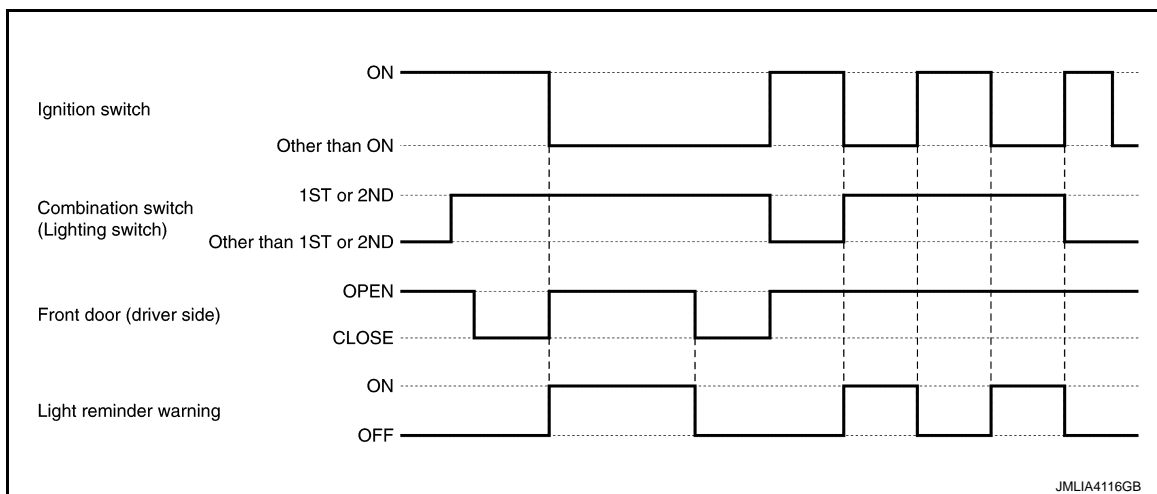
# SYSTEM

[HALOGEN HEADLAMP]

## < SYSTEM DESCRIPTION >

- Lighting switch other than 1ST or 2ND
- Front door (driver side) CLOSE [front door switch (driver side) OFF]

## TIMING CHART



## WARNING/INDICATOR/CHIME LIST

## WARNING/INDICATOR/CHIME LIST : Warning Lamp/Indicator Lamp

INFOID:0000000010789808

| Item                              | Design | Reference  |
|-----------------------------------|--------|--|
| Dipped beam indicator lamp        |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-32, "WARNING LAMPS/INDICATOR LAMPS : Dipped Beam Indicator Lamp"</a> .      |
| Front fog lamp indicator lamp*1   |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-38, "WARNING LAMPS/INDICATOR LAMPS : Front Fog Lamp Indicator Lamp"</a> .   |
| High beam assist indicator lamp*2 |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-40, "WARNING LAMPS/INDICATOR LAMPS : High Beam Assist Indicator Lamp"</a> . |
| High beam indicator lamp          |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-41, "WARNING LAMPS/INDICATOR LAMPS : High Beam Indicator Lamp"</a> .        |
| Position lamp indicator lamp      |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-52, "WARNING LAMPS/INDICATOR LAMPS : Position Lamp Indicator Lamp"</a> .    |
| Rear fog lamp indicator lamp      |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-53, "WARNING LAMPS/INDICATOR LAMPS : Rear Fog Lamp Indicator Lamp"</a> .    |
| Turn signal indicator lamp        |        | For layout, refer to <a href="#">MWI-10, "METER SYSTEM : Design"</a> .<br>For function, refer to <a href="#">MWI-59, "WARNING LAMPS/INDICATOR LAMPS : Turn Signal Indicator Lamp"</a> .      |

\*1: With front fog lamp

\*2: With high beam assist system



WARNING/INDICATOR/CHIME LIST : Warning Chime

INFOID:0000000010789809

| Item                                | Reference  |
|-------------------------------------|--|
| Light reminder warning (buzzer)     | Refer to <a href="#">WCS-12. "WARNING CHIME : Light Reminder Warning (Buzzer)".</a>                  |
| Turn signal operation sound warning | Refer to <a href="#">EXL-236. "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description".</a> |

WARNING/INDICATOR/CHIME LIST : Warning/Indicator (Information Display)

INFOID:0000000010789810

| Item   | Reference   |
|--|---|
| Light reminder warning (information display) | Refer to <a href="#">EXL-250. "INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)".</a> |

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P

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

### COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011008887

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

| Diagnosis mode           | Function Description  |
|--------------------------|---|
| Work Support             | Changes the setting for each system function.   |
| Self Diagnostic Result   | Displays the diagnosis results judged by BCM.   |
| CAN Diag Support Monitor | Monitors the reception status of CAN communication viewed from BCM.   |
| Data Monitor             | The BCM input/output signals are displayed.   |
| Active Test              | The signals used to activate each device are forcibly supplied from BCM.  |
| Ecu Identification       | The BCM part number is displayed.   |
| Configuration            | <ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul> |

### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

| System                               | Sub system selection item | Diagnosis mode |              |             |
|--------------------------------------|---------------------------|----------------|--------------|-------------|
|                                      |                           | Work Support   | Data Monitor | Active Test |
| Door lock                            | DOOR LOCK                 | ×              | ×            |             |
| Rear window defogger                 | REAR DEFOGGER             |                | ×            | ×           |
| Warning chime                        | BUZZER                    |                | ×            | ×           |
| Exterior lamp                        | HEAD LAMP                 | ×              | ×            | ×           |
| Interior room lamp control           | INT LAMP                  |                | ×            |             |
| Wiper and washer                     | WIPER                     | ×              | ×            | ×           |
| Turn signal and hazard warning lamps | FLASHER                   | ×              | ×            |             |
| —                                    | AIR CONDITONER*           |                | ×            | ×           |
| Intelligent Key system               | INTELLIGENT KEY           | ×              | ×            | ×           |
| Combination switch                   | COMB SW                   |                | ×            |             |
| Body control system                  | BCM                       | ×              |              |             |
| NVIS - NATS                          | IMMU                      |                | ×            |             |
| Interior room lamp battery saver     | BATTERY SAVER             |                | ×            |             |
| Back door open                       | TRUNK                     |                | ×            |             |
| Vehicle security                     | THEFT ALM                 | ×              | ×            |             |
| RAP                                  | RETAINED PWR              |                | ×            |             |
| Remote keyless entry system          | MULTI REMOTE ENT          | ×              | ×            |             |
| Signal buffer system                 | SIGNAL BUFFER             |                | ×            | ×           |

#### NOTE:

\*: This item is displayed, but not used.

### FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| CONSULT screen item  | Indication/Unit | Description  |
|----------------------|-----------------|--|
| BATTERY VOLTAGE      | V               | Battery voltage of the moment a particular DTC is detected.                        |
| VEHICLE SPEED        | km/h            | Vehicle speed of the moment a particular DTC is detected.                          |
| EXTERNAL TEMP        | °C              | External temperature of the moment a particular DTC is detected                    |
| VEHICLE COND         | —               | <b>NOTE:</b><br>This item is displayed, but cannot be use this item.               |
| DOOR LOCK STATUS     | —               | <b>NOTE:</b><br>This item is displayed, but cannot be use this item.               |
| POWER SUPPLY COUNTER | min             | Displays the cumulative time from the time that the battery terminal is connected. |

## HEADLAMP

### HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (Halogen Headlamp)

INFOID:0000000010789812

## WORK SUPPORT

| Service item           | Setting item | Setting   |
|------------------------|--------------|---|
| CUSTOM A/LIGHT SETTING | MODE1*       | Normal  |
|                        | MODE2        | More sensitive setting than normal setting (Turns ON earlier than normal operation) |
|                        | MODE3        | More sensitive setting than MODE2 (Turns ON earlier than MODE2)                     |
|                        | MODE4        | Less sensitive setting than normal setting (Turns ON later than normal operation)   |
| TWILIGHT On            | MODE1        | <b>NOTE:</b><br>This item is displayed, but cannot be used                          |
|                        | MODE2        |   |
| WIPER LINK             | MODE1        | <b>NOTE:</b><br>This item is displayed, but cannot be used                          |
|                        | MODE2        |   |
|                        | MODE3        |   |
|                        | MODE4        |   |

\*: Factory setting

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor item<br>[Unit]                 | Description   |
|--|---|
| PUSH SW<br>[On/Off]                    | Indicates [On/Off] condition of push-button ignition switch               |
| ENGINE STATE<br>[STOP/STALL/CRANK/RUN] | Indicates [STOP/STALL/CRANK/RUN] condition of engine states               |
| VEH SPEED 1<br>[km/h]                  | Indicates [km/h] condition of vehicle speed signal from combination meter |

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

| Monitor item<br>[Unit]          | Description  |
|---------------------------------|--|
| TURN SIGNAL R<br>[On/Off]       | Each switch status that BCM judges from the combination switch reading function. |
| TURN SIGNAL L<br>[On/Off]       |  |
| TAIL LAMP SW<br>[On/Off]        |  |
| HI BEAM SW<br>[On/Off]          |  |
| HEADLAMP SW<br>[On/Off]         |  |
| LIGHT OFF SW<br>[On/Off]        |  |
| PASSING SW<br>[On/Off]          |  |
| AUTO LIGHT SW*1<br>[On/Off]     |  |
| FR FOG SW*2<br>[On/Off]         |  |
| RR FOG SW<br>[On/Off]           |  |
| DOOR SW-DR<br>[On/Off]          | Indicated [On/Off] condition of front door switch (driver side)                  |
| DOOR SW-AS<br>[On/Off]          | Indicated [On/Off] condition of front door switch (passenger side)               |
| DOOR SW-RR<br>[On/Off]          | Indicated [On/Off] condition of rear door switch RH                              |
| DOOR SW-RL<br>[On/Off]          | Indicated [On/Off] condition of rear door switch LH                              |
| DOOR SW-BK<br>[On/Off]          | Indicated [On/Off] condition of back door switch                                 |
| OPTI SEN (DTCT)<br>[V]          | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                  |
| OPTI SEN (FILT)<br>[V]          | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                  |
| OPTICAL SENSOR*1<br>[On/Off/NG] | The sensor condition received from light & rain sensor                           |

\*1: For models without auto light system, this item is displayed, but cannot be monitored.

\*2: For models without front fog lamp, this item is displayed, but cannot be monitored.

## ACTIVE TEST

| Test item     | Operation | Description  |
|---------------|-----------|--|
| FR FOG LAMP*1 | On        | <ul style="list-style-type: none"> <li>Transmits the front fog light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON</li> <li>Transmits the front fog light request signal to combination meter via CAN communication to turn the front fog lamp indicator lamp ON</li> </ul> |
|               | Off       | Stops the front fog light request signal transmission  |
| RR FOG LAMP   | On        | <ul style="list-style-type: none"> <li>Outputs voltage to turn the rear fog lamp ON</li> <li>Transmits the rear fog lamp status signal to combination meter via CAN communication to turn the rear fog lamp indicator lamp ON</li> </ul>   |
|               | Off       | <ul style="list-style-type: none"> <li>Stops the voltage to turn the rear fog lamp OFF</li> <li>Stops the rear fog lamp status signal transmission</li> </ul>  |

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

| Test item             | Operation | Description   |
|-----------------------|-----------|---|
| STOP LAMP 1           | On        | Outputs voltage to turn the stop lamp RH ON   |
|                       | Off       | Stops the voltage to turn the stop lamp RH OFF  |
| STOP LAMP 2           | On        | Outputs voltage to turn the stop lamp LH ON   |
|                       | Off       | Stops the voltage to turn the stop lamp LH OFF  |
| STOP LAMP 3           | On        | Outputs voltage to turn the high-mounted stop lamp ON   |
|                       | Off       | Stops the voltage to turn the high-mounted stop lamp OFF  |
| DAYTIME RUNNING LIGHT | On        | Transmits the daytime running light request signal to IPDM E/R using CAN communication to turn the daytime running light ON |
|                       | Off       | Stops the daytime running light request signal transmission   |
| ILL DIM SIGNAL *2     | On        | Transmits the dimmer signal to NAVI control unit and dims display   |
|                       | Off       | Stops the dimmer signal transmission  |

\*1: For models without front fog lamp, this item is displayed, but cannot be tested.

\*2: For models without navigation, this item is displayed, but cannot be tested.

## FLASHER

## FLASHER : CONSULT Function (BCM - FLASHER) (Halogen Headlamp)

INFOID:0000000010789813

## WORK SUPPORT

| Service item           | Setting item | Setting                         |
|------------------------|--------------|---------------------------------|
| 3-TIME FLASHER SETTING | On*          | With 3-time flasher function    |
|                        | Off          | Without 3-time flasher function |

\*: Factory setting

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor item<br>[Unit]    | Description  |
|---------------------------|--|
| REQ SW -DR<br>[On/Off]    | Indicated [On/Off] condition of door request switch (driver side)                |
| REQ SW -AS<br>[On/Off]    | Indicated [On/Off] condition of door request switch (passenger side)             |
| PUSH SW<br>[On/Off]       | Indicates [On/Off] condition of push-button ignition switch                      |
| TURN SIGNAL R<br>[On/Off] | Each switch status that BCM detects from the combination switch reading function |
| TURN SIGNAL L<br>[On/Off] |  |
| HAZARD SW<br>[On/Off]     | The switch status input from the hazard switch                                   |
| RKE-LOCK<br>[On/Off]      | Indicates [On/Off] condition of LOCK signal from Intelligent Key or keyfob       |
| RKE-UNLOCK<br>[On/Off]    | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key or keyfob     |
| RKE-PANIC<br>[On/Off]     | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                  |

## INT LAMP

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000011008890

### WORK SUPPORT

| Service item           | Setting item | Setting                                   |
|------------------------|--------------|---|
| SET I/L D-UNLCK INTCON | On*          | With interior room lamp timer function    |
|                        | Off          | Without interior room lamp timer function |
| FOG LAMP OVERRIDE      | On*          | With fog override function                |
|                        | Off          | Without fog override function             |

\*: Factory setting

### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor item<br>[Unit]    | Description  |
|---------------------------|--|
| REQ SW-DR<br>[On/Off]     | Indicated [On/Off] condition of door request switch (driver side)              |
| REQ SW-AS<br>[On/Off]     | Indicated [On/Off] condition of door request switch (passenger side)           |
| PUSH SW<br>[On/Off]       | Indicates [On/Off] condition of push-button ignition switch                    |
| DOOR SW-DR<br>[On/Off]    | Indicated [On/Off] condition of front door switch (driver side)                |
| DOOR SW-AS<br>[On/Off]    | Indicated [On/Off] condition of front door switch (passenger side)             |
| DOOR SW-RR<br>[On/Off]    | Indicated [On/Off] condition of rear door switch RH                            |
| DOOR SW-RL<br>[On/Off]    | Indicated [On/Off] condition of rear door switch LH                            |
| DOOR SW-BK<br>[On/Off]    | Indicated [On/Off] condition of back door switch                               |
| CDL LOCK SW<br>[On/Off]   | Indicated [On/Off] condition of lock signal from door lock and unlock switch   |
| CDL UNLOCK SW<br>[On/Off] | Indicated [On/Off] condition of unlock signal from door lock and unlock switch |
| KEY CYL LK-SW<br>[On/Off] | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                |
| KEY CYL UN-SW<br>[On/Off] | <b>NOTE:</b><br>This item is displayed, but cannot be monitored                |
| RKE-LOCK<br>[On/Off]      | Indicates [On/Off] condition of LOCK signal from Intelligent Key or keyfob     |
| RKE-UNLOCK<br>[On/Off]    | Indicates [On/Off] condition of UNLOCK signal from Intelligent Key or keyfob   |
| KEY SW<br>[On/Off]        | Indicates [On/Off] condition of key switch                                     |

### ACTIVE TEST

| Test item | Operation | Description                                |
|-----------|-----------|--|
| INT LAMP  | On        | Outputs interior room lamp control signal. |
|           | Off       | Stops interior room lamp control signal.   |

## DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) (With Intelligent Key System and Super Lock)

INFOID:0000000011008893

## BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

## WORK SUPPORT

| Monitor item            | Description  |
|-------------------------|--|
| DOOR LOCK-UNLOCK SET    | Anti-hijack function mode can be changed to operation with this mode <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul> |
| AUTO UNLOCK TYPE        | <b>NOTE:</b><br>This item is displayed, but cannot be used   |
| SIGNATURE LIGHT SETTING | Signature light function can be changed to operation with this mode <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>  |

## DATA MONITOR

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item  | Contents   |
|---------------|--|
| REQ SW-DR     | Indicated [On/Off] condition of door request switch (driver side)          |
| REQ SW-AS     | Indicated [On/Off] condition of door request switch (passenger side)       |
| REQ SW-BD/TR  | Indicated [On/Off] condition of back door request switch                   |
| DOOR SW-DR    | Indicated [On/Off] condition of front door switch (driver side)            |
| DOOR SW-AS    | Indicated [On/Off] condition of front door switch (passenger side)         |
| DOOR SW-RR    | Indicated [On/Off] condition of rear door switch RH                        |
| DOOR SW-RL    | Indicated [On/Off] condition of rear door switch LH                        |
| DOOR SW-BK    | Indicated [On/Off] condition of back door switch                           |
| CDL LOCK SW   | Indicated [On/Off] condition of lock signal from door lock unlock switch   |
| CDL UNLOCK SW | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY CYL UN-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| SHOCK SENSOR  | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY SW        | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |

## ACTIVE TEST

| Test item | Description  |
|-----------|--|
| DOOR LOCK | This test is able to check door lock/unlock operation <ul style="list-style-type: none"> <li>The all door lock actuators are locked when "ALL LOCK" on CONSULT screen is touched</li> <li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li> </ul> |

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Test item     | Description  |
|---------------|--|
| SUPER LOCK    | This test is able to check super lock actuator operation <ul style="list-style-type: none"> <li>The all door lock actuators are set when "LOCK" on CONSULT screen is touched</li> <li>The all door lock actuators are released when "UNLOCK" on CONSULT screen is touched</li> </ul> |
| DOOR LOCK IND | This test is able to check door lock status indicator operation <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>  |

## DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) (With Intelligent Key System, Without Super Lock)

INFOID:0000000011008895

### BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

### WORK SUPPORT

| Monitor item            | Description  |
|-------------------------|--|
| DOOR LOCK-UNLOCK SET    | Anti-hijack function mode can be changed to operation with this mode <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul> |
| AUTO UNLOCK TYPE        | <b>NOTE:</b><br>This item is displayed, but cannot be used   |
| SIGNATURE LIGHT SETTING | Signature light function can be changed to operation with this mode <ul style="list-style-type: none"> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>  |

### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item  | Contents   |
|---------------|--|
| REQ SW-DR     | Indicated [On/Off] condition of door request switch (driver side)          |
| REQ SW-AS     | Indicated [On/Off] condition of door request switch (passenger side)       |
| REQ SW-BD/TR  | Indicated [On/Off] condition of back door request switch                   |
| DOOR SW-DR    | Indicated [On/Off] condition of front door switch (driver side)            |
| DOOR SW-AS    | Indicated [On/Off] condition of front door switch (passenger side)         |
| DOOR SW-RR    | Indicated [On/Off] condition of rear door switch RH                        |
| DOOR SW-RL    | Indicated [On/Off] condition of rear door switch LH                        |
| DOOR SW-BK    | Indicated [On/Off] condition of back door switch                           |
| CDL LOCK SW   | Indicated [On/Off] condition of lock signal from door lock unlock switch   |
| CDL UNLOCK SW | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY CYL UN-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| SHOCK SENSOR  | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY SW        | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |

### ACTIVE TEST



# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Test item     | Description   |
|---------------|---|
| DOOR LOCK     | This test is able to check door lock/unlock operation <ul style="list-style-type: none"><li>The all door lock actuators are locked when "ALL LOCK" on CONSULT screen is touched</li><li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li></ul> |
| SUPER LOCK    | <b>NOTE:</b><br>This item is displayed, but cannot be used  |
| DOOR LOCK IND | <b>NOTE:</b><br>This item is displayed, but cannot be used  |

## DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) (Without Intelligent Key System, With Super Lock)

INFOID:0000000011008896

### WORK SUPPORT

| Monitor item            | Description  |
|-------------------------|--|
| DOOR LOCK-UNLOCK SET    | Selective unlock function mode can be changed to operation with this mode <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul> |
| AUTO UNLOCK TYPE        | <b>NOTE:</b><br>This item is displayed, but cannot be used   |
| SIGNATURE LIGHT SETTING | Signature light function can be changed to operation with this mode <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul>       |

### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item  | Contents   |
|---------------|--|
| DOOR SW-DR    | Indicated [On/Off] condition of front door switch (driver side)            |
| DOOR SW-AS    | Indicated [On/Off] condition of front door switch (passenger side)         |
| DOOR SW-RR    | Indicated [On/Off] condition of rear door switch RH                        |
| DOOR SW-RL    | Indicated [On/Off] condition of rear door switch LH                        |
| DOOR SW-BK    | Indicated [On/Off] condition of back door switch                           |
| CDL LOCK SW   | Indicated [On/Off] condition of lock signal from door lock unlock switch   |
| CDL UNLOCK SW | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY CYL UN-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| SHOCK SENSOR  | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY SW        | Indicated [On/Off] condition of key switch                                 |

### ACTIVE TEST

| Test item | Description   |
|-----------|---|
| DOOR LOCK | This test is able to check door lock/unlock operation <ul style="list-style-type: none"><li>The all door lock actuators are locked when "ALL LOCK" on CONSULT screen is touched</li><li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li></ul> |

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Test item     | Description   |
|---------------|---|
| SUPER LOCK    | This test is able to check super lock actuator operation <ul style="list-style-type: none"><li>The all door lock actuators are set when "LOCK" on CONSULT screen is touched</li><li>The all door lock actuators are released when "UNLOCK" on CONSULT screen is touched</li></ul> |
| DOOR LOCK IND | This test is able to check door lock status indicator operation <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul>  |

## DOOR LOCK : CONSULT Function (BCM - DOOR LOCK) (Without Intelligent Key System and Super Lock)

INFOID:0000000011008897

## WORK SUPPORT

| Monitor item            | Description  |
|-------------------------|--|
| DOOR LOCK-UNLOCK SET    | Selective unlock function mode can be changed to operation with this mode <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul> |
| AUTO UNLOCK TYPE        | <b>NOTE:</b><br>This item is displayed, but cannot be used   |
| SIGNATURE LIGHT SETTING | Signature light function can be changed to operation with this mode <ul style="list-style-type: none"><li>On: Operate</li><li>Off: Non-operation</li></ul>       |

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item  | Contents   |
|---------------|--|
| DOOR SW-DR    | Indicated [On/Off] condition of front door switch (driver side)            |
| DOOR SW-AS    | Indicated [On/Off] condition of front door switch (passenger side)         |
| DOOR SW-RR    | Indicated [On/Off] condition of rear door switch RH                        |
| DOOR SW-RL    | Indicated [On/Off] condition of rear door switch LH                        |
| DOOR SW-BK    | Indicated [On/Off] condition of back door switch                           |
| CDL LOCK SW   | Indicated [On/Off] condition of lock signal from door lock unlock switch   |
| CDL UNLOCK SW | Indicated [On/Off] condition of unlock signal from door lock unlock switch |
| KEY CYL LK-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY CYL UN-SW | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| SHOCK SENSOR  | <b>NOTE:</b><br>This item is displayed, but cannot be monitored            |
| KEY SW        | Indicated [On/Off] condition of key switch                                 |

## ACTIVE TEST

| Test item     | Description   |
|---------------|---|
| DOOR LOCK     | This test is able to check door lock/unlock operation <ul style="list-style-type: none"><li>The all door lock actuators are locked when "ALL LOCK" on CONSULT screen is touched</li><li>The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched</li></ul> |
| SUPER LOCK    | <b>NOTE:</b><br>This item is displayed, but cannot be monitored   |
| DOOR LOCK IND | <b>NOTE:</b><br>This item is displayed, but cannot be monitored   |

## DIAGNOSIS SYSTEM (IPDM E/R)

## CONSULT Function (IPDM E/R)

INFOID:0000000011008889

## APPLICATION ITEM

CONSULT performs the following functions via CAN communication with IPDM E/R.

| Diagnosis mode           | Description  |
|--------------------------|--|
| Self Diagnostic Result   | Displays the diagnosis results judged by IPDM E/R.   |
| Data Monitor             | Displays the real-time input/output data from IPDM E/R input/output data.  |
| Work Support             | Changes the setting for each system function.  |
| Active Test              | IPDM E/R can provide a drive signal to electronic components to check their operations.  |
| Ecu Identification       | Allows confirmation of IPDM E/R part number.   |
| Configuration            | <ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>White the vehicle specification when replacing IPDM E/R.</li> </ul> |
| CAN Diag Support Monitor | The results of transmit/receive diagnosis of CAN communication can be read.  |

## SELF DIAGNOSTIC RESULT

Refer to [PCS-38, "DTC Index"](#).

## Freeze Frame Data (FFD)

The IPDM E/R records the vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

## DATA MONITOR

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

| Monitor Item<br>[Unit]            | Description  |
|-----------------------------------|--|
| REVERSE SIGNAL<br>[Open/Close]    | Displays the status of reverse position signal judged by IPDM E/R.   |
| IGN RELAY<br>[Open/Close]         | Displays the status of the ignition relay judged by IPDM E/R.  |
| PUSH SW<br>[Open/Close]           | Displays the status of the push-button ignition switch judged by IPDM E/R.   |
| NEUTRAL SW<br>[Open/Close]        | Displays the status of the neutral position signal (M/T) judged by IPDM E/R.   |
| INTERLOCK/PNP SW<br>[Open/Close]  | Displays the status of the transmission range switch (CVT) judged by IPDM E/R.   |
| OIL PRESSURE SW<br>[Open/Close]   | Displays the status of the oil pressure switch judged by IPDM E/R.   |
| LED H/L RH STATUS<br>[Open/Close] | Displays the LED headlamp (right) ON/OFF status judged by IPDM E/R.<br><b>NOTE:</b><br>This item is monitored only on the vehicle with LED headlamp. |
| LED H/L LH STATUS<br>[Open/Close] | Displays the LED headlamp (left) ON/OFF status judged by IPDM E/R.<br><b>NOTE:</b><br>This item is monitored only on the vehicle with LED headlamp.  |
| HOOD SW<br>[Open/Close]           | Displays the status of the hood switch judged by IPDM E/R.   |
| COMPRESSOR<br>[Off/On]            | Displays the compressor drive status judged by IPDM E/R.   |
| H/L WASHER PUMP<br>[Off/On]       | Displays the status of the headlamp washer relay judged by IPDM E/R.   |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Monitor Item<br>[Unit]              | Description   |
|-------------------------------------|---|
| HORN RELAY<br>[Off/On]              | Displays the status of the horn relay judged by IPDM E/R.   |
| COOLING FAN<br>[Off/On]             | Displays the cooling fan relay-4 drive status judged by IPDM E/R.   |
| FRONT WIPER HI/LO RELAY<br>[Off/On] | Displays the front wiper HI/LO relay drive status judged by IPDM E/R.   |
| FRONT WIPER RELAY<br>[Off/On]       | Displays the front wiper relay drive status judged by IPDM E/R.   |
| IGN RELAY OFF STATUS<br>[Off/On]    | Displays the status of the ignition relay OFF circuit judged by IPDM E/R.   |
| IGN RELAY ON STATUS<br>[Off/On]     | Displays the status of the ignition relay ON circuit judged by IPDM E/R.  |
| STEERING LOCK PWR SPLY<br>[Off/On]  | Displays the power supply status from IPDM E/R to the steering lock unit.<br><b>NOTE:</b><br>This item is monitored only on the vehicle with Intelligent Key system |
| HEIGHT SENSOR PWR SPLY<br>[Off/On]  | Displays the power supply status from IPDM E/R to the height sensor.  |
| COOLING FAN RELAY 1<br>[Off/On]     | Displays the status of the cooling fan relay-1 judged by IPDM E/R.  |
| STARTER RELAY<br>[Off/On]           | Displays the status of the starter relay judged by IPDM E/R.  |
| COMP ECV DUTY<br>[%]                | Displays the compressor control signal (PWM) status of IPDM E/R.  |
| COOLING FAN RELAY 2<br>[%]          | Displays the status of the cooling fan relay-5 judged by IPDM E/R.  |
| FR FOG LAMP LH<br>[%]               | Displays the front fog lamp (left) output (PWM) status of IPDM E/R.   |
| FR FOG LAMP RH<br>[%]               | Displays the front fog lamp (right) output (PWM) status of IPDM E/R.  |
| LEVELIZER OUTPUT<br>[%]             | Displays the aiming motor drive signal (PWM) status of IPDM E/R.  |
| PARKING LAMP<br>[%]                 | Displays the parking lamp output (PWM) status of IPDM E/R.  |
| TAIL LAMP LH<br>[%]                 | Displays the tail lamp (left) output (PWM) status of IPDM E/R.  |
| TAIL LAMP RH<br>[%]                 | Displays the tail lamp (right) output (PWM) status of IPDM E/R.   |
| DAYTIME RUNNING LIGHT LH<br>[%]     | Displays the daytime running light (left) output status of IPDM E/R.  |
| DAYTIME RUNNING LIGHT RH<br>[%]     | Displays the daytime running light (right) output status of IPDM E/R.   |
| HEADLAMP (HI) LH<br>[%]             | Displays the headlamp (HI) (left) output (PWM) status of IPDM E/R.  |
| HEADLAMP (HI) RH<br>[%]             | Displays the headlamp (HI) (right) output (PWM) status of IPDM E/R.   |
| HEADLAMP (LO) LH<br>[%]             | Displays the headlamp (LO) (left) output (PWM) status of IPDM E/R.  |
| HEADLAMP (LO) RH<br>[%]             | Displays the headlamp (LO) (right) output (PWM) status of IPDM E/R.   |
| A/C RELAY STUCK<br>[OK/NG]          | Displays the ON stuck status of the A/C relay judged by IPDM E/R.   |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Monitor Item<br>[Unit]                           | Description  |
|--|--|
| A/C RELAY<br>[Off/On]                            | Displays the status of the A/C relay judged by IPDM E/R.   |
| COMP ECV STATUS<br>[OK/NG]                       | Displays the compressor malfunction diagnosis status judged by IPDM E/R.                                     |
| VEHICLE SECURITY HORN<br>[Off/On]                | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| BATTERY CURRENT SENSOR<br>[OK/NG]                | Displays the battery current sensor malfunction diagnosis status judged by IPDM E/R.                         |
| FRONT FOG LAMP<br>[Off/On]                       | Displays the fog lamp illumination control status of IPDM E/R.   |
| COMP ECV CURRENT<br>[A]                          | Displays the electric current output to compressor judged by IPDM E/R.                                       |
| BATTERY VOLTAGE<br>[V]                           | Displays the status of the battery voltage judged by IPDM E/R.   |
| COOLING FAN DUTY<br>[%]                          | Displays the cooling fan output signal status of IPDM E/R.   |
| HOOD SW (CAN)<br>[Open/Close/NG]                 | Displays the status of the hood switch judged by IPDM E/R.   |
| FRONT WIPER<br>[STOP/HIGH/LOW/NG]                | Displays the front wiper motor drive control status of IPDM E/R.   |
| FR WIPER STOP POSITION<br>[ACTIVE P/STOP P]      | Displays the status of the front wiper position status judged by IPDM E/R.                                   |
| HEADLAMP (HI)<br>[Off/On]                        | Displays the headlamp (HI) illumination control status of IPDM E/R.  |
| HEADLAMP (LO)<br>[Off/On]                        | Displays the headlamp (LO) illumination control status of IPDM E/R.  |
| IGNITION RELAY STATUS<br>[Off/On]                | Displays the ignition relay output status of IPDM E/R.   |
| IGN RELAY MONITOR<br>[Off/On]                    | Displays the status of the ignition relay judged by IPDM E/R.  |
| IGNITION POWER SUPPLY<br>[Off/On]                | Displays the status of the ignition power supply judged by IPDM E/R.   |
| INTERLOCK/PNP SW (CAN)<br>[Off/On]               | Displays the status of the transmission range switch signal that IPDM transmits via CAN communication.       |
| NEUTRAL SWITCH (CAN)<br>[Off/On/NG]              | Displays the status of the neutral position switch (M/T) signal that IPDM transmits via CAN communication.   |
| PUSH-BUTTON IGN SW (CAN)<br>[Off/On]             | Displays the status of the ignition switch signal that IPDM transmits via CAN communication.                 |
| TAIL LAMP<br>[Off/On]                            | Displays the tail lamp illumination control status of IPDM E/R.  |
| REVERSE SIGNAL (CAN)<br>[Off/On/NG]              | Displays the status of the reverse switch (M/T) signal that IPDM transmits via CAN communication.            |
| ST&ST CONT RELAY STATUS<br>[Off/Off, ON/ST R On] | Displays the status of the start control relay and start motor relay status judged by IPDM E/R.              |
| STARTER MOTOR STATUS<br>[Off/On/L-TIME]          | Displays the status of the starter motor judged by IPDM E/R.   |
| STARTER RELAY (CAN)<br>[LOW/HIGH/NG]             | Displays the status of the IPDM E/R transmits the starter control relay status signal via CAN communication. |
| IPDM NOT SLEEP<br>[NO RDY/READY]                 | Displays the status of the IPDM E/R transmits the not sleep signal via CAN communication.                    |

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# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

| Monitor Item<br>[Unit]  | Description  |
|---|--|
| AFTER COOLING TIME<br>[No request/0.5min/1.0min/1.5min/<br>2.0min/2.5min/3.0min/3.5min/4min/5min/<br>6min/8min/10min/12min/14min/16min] | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| AFTER COOLING SPEED<br>[0%/25%/40%/55%/70%/78%/85%/<br>100%]  | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| COOLING FAN TYPE<br>[RENAULT/NISSAN]  | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| COMPRESSOR REQ 1<br>[Off/On]  | Displays the status of the A/C compressor request signal received from ECM via CAN communication.                                      |
| VHCL SECURTY HORN REQ<br>[Off/On]   | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| DTRL REQ<br>[Off/On]  | Displays the status of the daytime running light request signal received from BCM via CAN communication.                               |
| SLEEP/WAKE UP<br>[SLEEP/WAKEUP]   | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| CLUTCH INTERLOCK SW<br>[Off/On/NG]  | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| CRANKING ENABLE-TCM<br>[OK/NG]  | Displays the status of the cranking enable signal received from TCM via CAN communication.   |
| CRANKING ENABLE-ECM<br>[OK/NG/STOP/No request]  | Displays the status of the cranking enable signal received from ECM via CAN communication.   |
| CAN DIAGNOSIS<br>[OK/NG]  | Displays the status of the CAN diagnosis signal received from BCM via CAN communication.   |
| FRONT FOG LAMP REQ<br>[Off/On]  | Displays the status of the front fog light request signal received from BCM via CAN communication.                                     |
| H/L WASHER REQ<br>[Off/On]  | Displays the status of the headlamp washer request signal received from BCM via CAN communication.                                     |
| PASSING REQ<br>[Off/On]   | <b>NOTE:</b><br>The item is indicated, but not monitored.  |
| HIGH BEAM REQ<br>[Off/On]   | Displays the status of the high beam request signal received from BCM via CAN communication.   |
| HORN CHIRP<br>[Off/On]  | Displays the status of the horn reminder signal received from BCM via CAN communication.   |
| COOLING FAN REQ<br>[%]  | Displays the status of the cooling fan speed request signal received from ECM via CAN communication.                                   |
| ENGINE STATUS<br>[STOP/IDLING/RUN]  | Displays the status of the engine status signal received from ECM via CAN communication.   |
| TURN SIGNAL REQ<br>[Off/LH/RH]  | Displays the status of the turn indicator signal received from BCM via CAN communication.  |
| FR WIPER REQ<br>[RETURN/STOP/NG/LOW/HIGH]   | Displays the status of the front wiper request signal received from BCM via CAN communication.   |
| SHIFT POSITION<br>[OFF/P/R/N/D/S/L/B/1/2/3/4/5/6/7]   | Displays the status of the shift position signal received from TCM via CAN communication.  |
| LOW BEAM REQ<br>[Off/On]  | Displays the status of the low beam request signal received from BCM via CAN communication.  |
| POSITION LIGHT REQ<br>[Off/On]  | Displays the status of the position light request signal received from BCM via CAN communication.                                      |
| COMPRESSOR REQ 2<br>[Off/On]  | Displays the status of the A/C ON signal received from A/C auto amp. via CAN communication.  |
| IGNITION SW<br>[Off/On/START/No request]  | Displays the status of the ignition switch ON signal and starter control relay request signal received from BCM via CAN communication. |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Monitor Item<br>[Unit]              | Description  |
|-------------------------------------|--|
| VEHICLE SPEED (METER)<br>[km/h]     | Displays the status of the A/C ON signal received from A/C auto amp. via CAN communication.  |
| BAT DISCHARGE COUNT<br>[—]          | Monitor the cumulative discharge value of the battery.<br><b>NOTE:</b><br>When 65,000 or more is counted, replace the battery.   |
| P LAMP CIRC MALFUNCTN<br>[0 – 1]    | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the parking lamp circuit.<br><b>NOTE:</b><br>When the number of parking lamp circuit retries count is 20, this item counts 1.  |
| NMB P LAMP CIRC RETRY<br>[0 – 20]   | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the parking lamp circuit.<br><b>NOTE:</b><br>When the number of short circuits in the parking lamp circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.                                   |
| NMB P LAMP CIRC SHORT<br>[0 – 5]    | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the parking lamp circuit.   |
| DTRL LH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (left) circuit.<br><b>NOTE:</b><br>When the number of daytime running light (left) circuit retries count is 20, this item counts 1.  |
| NMB DTRL LH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the daytime running light (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.   |
| NMB DTRL LH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (left) circuit.   |
| DTRL RH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (right) circuit.<br><b>NOTE:</b><br>When the number of daytime running light (right) circuit retries count is 20, this item counts 1.  |
| NMB DTRL RH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the daytime running light (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1. |
| NMB DTRL RH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (right) circuit.  |
| F FOG LH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the front fog lamp (left) circuit.<br><b>NOTE:</b><br>When the number of front fog lamp (left) circuit retries count is 20, this item counts 1.  |
| NMB F FOG LH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the front fog lamp (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the front fog lamp (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.                 |
| NMB F FOG LH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the front fog lamp (left) circuit.  |
| F FOG RH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the front fog lamp (right) circuit.<br><b>NOTE:</b><br>When the number of front fog lamp (right) circuit retries count is 20, this item counts 1.  |

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# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Monitor Item<br>[Unit]                | Description  |
|---------------------------------------|--|
| NMB F FOG RH CIRC RETRY<br>[0 – 20]   | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the front fog lamp (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the front fog lamp (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1. |
| NMB F FOG RH CIRC SHORT<br>[0 – 5]    | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the front fog lamp (right) circuit.   |
| HL (HI) LH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (HI) (left) circuit.<br><b>NOTE:</b><br>When the number of headlamp (HI) (left) circuit retries count is 20, this item counts 1.  |
| NMB HL (HI) LH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (HI) (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (HI) (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.     |
| NMB HL (HI) LH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (HI) (left) circuit.   |
| HL (HI) RH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (HI) (right) circuit.<br><b>NOTE:</b><br>When the number of headlamp (HI) (right) circuit retries count is 20, this item counts 1.  |
| NMB HL (HI) RH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (HI) (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (HI) (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.   |
| NMB HL (HI) RH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (HI) (right) circuit.  |
| S/L CIRC MALFUNCTN<br>[0 – 1]         | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the steering lock circuit.<br><b>NOTE:</b><br>When the number of steering lock circuit retries count is 20, this item counts 1.  |
| NMB S/L CIRC RETRY<br>[0 – 20]        | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the steering lock circuit.<br><b>NOTE:</b><br>When the number of short circuits in the steering lock circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.                   |
| NMB S/L CIRC SHORT<br>[0 – 5]         | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the steering lock circuit.  |
| HL (LO) LH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (LO) (left) circuit.<br><b>NOTE:</b><br>When the number of headlamp (LO) (left) circuit retries count is 20, this item counts 1.  |
| NMB HL (LO) LH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (LO) (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.     |
| NMB HL (LO) LH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (left) circuit.   |
| HL (LO) RH CIRC MALFUNCTN<br>[0 – 1]  | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (LO) (right) circuit.<br><b>NOTE:</b><br>When the number of headlamp (LO) (right) circuit retries count is 20, this item counts 1.  |



# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Monitor Item<br>[Unit]                | Description  |
|---------------------------------------|--|
| NMB HL (LO) RH CIRC RETRY<br>[0 – 20] | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the headlamp (LO) (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1. |
| NMB HL (LO) RH CIRC SHORT<br>[0 – 5]  | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (right) circuit.  |
| T LAMP LH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (left) circuit.<br><b>NOTE:</b><br>When the number of tail lamp (left) circuit retries count is 20, this item counts 1.  |
| NMB T LAMP LH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (left) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the tail lamp (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.           |
| NMB T LAMP LH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (left) circuit.   |
| T LAMP RH CIRC MALFUNCTN<br>[0 – 1]   | Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (right) circuit.<br><b>NOTE:</b><br>When the number of tail lamp (right) circuit retries count is 20, this item counts 1.  |
| NMB T LAMP RH CIRC RETRY<br>[0 – 20]  | Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (right) circuit.<br><b>NOTE:</b><br>When the number of short circuits in the tail lamp (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.         |
| NMB T LAMP RH CIRC SHORT<br>[0 – 5]   | Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (right) circuit.  |
| BATTERY STATUS<br>[OK/NG]             | Monitor the battery status from the battery output.  |

## ACTIVE TEST

| Test item          | Operation | Description   |
|--------------------|-----------|---|
| HORN               | Off       | OFF   |
|                    | On        | Operates horn relay for 20 ms.                              |
| HEADLAMP WASHER    | Off       | OFF   |
|                    | On        | Operates headlamp washer relay for 10 ms.                   |
| FRONT WIPER        | Off       | OFF   |
|                    | Low       | Operates the front wiper relay.                             |
|                    | High      | Operates the front wiper relay and front wiper HI/LO relay. |
| COMPRESSOR         | Off       | OFF   |
|                    | On        | Operates the A/C relay.                                     |
| COOLING FAN (MONO) | Off       | OFF   |
|                    | Lo        | Run the cooling fan at low speed.                           |
|                    | Hi        | Run the cooling fan at high speed.                          |
| HEADLAMP (HI)      | Off       | OFF   |
|                    | On        | Operates the headlamp (HI)                                  |
| HEADLAMP (LO)      | Off       | OFF   |
|                    | On        | Operates the headlamp (LO).                                 |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

| Test item              | Operation | Description  |
|------------------------|-----------|--|
| FRONT FOG LAMP         | Off       | OFF  |
|                        | On        | Operates the front fog lamp.   |
| DAYTIME RUNNING LIGHT  | Off       | OFF  |
|                        | On        | Operates the parking lamp (daytime running light operation).   |
| PARKING LAMP           | Off       | OFF  |
|                        | On        | Operates the parking lamp.   |
| TAIL LAMP              | Off       | OFF  |
|                        | On        | Operates the tail lamp.  |
| OPTIC AXIS ACTIVE TEST | Default   | Return the optical axis to the default position.<br><b>NOTE:</b><br>While the headlamp is OFF, it does not return to the default position. |
|                        | Lower     | Adjust the optical axis to the lowermost point.  |

## WORK SUPPORT

| Work item              | Description  |
|------------------------|--|
| SENSOR INITIALIZE      | Adjusts the height sensor signal output value in the unloaded vehicle condition. |
| CML B/DCHRG CRNT CLEAR | In this mode, cumulative battery discharge current is cleared.                   |

# BCM, IPDM E/R, FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[HALOGEN HEADLAMP]

## ECU DIAGNOSIS INFORMATION

### BCM, IPDM E/R, FRONT CAMERA UNIT

#### List of ECU Reference

INFOID:0000000010789818

| ECU                | Reference   |
|--------------------|---|
| BCM                | <a href="#">BCS-53, "Reference Value"</a>               |
|                    | <a href="#">BCS-76, "Fail-safe"</a>                     |
|                    | <a href="#">BCS-77, "DTC Inspection Priority Chart"</a> |
|                    | <a href="#">BCS-78, "DTC Index"</a>                     |
| IPDM E/R           | <a href="#">PCS-22, "Reference Value"</a>               |
|                    | <a href="#">PCS-34, "Fail-safe"</a>                     |
|                    | <a href="#">PCS-37, "DTC Inspection Priority Chart"</a> |
|                    | <a href="#">PCS-38, "DTC Index"</a>                     |
| Front camera unit* | <a href="#">DAS-51, "Reference Value"</a>               |
|                    | <a href="#">DAS-55, "Fail-safe (Front Camera Unit)"</a> |
|                    | <a href="#">DAS-56, "DTC Inspection Priority Chart"</a> |
|                    | <a href="#">DAS-56, "DTC Index"</a>                     |

\*: With high beam assist system

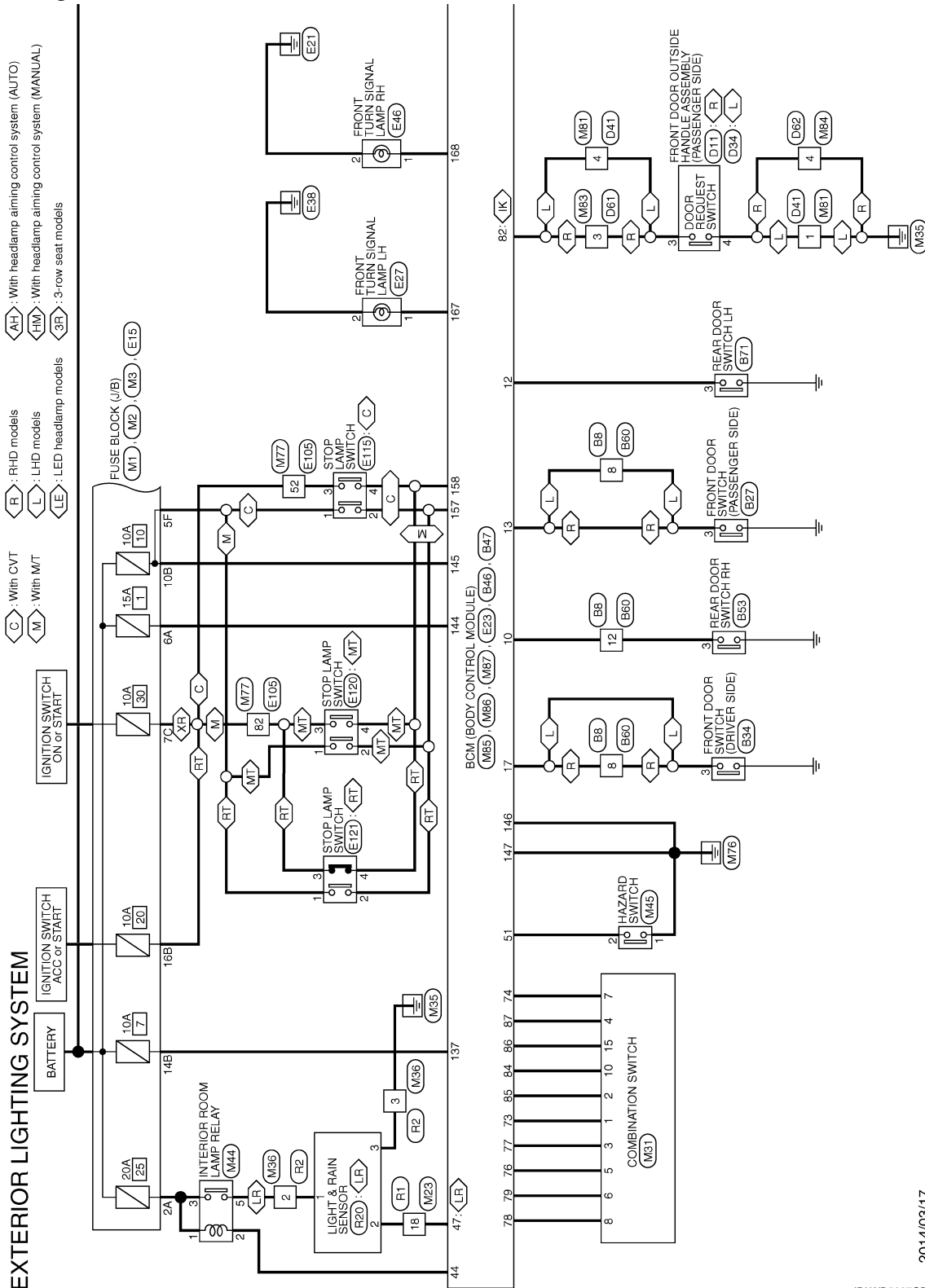
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## WIRING DIAGRAM

### EXTERIOR LIGHTING SYSTEM

#### Wiring Diagram

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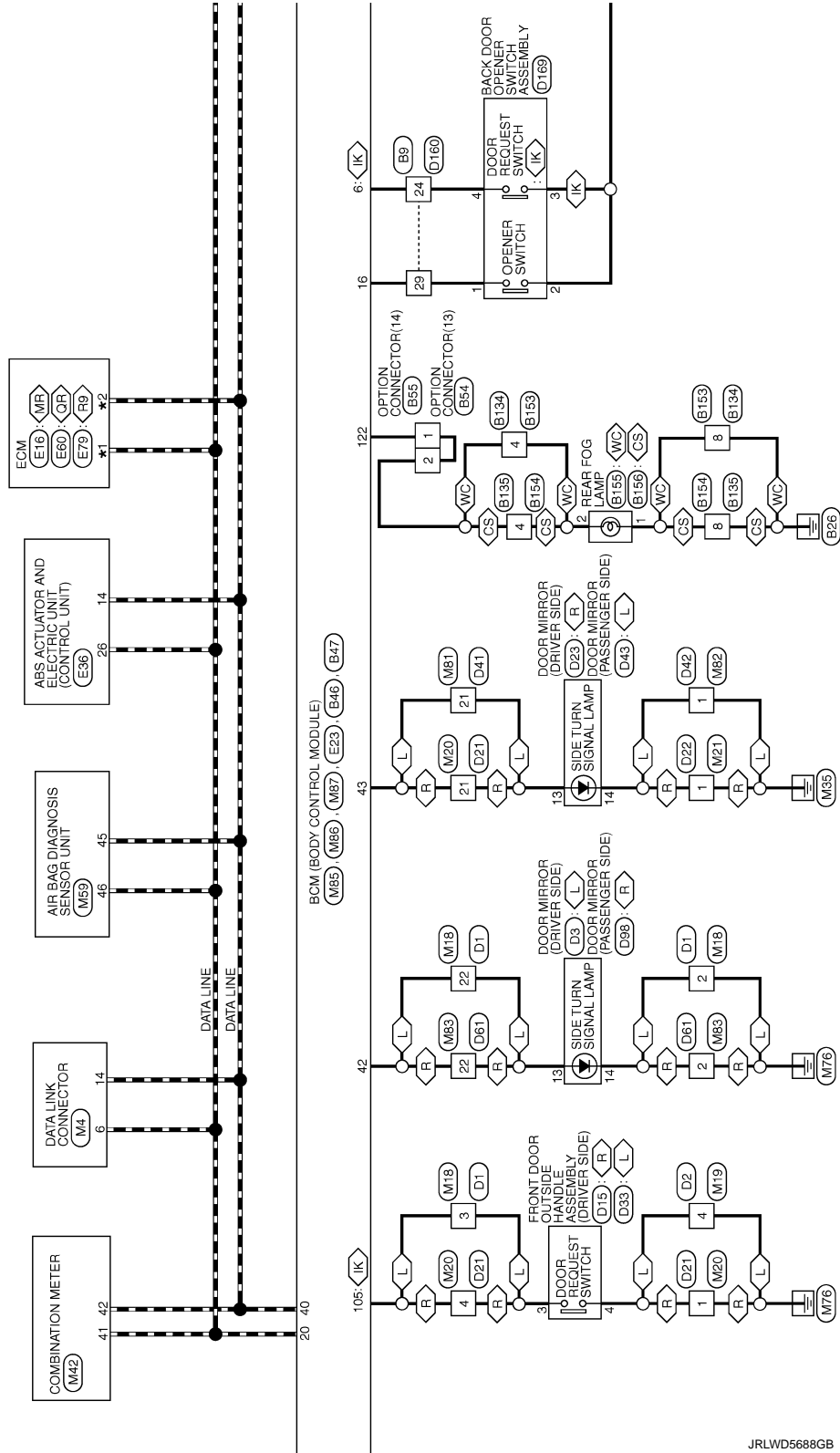
2014/03/17

# EXTERIOR LIGHTING SYSTEM

[HALOGEN HEADLAMP]

< WIRING DIAGRAM >

- X9 : Except for R9M engine models
- MT : MR engine models with M/T
- MR : MR engine models
- XR : Except for R9M engine models with M/T
- R9 : R9M engine models
- RT : R9M engine models with M/T
- MR : MR engine models
- LR : With light & rain sensor
- LA : With LDW
- AB : With automatic back door system
- QR : QR engine models
- MR : MR engine models
- QB : Without automatic back door system
- HA : Halogen headlamp models
- IK : With intelligent key



JRLWD5688GB

# EXTERIOR LIGHTING SYSTEM

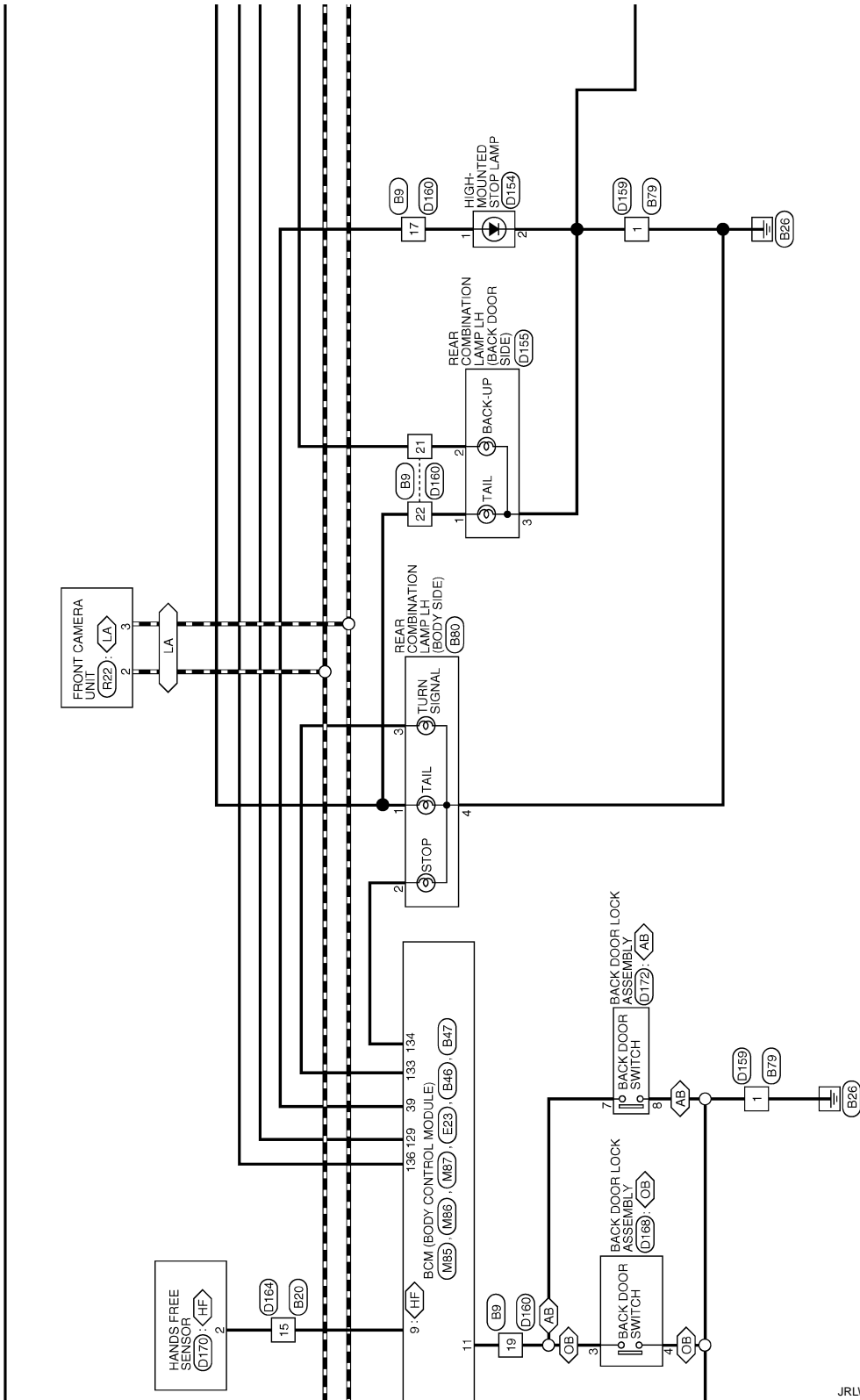
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

HF : With hands free sensor models

CS : With Sonar System OFF switch  
WC : Without Sonar System OFF switch

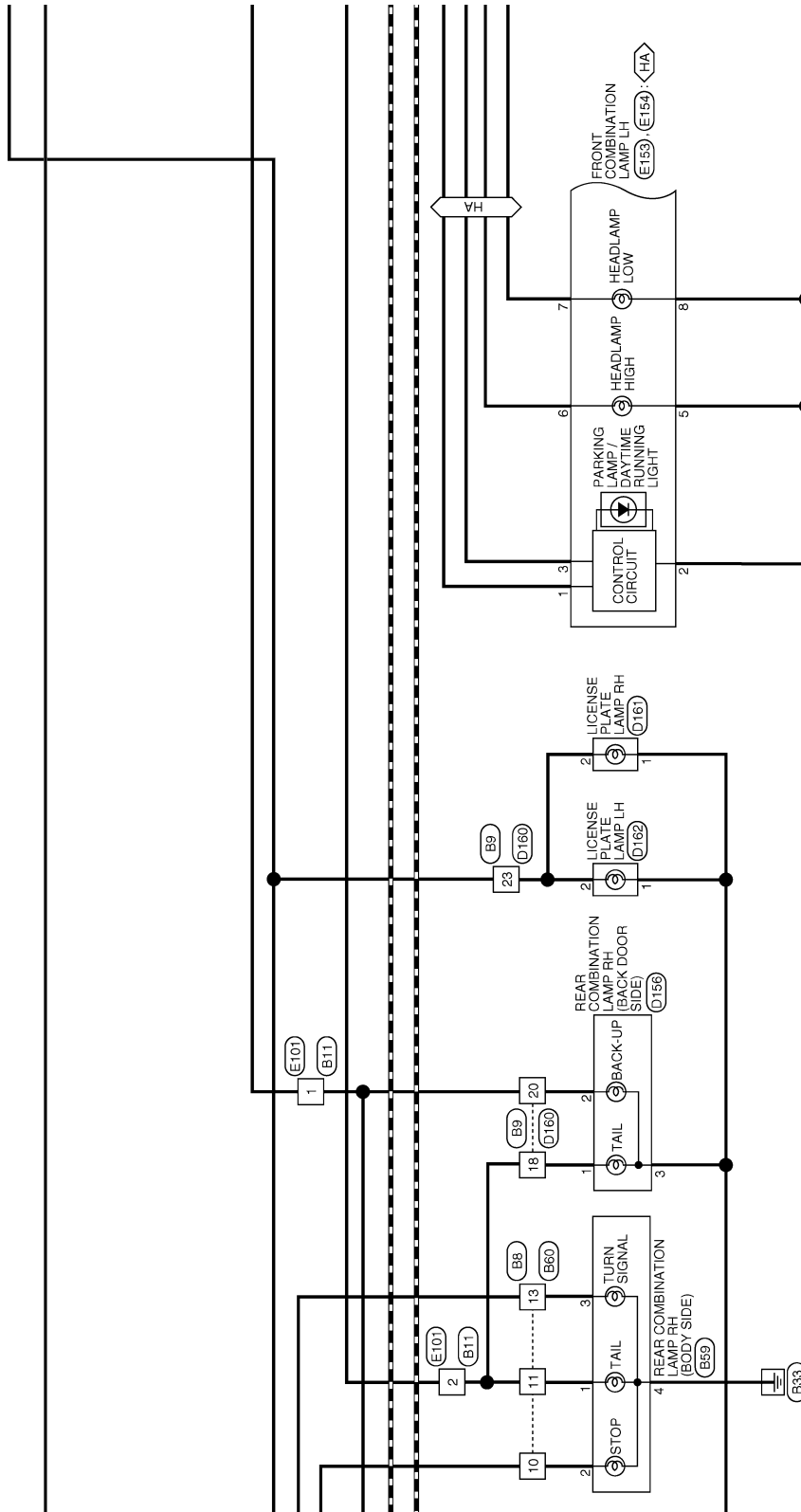
IS : With Stop / Start System  
OS : Without Stop / Start System



# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

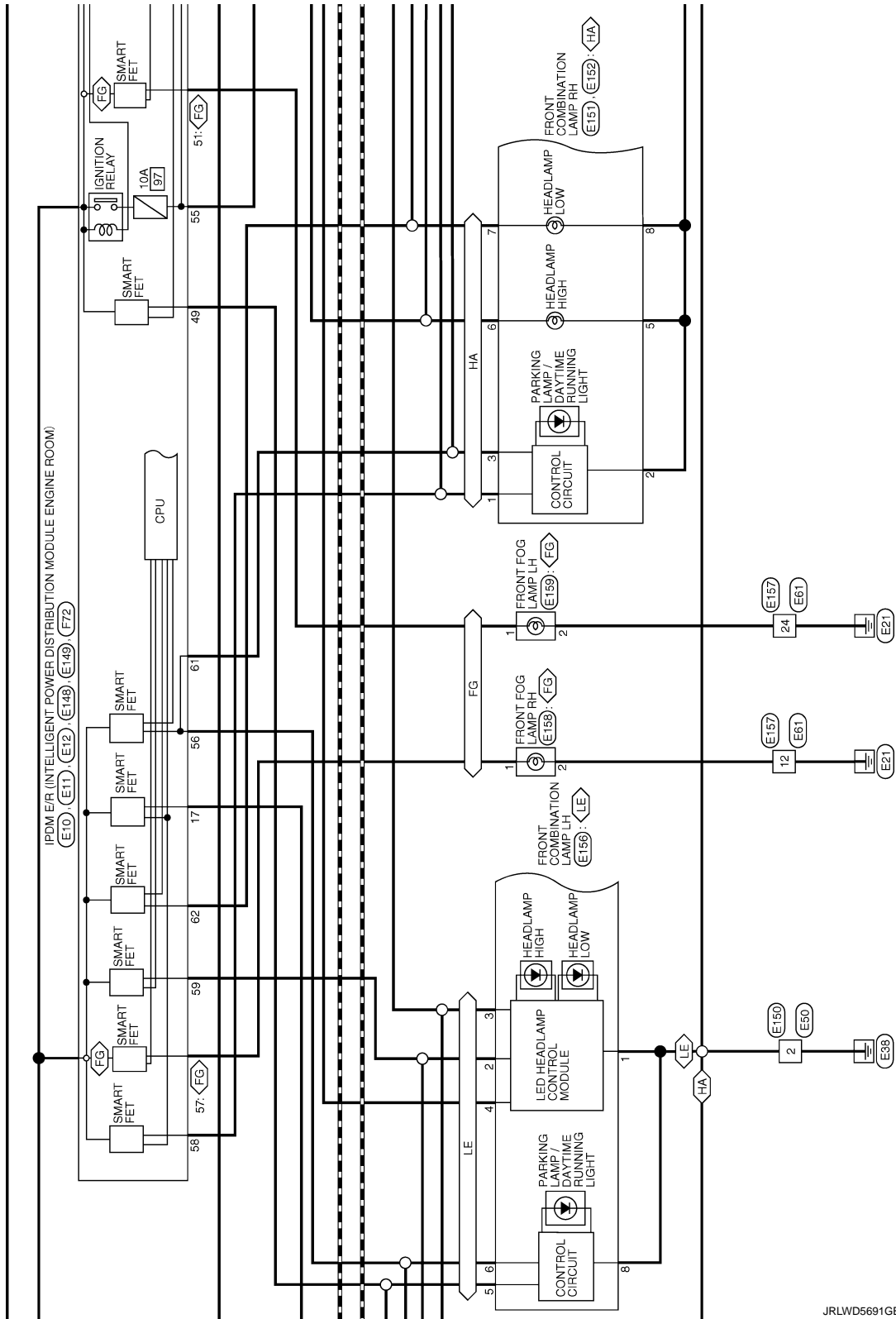


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## EXTERIOR LIGHTING SYSTEM

## < WIRING DIAGRAM >

## [HALOGEN HEADLAMP]



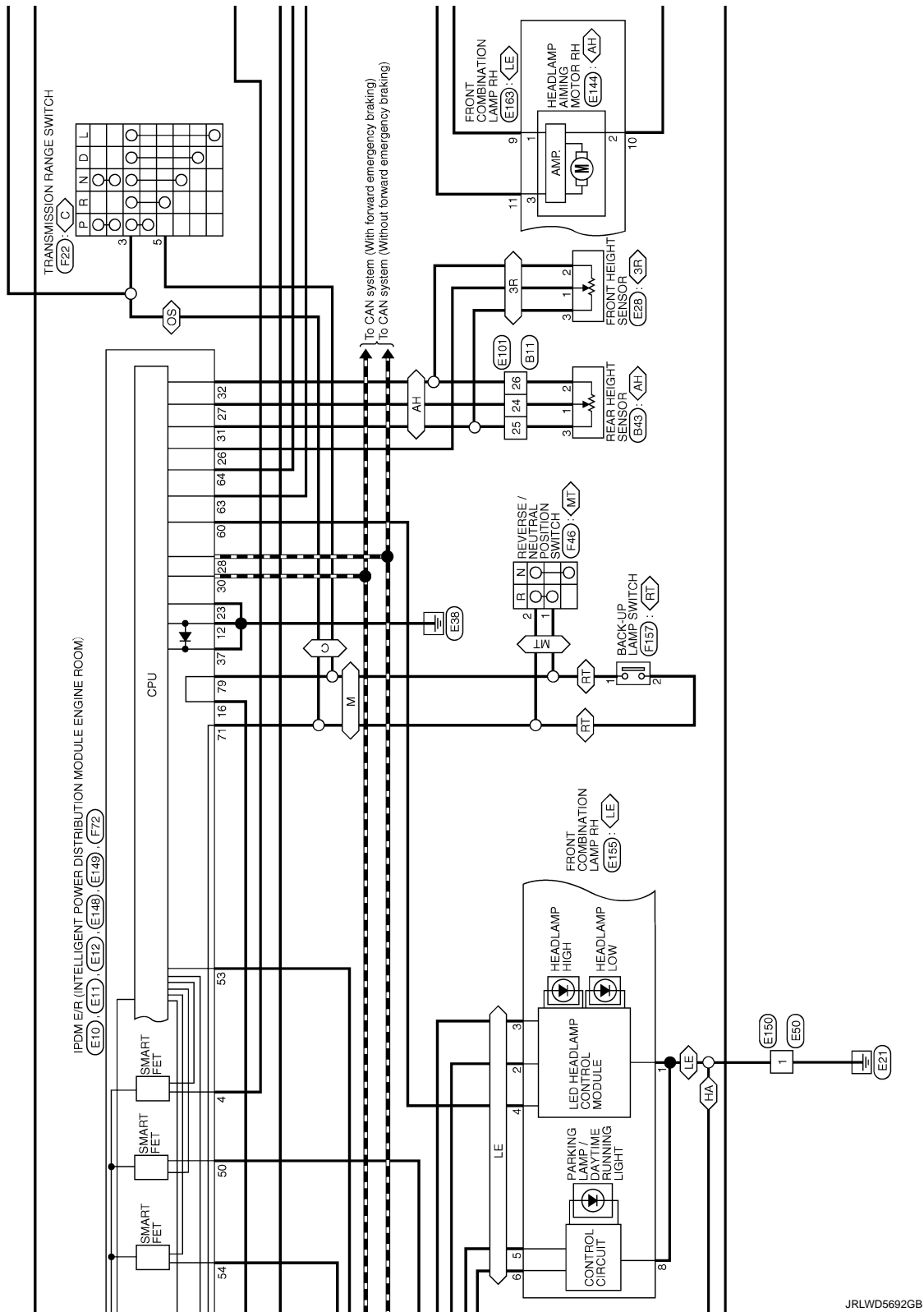
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## EXTERIOR LIGHTING SYSTEM

## < WIRING DIAGRAM >

### [HALOGEN HEADLAMP]

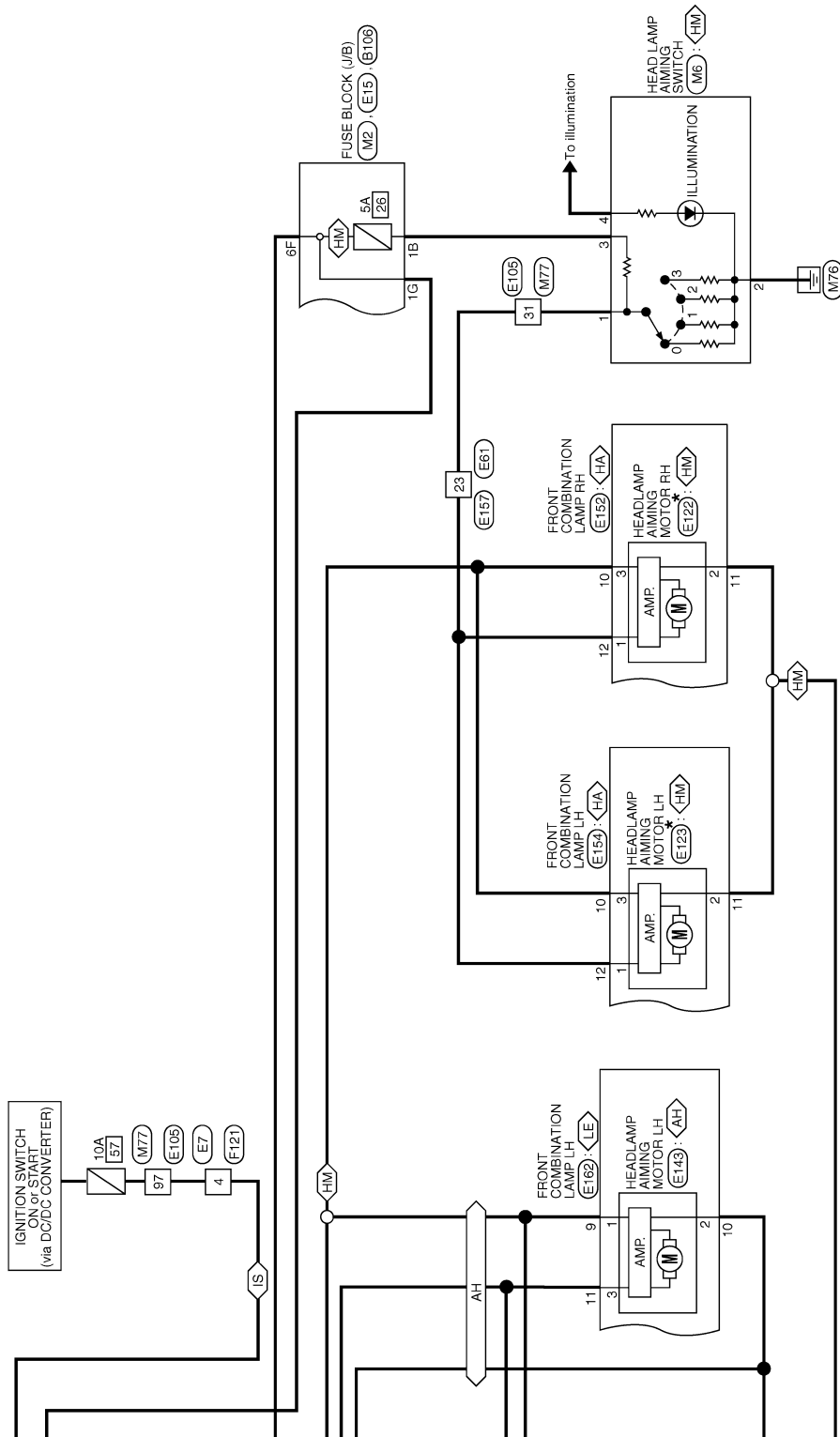


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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]



\*: This connector is not shown in "Harness Layout".

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |              |
|----------------|--------------|
| Connector No.  | B8           |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | G             | -                           |
| 3            | P             | -                           |
| 4            | L             | -                           |
| 5            | SB            | -                           |
| 6            | R             | -                           |
| 7            | LA/R          | -                           |
| 8            | LA/G          | -                           |
| 9            | LA/B          | -                           |
| 10           | LA/W          | -                           |
| 11           | LA/Y          | -                           |
| 12           | LA/P          | -                           |
| 13           | LA/R          | -                           |
| 14           | LA/G          | -                           |
| 15           | LA/B          | -                           |
| 16           | LA/W          | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | B9           |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH04FW-NH    |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 4            | W             | -                           |
| 5            | R             | -                           |
| 6            | B             | -                           |
| 7            | W             | -                           |
| 8            | SHIELD        | -                           |

|    |      |   |
|----|------|---|
| 13 | W    | - |
| 14 | V    | - |
| 15 | BR   | - |
| 16 | SB   | - |
| 17 | LA/R | - |
| 18 | LA/B | - |
| 19 | LA/G | - |
| 20 | LA/W | - |
| 21 | LA/Y | - |
| 22 | LA/P | - |
| 23 | LA/R | - |
| 24 | R    | - |
| 29 | Y    | - |
| 30 | G    | - |
| 31 | GR   | - |
| 32 | LG   | - |

|                |              |
|----------------|--------------|
| Connector No.  | B11          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH04FW-NH    |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | G             | -                           |
| 2            | LA/R          | -                           |
| 5            | BG            | -                           |
| 11           | BR            | -                           |
| 12           | W             | -                           |
| 13           | P             | -                           |
| 14           | SB            | -                           |
| 15           | V             | -                           |
| 16           | P             | -                           |
| 17           | P             | -                           |
| 18           | G             | -                           |
| 19           | P             | -                           |
| 20           | R             | -                           |
| 21           | BR            | -                           |
| 22           | Y             | -                           |
| 23           | BG            | -                           |
| 24           | SB            | -                           |

|    |    |   |
|----|----|---|
| 25 | G  | - |
| 26 | B  | - |
| 27 | P  | - |
| 28 | R  | - |
| 29 | LG | - |
| 30 | P  | - |
| 92 | BR | - |
| 93 | GR | - |
| 94 | Y  | - |
| 95 | LG | - |
| 97 | LG | - |

|                |              |
|----------------|--------------|
| Connector No.  | B20          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 8            | LA/G          | -                           |
| 9            | LA/R          | -                           |
| 10           | LA/V          | -                           |
| 12           | L             | -                           |
| 13           | SB            | -                           |
| 14           | R             | -                           |
| 15           | G             | -                           |
| 16           | W             | -                           |

|                |                                    |
|----------------|------------------------------------|
| Connector No.  | B27                                |
| Connector Name | FRONT DOOR SWITCH (PASSENGER SIDE) |
| Connector Type | TH04FW-NH                          |



|   |   |   |
|---|---|---|
| 1 | 2 | 3 |
|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | GR            | - [For LHD models]          |
| 3            | SB            | - [For RHD models]          |

|                |                                 |
|----------------|---------------------------------|
| Connector No.  | B34                             |
| Connector Name | FRONT DOOR SWITCH (DRIVER SIDE) |
| Connector Type | TH04FW-NH                       |



|   |   |   |
|---|---|---|
| 1 | 2 | 3 |
|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | SB            | -                           |

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

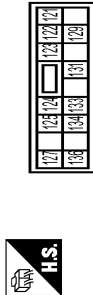
## EXTERIOR LIGHTING SYSTEM

|                |                    |
|----------------|--------------------|
| Connector No.  | B43                |
| Connector Name | REAR HEIGHT SENSOR |
| Connector Type | RHD3FB             |



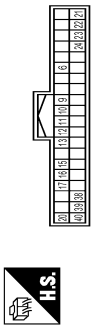
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | SB            | -                           |
| 2            | B             | -                           |
| 3            | G             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | B46                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | NS16GY-CS                 |



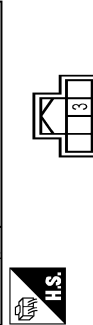
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 121          | LAV           | BACK DOOR OPENER CONT       |
| 122          | Y             | REAR FOG LAMP OUTPUT        |
| 123          | LAV           | REAR WIPER OUTPUT           |
| 124          | W             | REAR DOOR UNLOCK OUTPUT     |
| 125          | L             | REAR DOOR LOCK OUTPUT       |
| 127          | R             | LUGGAGE ROOM LAMP CONT      |
| 129          | LAV           | STOP LAMP LH OUT            |
| 131          | R             | REAR DOOR SUPERLOCK OUTPUT  |
| 133          | GR            | TURN SIG LH (REAR)          |
| 134          | LAV           | STOP LAMP RH OUT            |
| 136          | P             | TURN SIG RH (REAR)          |

|                |                           |
|----------------|---------------------------|
| Connector No.  | B47                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FG-NH                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 6            | R             | BACK DOOR OPENER REQUEST SW |
| 9            | G             | HANDS FREE SENSOR           |
| 10           | W             | REAR RH DOOR SW             |
| 11           | L             | BACK DOOR SW                |
| 12           | R             | REAR LH DOOR SW             |
| 13           | SB            | PASSENGER DOOR SW           |
| 15           | LAV           | REAR WIPER AUTO STOP        |
| 16           | Y             | BACK DOOR OPENER SW         |
| 17           | SB            | DRIVER DOOR SW              |
| 20           | L             | CANH                        |
| 21           | BR            | BUMPER ANTENNA(-)           |
| 22           | Y             | REAR ANTENNA(-)             |
| 23           | L             | REAR ANTENNA(+)             |
| 24           | G             | BUMPER ANTENNA(+)           |
| 38           | V             | SIREN                       |
| 39           | LAV           | HIGH-MOUNTED STOP LAMP      |
| 40           | P             | CANH                        |

|                |                     |
|----------------|---------------------|
| Connector No.  | B53                 |
| Connector Name | REAR DOOR SWITCH RH |
| Connector Type | TH44FW-NH           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | W             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | B54                   |
| Connector Name | OPTION CONNECTOR (13) |
| Connector Type | NS02MBR-CS            |



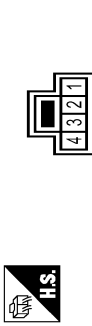
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | R             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | B55                   |
| Connector Name | OPTION CONNECTOR (14) |
| Connector Type | NS02FBR-CS            |



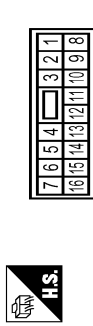
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | Y             | -                           |
| 2            | SB            | -                           |

|                |                                      |
|----------------|--------------------------------------|
| Connector No.  | B59                                  |
| Connector Name | REAR COMBINATION LAMP RH (BODY SIDE) |
| Connector Type | NS04MW-CS                            |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAVR          | -                           |
| 2            | LAV           | -                           |
| 3            | LAV           | -                           |
| 4            | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | B60          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAVG          | -                           |
| 2            | LA/GR         | -                           |
| 3            | P             | -                           |
| 6            | L             | -                           |
| 7            | L             | -                           |
| 8            | GR            | - [For LHD models]          |
| 9            | SB            | - [For RHD models]          |
| 10           | LAV           | -                           |
| 11           | LAVR          | -                           |
| 12           | W             | -                           |
| 13           | LAV           | -                           |
| 14           | R             | -                           |
| 15           | P             | -                           |
| 16           | P             | -                           |

JRLWLD5695GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                     |
|----------------|---------------------|
| Connector No.  | B71                 |
| Connector Name | REAR DOOR SWITCH LH |
| Connector Type | TH04FW-NH           |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 3 |
| Color                       | R |
| Wire                        | - |
| Signal Name [Specification] | - |

|                |              |
|----------------|--------------|
| Connector No.  | B79          |
| Connector Name | WIRE TO WIRE |
| Connector Type | M02MW-LC     |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 1 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                |                                    |
|----------------|------------------------------------|
| Connector No.  | B80                                |
| Connector Name | REAR COMBINATION LAMP (RIGHT SIDE) |
| Connector Type | NS04MW-GS                          |



|                             |      |
|-----------------------------|------|
| Terminal No.                | 1    |
| Color                       | LA/R |
| Wire                        | -    |
| Signal Name [Specification] | -    |

|                             |      |
|-----------------------------|------|
| Terminal No.                | 2    |
| Color                       | LA/Y |
| Wire                        | -    |
| Signal Name [Specification] | -    |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 3  |
| Color                       | GR |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |      |
|-----------------------------|------|
| Terminal No.                | 1G   |
| Color                       | LA/R |
| Wire                        | -    |
| Signal Name [Specification] | -    |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 2G |
| Color                       | P  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 3G |
| Color                       | G  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 4G |
| Color                       | P  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 5G |
| Color                       | G  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |      |
|-----------------------------|------|
| Terminal No.                | 1G   |
| Color                       | LA/R |
| Wire                        | -    |
| Signal Name [Specification] | -    |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 2G |
| Color                       | P  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 3G |
| Color                       | G  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |    |
|-----------------------------|----|
| Terminal No.                | 4G |
| Color                       | P  |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                |              |
|----------------|--------------|
| Connector No.  | B135         |
| Connector Name | WIRE TO WIRE |
| Connector Type | RH08MB       |



|                             |    |
|-----------------------------|----|
| Terminal No.                | 4  |
| Color                       | SB |
| Wire                        | -  |
| Signal Name [Specification] | -  |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color                       | Y |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color                       | Y |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                |              |
|----------------|--------------|
| Connector No.  | B154         |
| Connector Name | WIRE TO WIRE |
| Connector Type | RH08FB       |



|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color                       | Y |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color                       | Y |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 4 |
| Color                       | Y |
| Wire                        | - |
| Signal Name [Specification] | - |

|                             |   |
|-----------------------------|---|
| Terminal No.                | 8 |
| Color                       | B |
| Wire                        | - |
| Signal Name [Specification] | - |

JRLWD5696GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |               |
|----------------|---------------|
| Connector No.  | B156          |
| Connector Name | REAR FOG LAMP |
| Connector Type | RS02FGY       |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | Y             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D1           |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | Y             | -                           |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAV           | -                           |
| 2            | LAVB          | -                           |
| 3            | W             | -                           |
| 4            | V             | -                           |
| 5            | SB            | -                           |
| 6            | LG            | -                           |
| 7            | GR            | -                           |
| 8            | G             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | R             | -                           |
| 13           | LAW           | -                           |
| 14           | LAW           | -                           |
| 15           | LAVG          | -                           |
| 16           | LAV           | -                           |
| 17           | LAVL          | -                           |
| 18           | LAVB          | -                           |
| 19           | LAVR          | -                           |

|    |     |
|----|-----|
| 22 | LAG |
| 23 | L   |
| 24 | BG  |

|                |              |
|----------------|--------------|
| Connector No.  | D2           |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | Y             | -                           |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LAV           | -                           |
| 2            | R             | -                           |
| 3            | LAG           | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | LAVL          | -                           |
| 7            | LAVBR         | -                           |
| 8            | SB            | -                           |
| 9            | LAVGR         | -                           |
| 10           | LAVSB         | -                           |
| 11           | P             | -                           |
| 12           | LG            | -                           |
| 13           | LAVY          | -                           |
| 14           | LAW           | -                           |
| 15           | LAVR          | -                           |
| 16           | B             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | D3                        |
| Connector Name | DOOR MIRROR (DRIVER SIDE) |
| Connector Type | TH16MW-NH                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | Y             | -                           |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LG            | -                           |
| 3            | LAP           | -                           |
| 4            | LAVB          | -                           |
| 5            | LAW           | -                           |
| 7            | GR            | -                           |
| 8            | G             | -                           |
| 10           | B             | -                           |
| 11           | LAVSB         | -                           |
| 12           | LAVGR         | -                           |
| 14           | LAVB          | -                           |
| 15           | B             | -                           |
| 16           | Y             | -                           |

|                |   |
|----------------|---|
| Connector No.  | D11   |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY PASSENGER SIDE |
| Connector Type | RH4FB   |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | SB            | -                           |
| 3            | P             | -                           |
| 4            | B             | -                           |

|                |  |
|----------------|--|
| Connector No.  | D15  |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY DRIVER SIDE |
| Connector Type | RH4FB  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | SB            | -                           |
| 3            | W             | -                           |
| 4            | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D21          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | Y             | -                           |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 3            | B             | -                           |
| 4            | W             | -                           |
| 5            | V             | -                           |
| 6            | SB            | -                           |
| 7            | L             | -                           |
| 8            | G             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | G             | -                           |
| 13           | LAW           | -                           |
| 14           | LAVG          | -                           |
| 15           | LAVGR         | -                           |
| 16           | LAP           | -                           |
| 17           | LAVSB         | -                           |
| 18           | LAVR          | -                           |

JRLWD5697GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

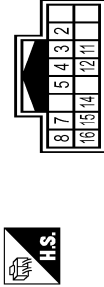
|    |      |   |
|----|------|---|
| 19 | LA5B | - |
| 20 | GR   | - |
| 21 | LAG  | - |
| 22 | R    | - |
| 23 | BG   | - |
| 24 | L    | - |

|                |              |
|----------------|--------------|
| Connector No.  | D22          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | LA5B          | -                           |
| 2            | Y             | -                           |
| 3            | G             | -                           |
| 4            | V             | -                           |
| 5            | LG            | -                           |
| 6            | G             | -                           |
| 7            | SB            | -                           |
| 8            | LA5B          | -                           |
| 9            | LA5R          | -                           |
| 10           | LAV           | -                           |
| 11           | LAL           | -                           |
| 12           | LAG           | -                           |
| 13           | LAR           | -                           |
| 14           | LAG           | -                           |
| 15           | LAR           | -                           |
| 16           | B             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | D23                       |
| Connector Name | DOOR MIRROR (DRIVER SIDE) |
| Connector Type | TH16MW-NH                 |



|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | GR            | -                           |
| 2            | LAL           | -                           |
| 3            | LAL           | -                           |
| 4            | LAR           | -                           |
| 5            | LAV           | -                           |
| 6            | L             | -                           |
| 7            | G             | -                           |
| 8            | LAG           | -                           |
| 9            | LAV           | -                           |
| 10           | LAV           | -                           |
| 11           | B             | -                           |
| 12           | Y             | -                           |
| 13           | B             | -                           |
| 14           | Y             | -                           |
| 15           | B             | -                           |
| 16           | Y             | -                           |

|                |  |
|----------------|--|
| Connector No.  | D33  |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY (DRIVER SIDE) |
| Connector Type | RH4MF  |



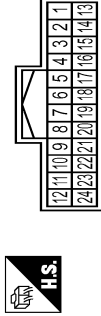
|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | V             | -                           |
| 2            | SB            | -                           |
| 3            | W             | -                           |
| 4            | B             | -                           |

|                |   |
|----------------|---|
| Connector No.  | D34   |
| Connector Name | FRONT DOOR OUTSIDE HANDLE ASSEMBLY (PASSENGER SIDE) |
| Connector Type | RH4MF   |



|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | R             | -                           |
| 2            | SB            | -                           |
| 3            | P             | -                           |
| 4            | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D41          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | B             | -                           |
| 2            | B             | -                           |
| 3            | P             | -                           |
| 4            | R             | -                           |
| 5            | SB            | -                           |
| 6            | L             | -                           |
| 7            | V             | -                           |
| 8            | Y             | -                           |
| 9            | B             | -                           |
| 10           | G             | -                           |
| 11           | LAV           | -                           |
| 12           | LAV           | -                           |
| 13           | LAV           | -                           |
| 14           | LAV           | -                           |
| 15           | LAV           | -                           |
| 16           | LAV           | -                           |
| 17           | LAV           | -                           |
| 18           | GR            | -                           |

|    |     |   |
|----|-----|---|
| 21 | LAG | - |
|----|-----|---|

|                |              |
|----------------|--------------|
| Connector No.  | D42          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 1            | LAG           | -                           |
| 2            | B             | -                           |
| 3            | LAG           | -                           |
| 4            | LAV           | -                           |
| 5            | LAV           | -                           |
| 6            | LAV           | -                           |
| 7            | LAV           | -                           |
| 8            | LAV           | -                           |
| 9            | LAV           | -                           |
| 10           | LAV           | -                           |
| 11           | LAV           | -                           |
| 12           | LAV           | -                           |
| 13           | LAV           | -                           |
| 14           | LAG           | -                           |

|                |                              |
|----------------|------------------------------|
| Connector No.  | D43                          |
| Connector Name | DOOR MIRROR (PASSENGER SIDE) |
| Connector Type | TH16MW-NH                    |



|              |               |                             |
|--------------|---------------|-----------------------------|
| Terminal No. | Color Of Wire | Signal Name [Specification] |
| 2            | GR            | -                           |
| 3            | LAL           | -                           |
| 4            | LAR           | -                           |
| 5            | LAV           | -                           |
| 6            | L             | -                           |
| 7            | V             | -                           |
| 8            | B             | -                           |
| 9            | LAG           | -                           |
| 10           | B             | -                           |
| 11           | LAG           | -                           |

JRLWD5698GB

# EXTERIOR LIGHTING SYSTEM

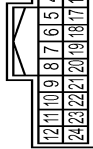
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

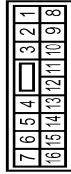
|    |     |   |
|----|-----|---|
| 12 | LAV | - |
| 14 | LAB | - |
| 15 | B   | - |
| 16 | Y   | - |

|                |              |
|----------------|--------------|
| Connector No.  | D61          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LAV           | -                           |
| 3            | P             | -                           |
| 4            | R             | -                           |
| 5            | SB            | -                           |
| 6            | LG            | -                           |
| 7            | L             | -                           |
| 8            | V             | -                           |
| 9            | Y             | -                           |
| 10           | B             | -                           |
| 11           | R             | -                           |
| 13           | B             | -                           |
| 14           | LAV           | -                           |
| 15           | LAG           | -                           |
| 16           | LAGR          | -                           |
| 17           | LAP           | -                           |
| 18           | LASE          | -                           |
| 19           | B             | -                           |
| 20           | LG            | -                           |
| 21           | BR            | -                           |
| 22           | LAG           | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D62          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | L             | -                           |
| 2            | V             | -                           |
| 3            | R             | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | LAL           | -                           |
| 7            | LABR          | -                           |
| 9            | LAY           | -                           |
| 10           | LABR          | -                           |
| 11           | LAL           | -                           |

|                |                              |
|----------------|------------------------------|
| Connector No.  | D98                          |
| Connector Name | DOOR MIRROR (PASSENGER SIDE) |
| Connector Type | TH16MM-NH                    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LG            | -                           |
| 3            | LAP           | -                           |
| 4            | LAG           | -                           |
| 5            | LAW           | -                           |
| 7            | L             | -                           |
| 8            | V             | -                           |
| 11           | LASE          | -                           |
| 12           | LAGR          | -                           |
| 14           | LAB           | -                           |
| 15           | B             | -                           |

|    |   |   |
|----|---|---|
| 16 | Y | - |
|----|---|---|

|                |                        |
|----------------|------------------------|
| Connector No.  | D154                   |
| Connector Name | HIGH-MOUNTED STOP LAMP |
| Connector Type | TK02AW                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |

|                |  |
|----------------|--|
| Connector No.  | D155                                     |
| Connector Name | REAR COMBINATION LAMP L (REAR DOOR SIDE) |
| Connector Type | NS03MW-CS                                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 3            | GR            | -                           |

|                |  |
|----------------|--|
| Connector No.  | D156                                     |
| Connector Name | REAR COMBINATION LAMP R (REAR DOOR SIDE) |
| Connector Type | NS03MW-CS                                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 3            | W             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D159         |
| Connector Name | WIRE TO WIRE |
| Connector Type | MO2FW-LC     |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |

JRLWD5699GB



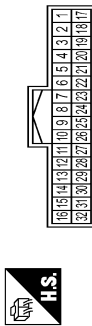
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |              |
|----------------|--------------|
| Connector No.  | D160         |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH32FW-NH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 4            | W             | -                           |
| 5            | W             | -                           |
| 6            | W             | -                           |
| 7            | W             | -                           |
| 8            | W             | -                           |
| 13           | W             | -                           |
| 14           | W             | -                           |
| 15           | W             | -                           |
| 16           | W             | -                           |
| 17           | W             | -                           |
| 18           | W             | -                           |
| 19           | W             | -                           |
| 20           | W             | -                           |
| 21           | W             | -                           |
| 22           | W             | -                           |
| 23           | W             | -                           |
| 24           | W             | -                           |
| 29           | W             | -                           |
| 30           | W             | -                           |
| 31           | W             | -                           |
| 32           | W             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | D161                  |
| Connector Name | LICENSE PLATE LAMP RH |
| Connector Type | TK02FBR               |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | R             | -                           |

|                |                       |
|----------------|-----------------------|
| Connector No.  | D162                  |
| Connector Name | LICENSE PLATE LAMP LH |
| Connector Type | TK02FBR               |

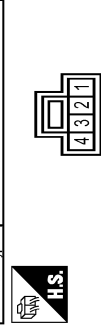
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | D164         |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 8            | W             | -                           |
| 9            | W             | -                           |
| 10           | W             | -                           |
| 12           | W             | -                           |
| 13           | W             | -                           |
| 14           | W             | -                           |
| 15           | W             | -                           |
| 16           | W             | -                           |

|                |                         |
|----------------|-------------------------|
| Connector No.  | D168                    |
| Connector Name | BACK DOOR LOCK ASSEMBLY |
| Connector Type | NS04FW-CS               |



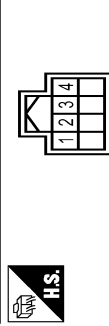
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | GR            | -                           |
| 3            | W             | -                           |
| 4            | GR            | -                           |

|                |                                  |
|----------------|----------------------------------|
| Connector No.  | D169                             |
| Connector Name | BACK DOOR OPENER SWITCH ASSEMBLY |
| Connector Type | TH04MW-NH                        |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | GR            | -                           |
| 3            | GR            | -                           |
| 4            | BR            | - [Without PBD]             |
| 4            | W             | - [With PBD]                |

|                |                   |
|----------------|-------------------|
| Connector No.  | D170              |
| Connector Name | HANDS FREE SENSOR |
| Connector Type | TH08FW-NH         |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 3            | W             | -                           |
| 4            | W             | -                           |

JRLWDS700GB

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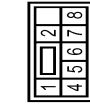
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                         |
|----------------|-------------------------|
| Connector No.  | D172                    |
| Connector Name | BACK DOOR LOCK ASSEMBLY |
| Connector Type | NS08FW-CS               |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | W             | -                           |
| 4            | W             | -                           |
| 5            | W             | -                           |
| 6            | W             | -                           |
| 7            | W             | -                           |
| 8            | B             | -                           |

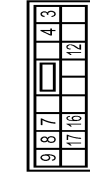
|                |              |
|----------------|--------------|
| Connector No.  | E7           |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MBR-CS   |



| Terminal No. | Color Of Wire | Signal Name [Specification]        |
|--------------|---------------|------------------------------------|
| 1            | BR            | - [With MR20 or QR25 engine]       |
| 1            | SB            | - [With R3M engine]                |
| 2            | BR            | - [With MR20 or QR25 engine]       |
| 2            | GR            | - [With R3M engine]                |
| 3            | G             | -                                  |
| 4            | R             | -                                  |
| 5            | B             | - [With MR20 engine]               |
| 5            | L             | - [With R3M engine]                |
| 6            | LG            | - [With QR25 engine]               |
| 6            | BG            | -                                  |
| 7            | G             | -                                  |
| 8            | V             | - [With MR20 engine or R3M engine] |
| 8            | W             | - [With QR25 engine]               |

|    |    |                              |
|----|----|------------------------------|
| 9  | BG | - [With R3M engine]          |
| 9  | BR | - [With MR20 engine]         |
| 10 | BR | -                            |
| 11 | Y  | -                            |
| 12 | L  | - [With R3M engine]          |
| 12 | LG | - [With QR25 engine]         |
| 13 | BR | - [With MR20 or QR25 engine] |
| 13 | R  | -                            |
| 15 | L  | -                            |
| 16 | SB | -                            |

|                |   |
|----------------|---|
| Connector No.  | E10   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS16FGY-CS  |



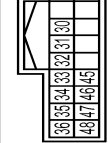
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | P             | -                           |
| 4            | Y             | -                           |
| 7            | L             | -                           |
| 8            | BG            | -                           |
| 9            | L             | -                           |
| 12           | B             | -                           |
| 16           | G             | -                           |
| 17           | W             | -                           |

|                |   |
|----------------|---|
| Connector No.  | E11   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | repart. 243405408R  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 19           | V             | -                           |
| 20           | R             | -                           |
| 21           | LG            | -                           |
| 22           | Y             | -                           |
| 23           | B             | -                           |
| 24           | W             | -                           |

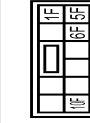
|                |   |
|----------------|---|
| Connector No.  | E12   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | TH24FGY-NH  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 25           | LG            | -                           |
| 26           | W             | -                           |
| 27           | SB            | -                           |
| 28           | P             | -                           |
| 30           | L             | -                           |
| 31           | G             | -                           |
| 32           | B             | -                           |
| 33           | BG            | -                           |
| 34           | LG            | -                           |
| 35           | V             | -                           |
| 36           | Y             | -                           |
| 37           | B             | -                           |
| 38           | GR            | -                           |
| 39           | BR            | -                           |

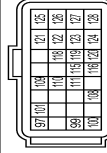
|    |   |   |
|----|---|---|
| 45 | L | - |
| 46 | P | - |
| 47 | W | - |
| 48 | R | - |

|                |                 |
|----------------|-----------------|
| Connector No.  | E15             |
| Connector Name | FUSE BLOCK (JB) |
| Connector Type | NS10FW-CS       |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 10P          | L             | -                           |
| 1F           | W             | -                           |
| 5F           | V             | -                           |
| 6F           | Y             | -                           |

|                |                 |
|----------------|-----------------|
| Connector No.  | E16             |
| Connector Name | ECM             |
| Connector Type | RH24FB-R2B-L-LH |



| Terminal No. | Color Of Wire | Signal Name [Specification]  |
|--------------|---------------|------------------------------|
| 97           | W             | BAROMETRIC PRESSURE SENSOR   |
| 99           | P             | CANL                         |
| 100          | L             | CANH                         |
| 101          | Y             | SENSOR POWER SUPPLY          |
| 108          | R             | CLUTCH PEDAL POSITION SWITCH |
| 109          | LG            | IGNITION SWITCH              |
| 110          | G             | ASCD STEERING SWITCH         |
| 111          | BR            | SENSOR GROUND                |
| 115          | V             | STOP LAMP SWITCH             |
| 116          | GR            | BRAKE PEDAL POSITION SWITCH  |

JRLWD5701GB

# EXTERIOR LIGHTING SYSTEM

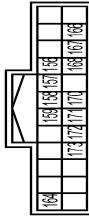
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|     |    |                                     |
|-----|----|-------------------------------------|
| 118 | SB | SENSOR POWER SUPPLY                 |
| 119 | Y  | ACCELERATOR PEDAL POSITION SENSOR 2 |
| 120 | LG | SENSOR GROUND                       |
| 121 | BR | POWER SUPPLY FOR ECM                |
| 122 | V  | SENSOR POWER SUPPLY                 |
| 123 | B  | ECM GROUND                          |
| 124 | R  | SENSOR GROUND                       |
| 125 | B  | ECM GROUND                          |
| 126 | GR | ACCELERATOR PEDAL POSITION SENSOR 1 |
| 127 | R  | SENSOR GROUND                       |
| 128 | B  | ECM GROUND                          |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E23                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | IT24FB-NH                 |



| Terminal No. | Wire | Signal Name [Specification]     |
|--------------|------|---------------------------------|
| 156          | V    | CLUTCH INTERLOCK SW             |
| 157          | LG   | STOP LAMP SW 2                  |
| 158          | W    | STOP LAMP SW 1                  |
| 159          | R    | ASCD CLUTCH SWITCH              |
| 164          | Y    | INTELLIGENT KEY WARNING BUZZER  |
| 166          | P    | STEERING LOCK UNIT POWER SUPPLY |
| 167          | BR   | TURN SIG LH (FRONT)             |
| 168          | GR   | TURN SIG RH (FRONT)             |
| 170          | L    | PTC RELAY-3 CONTROL             |
| 171          | G    | STARTER RELAY CONT              |
| 172          | V    | PTC RELAY-1 CONTROL             |
| 173          | BG   | PTC RELAY-2 CONTROL             |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E27                       |
| Connector Name | FRONT TURN SIGNAL LAMP LH |
| Connector Type | RS02FGY                   |



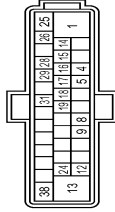
| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | BR   | -                           |
| 2            | B    | -                           |

|                |                     |
|----------------|---------------------|
| Connector No.  | E28                 |
| Connector Name | FRONT HEIGHT SENSOR |
| Connector Type | RH03FB              |



| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | W    | SIGNAL                      |
| 2            | B    | -                           |
| 3            | BR   | VDC                         |

|                |   |
|----------------|---|
| Connector No.  | E36   |
| Connector Name | ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) |
| Connector Type | BE24FB-BH/2-BJZ2-RH                           |



| Terminal No. | Wire   | Signal Name [Specification]      |
|--------------|--------|----------------------------------|
| 1            | Y      | MOTOR POWER SUPPLY               |
| 4            | SB     | FR RH WHEEL SENSOR SIGNAL        |
| 5            | SB     | FR LH WHEEL SENSOR SIGNAL        |
| 8            | P      | BRAKE VACUUM SENSOR POWER SUPPLY |
| 9            | P      | FR LH WHEEL SENSOR SIGNAL        |
| 12           | LG     | IM (gear) control SWITCH SIGNAL  |
| 13           | B      | BRAKE VACUUM SENSOR SIGNAL       |
| 14           | P      | GROUND (MOTOR)                   |
| 15           | BR     | CAN-L                            |
| 16           | R      | VDC OFF SWITCH SIGNAL            |
| 17           | Y      | FR RH WHEEL SENSOR POWER SUPPLY  |
| 18           | G      | RR RH WHEEL SENSOR SIGNAL        |
| 19           | W      | RR LH WHEEL SENSOR SIGNAL        |
| 24           | SHIELD | FR LH WHEEL SENSOR POWER SUPPLY  |
| 25           | BR     | BRAKE VACUUM SENSOR GROUND       |
| 26           | L      | VALVE POWER SUPPLY               |
| 28           | GR     | CAN-H                            |
| 29           | LG     | IGNITION POWER SUPPLY            |
| 31           | BR     | RR RH WHEEL SENSOR SIGNAL        |
| 38           | B      | RR LH WHEEL SENSOR POWER SUPPLY  |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E46                       |
| Connector Name | FRONT TURN SIGNAL LAMP RH |
| Connector Type | RS02FGY                   |



| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | GR   | -                           |
| 2            | B    | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | E50          |
| Connector Name | WIRE TO WIRE |
| Connector Type | M02MM-GY-LC  |



| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | GR   | -                           |
| 2            | B    | -                           |

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EXL

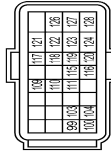
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                |
|----------------|----------------|
| Connector No.  | E60            |
| Connector Name | ECM            |
| Connector Type | RH24FB-R28-L/H |



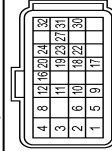
| Terminal No. | Color | Wire | Signal Name [Specification]         |
|--------------|-------|------|-------------------------------------|
| 99           | P     |      | CAN COMMUNICATION LINE (CANL)       |
| 100          | L     |      | CAN COMMUNICATION LINE (CANH)       |
| 103          | Y     |      | REFRIGERANT PRESSURE SENSOR         |
| 104          | R     |      | SENSOR POWER SUPPLY                 |
| 109          | LG    |      | IGNITION SWITCH                     |
| 110          | G     |      | ASCD STEERING SWITCH                |
| 111          | BR    |      | SENSOR GROUND                       |
| 115          | V     |      | STOP LAMP SWITCH                    |
| 116          | GR    |      | BRAKE PEDAL POSITION SWITCH         |
| 117          | W     |      | PNP SIGNAL                          |
| 118          | SB    |      | SENSOR POWER SUPPLY                 |
| 119          | Y     |      | ACCELERATOR PEDAL POSITION SENSOR 2 |
| 120          | LG    |      | SENSOR GROUND                       |
| 121          | BR    |      | POWER SUPPLY FOR ECM                |
| 122          | V     |      | SENSOR POWER SUPPLY                 |
| 123          | BR    |      | ECM GROUND                          |
| 124          | W     |      | SENSOR GROUND                       |
| 126          | GR    |      | ACCELERATOR PEDAL POSITION SENSOR 1 |
| 127          | R     |      | SENSOR GROUND                       |
| 128          | BR    |      | ECM GROUND                          |

|                |              |
|----------------|--------------|
| Connector No.  | E61          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24MV-AH    |



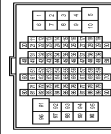
| Terminal No. | Color  | Wire | Signal Name [Specification] |
|--------------|--------|------|-----------------------------|
| 1            | V      |      |                             |
| 2            | L      |      |                             |
| 3            | P      |      |                             |
| 4            | W      |      |                             |
| 6            | P      |      |                             |
| 7            | G      |      |                             |
| 9            | P      |      |                             |
| 10           | BR     |      |                             |
| 12           | GR     |      |                             |
| 13           | SHIELD |      |                             |
| 14           | LG     |      |                             |
| 15           | P      |      |                             |
| 16           | V      |      |                             |
| 17           | SB     |      |                             |
| 18           | P      |      |                             |
| 19           | LG     |      |                             |
| 22           | R      |      |                             |
| 23           | Y      |      |                             |
| 24           | GR     |      |                             |

|                |                 |
|----------------|-----------------|
| Connector No.  | E79             |
| Connector Name | ECM             |
| Connector Type | RH24FB-R28-R/RH |



| Terminal No. | Color | Wire | Signal Name [Specification]                             |
|--------------|-------|------|---|
| 1            | B     |      | ECM GROUND  |
| 2            | W     |      | ACCELERATOR PEDAL POSITION SENSOR 1                     |
| 3            | Y     |      | SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 1       |
| 4            | B     |      | ECM GROUND  |
| 5            | L     |      | POWER SUPPLY FOR ECM                                    |
| 6            | G     |      | SENSOR POWER SUPPLY ACCELERATOR PEDAL POSITION SENSOR 1 |
| 8            | B     |      | ECM GROUND  |
| 9            | L     |      | FUEL HEATER AND WATER IN FUEL LEVEL SENSOR              |
| 10           | L     |      | SENSOR POWER SUPPLY ACCELERATOR PEDAL POSITION SENSOR 2 |
| 11           | V     |      | ACCELERATOR PEDAL POSITION SENSOR 2                     |
| 12           | P     |      | SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 2       |
| 16           | BG    |      | STOP LAMP SWITCH (With M/T)                             |
| 17           | R     |      | BRAKE PEDAL POSITION SWITCH (With CVT)                  |
| 18           | LG    |      | IGNITION SWITCH   |
| 19           | G     |      | ASCD STEERING SWITCH                                    |
| 20           | BR    |      | SENSOR GROUND ASCD STEERING SWITCH                      |
| 22           | G     |      | FUEL PUMP CONTROL INJECTOR (COMMON)                     |
| 23           | V     |      | FUEL PUMP CONTROL INJECTOR (COMMON)                     |
| 24           | R     |      | SPEED LIMITER MAIN SWITCH                               |
| 27           | V     |      | CLUTCH PEDAL POSITION SWITCH                            |
| 30           | BR    |      | ASCD MAIN SWITCH  |
| 31           | P     |      | CANL  |
| 32           | L     |      | CANH  |

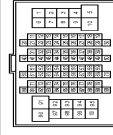
|                |                   |
|----------------|-------------------|
| Connector No.  | E101              |
| Connector Name | WIRE TO WIRE      |
| Connector Type | TH80FDGY-CT16-TM4 |



| Terminal No. | Color | Wire | Signal Name [Specification] |
|--------------|-------|------|-----------------------------|
| 1            | G     |      |                             |
| 2            | W     |      |                             |
| 5            | G     |      |                             |
| 11           | BR    |      |                             |
| 12           | W     |      |                             |
| 13           | P     |      |                             |
| 14           | SB    |      |                             |
| 15           | V     |      |                             |

|    |    |  |  |
|----|----|--|--|
| 16 | P  |  |  |
| 17 | P  |  |  |
| 19 | G  |  |  |
| 20 | P  |  |  |
| 21 | G  |  |  |
| 21 | BR |  |  |
| 22 | LG |  |  |
| 23 | Y  |  |  |
| 24 | SB |  |  |
| 25 | G  |  |  |
| 26 | B  |  |  |
| 27 | P  |  |  |
| 28 | R  |  |  |
| 29 | LG |  |  |
| 30 | P  |  |  |
| 92 | BR |  |  |
| 93 | GR |  |  |
| 94 | R  |  |  |
| 95 | L  |  |  |
| 97 | LG |  |  |

|                |                 |
|----------------|-----------------|
| Connector No.  | E105            |
| Connector Name | WIRE TO WIRE    |
| Connector Type | TH80FW-CT16-TM4 |



| Terminal No. | Color  | Wire | Signal Name [Specification] |
|--------------|--------|------|-----------------------------|
| 2            | W      |      |                             |
| 5            | V      |      |                             |
| 5            | W      |      |                             |
| 8            | L      |      |                             |
| 9            | LG     |      |                             |
| 10           | W      |      |                             |
| 20           | W      |      |                             |
| 21           | B      |      |                             |
| 22           | SHIELD |      |                             |
| 31           | Y      |      |                             |
| 32           | W      |      |                             |
| 33           | SB     |      |                             |
| 34           | LG     |      |                             |
| 35           | BG     |      |                             |

## EXTERIOR LIGHTING SYSTEM



&lt; WIRING DIAGRAM &gt;

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM



|    |        |   |
|----|--------|---|
| 36 | LG     | - |
| 37 | V      | - |
| 38 | G      | - |
| 39 | BR     | - |
| 40 | L      | - |
| 41 | P      | - |
| 47 | GR     | - |
| 48 | SB     | - |
| 51 | P      | - |
| 52 | L      | - |
| 53 | W      | - |
| 54 | Y      | - |
| 55 | BR     | - |
| 56 | P      | - |
| 57 | B      | - |
| 58 | L      | - |
| 59 | W      | - |
| 60 | G      | - |
| 61 | BR     | - |
| 62 | V      | - |
| 63 | BR     | - |
| 64 | GR     | - |
| 65 | LG     | - |
| 66 | BG     | - |
| 67 | L      | - |
| 68 | R      | - |
| 71 | V      | - |
| 72 | L      | - |
| 73 | R      | - |
| 76 | L      | - |
| 77 | V      | - |
| 78 | LG     | - |
| 79 | SHIELD | - |
| 80 | GR     | - |
| 82 | Y      | - |
| 83 | SB     | - |
| 84 | L      | - |
| 85 | G      | - |
| 86 | Y      | - |
| 87 | B      | - |
| 88 | B      | - |
| 91 | R      | - |
| 92 | BR     | - |
| 93 | W      | - |
| 96 | GR     | - |
| 97 | R      | - |
| 98 | V      | - |
| 99 | Y      | - |

|                |                  |
|----------------|------------------|
| Connector No.  | E115             |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC         |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | LG            | -                           |
| 3            | L             | -                           |
| 4            | W             | -                           |

|                |                  |
|----------------|------------------|
| Connector No.  | E120             |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC         |





| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | LG            | -                           |
| 3            | Y             | -                           |
| 4            | W             | -                           |

|                |                  |
|----------------|------------------|
| Connector No.  | E121             |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC         |





| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | LG            | -                           |
| 3            | Y             | -                           |
| 4            | W             | -                           |

|                |                          |
|----------------|--------------------------|
| Connector No.  | E122                     |
| Connector Name | HEADLAMP AIMING MOTOR RH |
| Connector Type | HS03FGY                  |





| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | -             | -                           |
| 2            | -             | -                           |
| 3            | -             | -                           |

|                |                          |
|----------------|--------------------------|
| Connector No.  | E123                     |
| Connector Name | HEADLAMP AIMING MOTOR LH |
| Connector Type | HS03FGY                  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | -             | -                           |
| 2            | -             | -                           |
| 3            | -             | -                           |

|                |                          |
|----------------|--------------------------|
| Connector No.  | E143                     |
| Connector Name | HEADLAMP AIMING MOTOR LH |
| Connector Type | HS03FGY                  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | -             | -                           |
| 2            | -             | -                           |
| 3            | -             | -                           |

JRLW05704GB

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

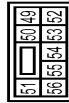
## EXTERIOR LIGHTING SYSTEM

|                |                          |
|----------------|--------------------------|
| Connector No.  | E144                     |
| Connector Name | HEADLAMP AIMING MOTOR RH |
| Connector Type | HS03FGY                  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | -             | -                           |
| 2            | -             | -                           |
| 3            | -             | -                           |

|                |   |
|----------------|---|
| Connector No.  | E148  |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS08FBR-CS  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 49           | R             | -                           |
| 50           | L             | -                           |
| 51           | V             | -                           |
| 52           | W             | -                           |
| 53           | GR            | -                           |
| 54           | LG            | -                           |
| 55           | SB            | -                           |
| 56           | BG            | -                           |

|                |   |
|----------------|---|
| Connector No.  | E149  |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS08FW-CS   |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 57           | W             | -                           |
| 58           | R             | -                           |
| 59           | G             | -                           |
| 60           | Y             | -                           |
| 61           | GR            | -                           |
| 62           | SB            | -                           |
| 63           | B             | -                           |
| 64           | V             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | E150         |
| Connector Name | WIRE TO WIRE |
| Connector Type | M02FW-GY-LC  |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | B             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E151                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FGY-PR                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | GR            | -                           |
| 3            | GR            | -                           |
| 4            | B             | -                           |
| 6            | LG            | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E152                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FB-PR                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 7            | SB            | -                           |
| 8            | B             | -                           |
| 10           | SB            | -                           |
| 11           | B             | -                           |
| 12           | W             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E153                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FGY-PR                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | R             | -                           |
| 2            | GR            | -                           |
| 3            | BG            | -                           |
| 4            | B             | -                           |
| 6            | G             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E154                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FB-PR                 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 7            | L             | -                           |
| 8            | B             | -                           |
| 10           | L             | -                           |
| 11           | B             | -                           |
| 12           | P             | -                           |

JRLWD5705GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                           |
|----------------|---------------------------|
| Connector No.  | E155                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS08FB-PR                 |



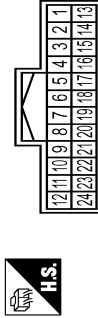
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | H L Lo-BEAM GND             |
| 2            | LG            | Lo-BEAM +B                  |
| 3            | SB            | Lo-BEAM +B                  |
| 4            | Y             | ECU OUTPUT                  |
| 5            | R             | DRL+                        |
| 6            | GR            | CLL+                        |
| 8            | B             | DRL CLL FSLM GND            |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E156                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS08FB-PR                 |



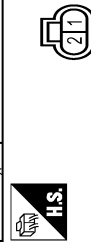
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | H L Lo-BEAM GND             |
| 2            | G             | H-BEAM +B                   |
| 3            | L             | Lo-BEAM +B                  |
| 4            | GR            | ECU OUTPUT                  |
| 5            | R             | DRL+                        |
| 6            | BG            | CLL+                        |
| 8            | B             | DRL CLL FSLM GND            |

|                |              |
|----------------|--------------|
| Connector No.  | E157         |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-AH    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | L             | -                           |
| 3            | P             | -                           |
| 4            | W             | -                           |
| 5            | P             | -                           |
| 6            | G             | -                           |
| 7            | G             | -                           |
| 8            | P             | -                           |
| 9            | P             | -                           |
| 10           | BR            | -                           |
| 11           | GR            | -                           |
| 12           | GR            | -                           |
| 13           | SHIELD        | -                           |
| 14           | LG            | -                           |
| 15           | P             | -                           |
| 16           | V             | -                           |
| 17           | SB            | -                           |
| 18           | P             | -                           |
| 19           | LG            | -                           |
| 20           | R             | -                           |
| 21           | V             | -                           |
| 22           | V             | -                           |
| 23           | GR            | -                           |
| 24           | GR            | -                           |

|                |                   |
|----------------|-------------------|
| Connector No.  | E158              |
| Connector Name | FRONT FOG LAMP RH |
| Connector Type | FH202FB           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | W             | -                           |
| 2            | GR            | -                           |

|                |                   |
|----------------|-------------------|
| Connector No.  | E159              |
| Connector Name | FRONT FOG LAMP LH |
| Connector Type | FH202FB           |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | GR            | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E162                      |
| Connector Name | FRONT COMBINATION LAMP LH |
| Connector Type | RS03FB                    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 9            | L             | -                           |
| 10           | B             | -                           |
| 11           | V             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | E163                      |
| Connector Name | FRONT COMBINATION LAMP RH |
| Connector Type | RS03FB                    |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 9            | SB            | -                           |
| 10           | B             | -                           |
| 11           | V             | -                           |

|                |                           |
|----------------|---------------------------|
| Connector No.  | F22                       |
| Connector Name | TRANSMISSION RANGE SWITCH |
| Connector Type | YD06FB-HS4                |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | BG            | -                           |
| 2            | GR            | -                           |
| 3            | W             | -                           |
| 4            | V             | -                           |
| 5            | G             | -                           |
| 6            | BR            | -                           |
| 7            | Y             | -                           |
| 8            | GR            | -                           |

JRLWD5706GB

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EXL

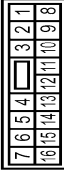
# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |                                   |
|----------------|-----------------------------------|
| Connector No.  | F46                               |
| Connector Name | REVERSE / NEUTRAL POSITION SWITCH |
| Connector Type | FEA03FG-LC                        |



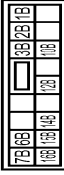
|                |              |
|----------------|--------------|
| Connector No.  | F121         |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FBR-CS   |



|                |                     |
|----------------|---------------------|
| Connector No.  | F157                |
| Connector Name | BACK-UP LAMP SWITCH |
| Connector Type | RK02FB              |



|                |                  |
|----------------|------------------|
| Connector No.  | M2               |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FBR-CS       |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | G             | -                           |
| 2            | W             | -                           |
| 3            | SB            | -                           |

|                |   |
|----------------|---|
| Connector No.  | F72   |
| Connector Name | POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM) |
| Connector Type | NS16FW-CS   |

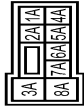


| Terminal No. | Color Of Wire | Signal Name [Specification]  |
|--------------|---------------|------------------------------|
| 65           | P             | -                            |
| 66           | L             | - [With R&M Engine]          |
| 67           | R             | - [With R&M Engine]          |
| 70           | BG            | - [With CVT]                 |
| 70           | GR            | - [With MT]                  |
| 71           | SB            | -                            |
| 72           | GR            | -                            |
| 73           | R             | - [With R&M Engine]          |
| 73           | Y             | - [With MR20 or QR25 Engine] |
| 75           | BR            | - [With MR20 or QR25 Engine] |
| 76           | L             | - [With R&M Engine]          |
| 76           | P             | -                            |
| 78           | L             | - [With QR25 engine]         |
| 78           | R             | - [With R&M Engine]          |
| 79           | G             | -                            |

| Terminal No. | Color Of Wire | Signal Name [Specification]        |
|--------------|---------------|------------------------------------|
| 1            | P             | - [With MR20 or QR25 engine]       |
| 1            | B             | - [With R&M engine]                |
| 2            | BR            | - [With QR25 engine]               |
| 2            | GR            | - [With MR20 engine]               |
| 2            | Y             | - [With R&M engine]                |
| 3            | G             | -                                  |
| 4            | BG            | -                                  |
| 5            | B             | - [With MR20 engine]               |
| 5            | L             | - [With R&M engine]                |
| 5            | LG            | - [With QR25 engine]               |
| 6            | V             | -                                  |
| 7            | G             | -                                  |
| 8            | V             | - [With MR20 engine or R&M engine] |
| 8            | W             | - [With QR25 engine]               |
| 9            | B             | - [With MR20 engine]               |
| 9            | W             | - [With R&M engine]                |
| 10           | BR            | -                                  |
| 11           | P             | - [Without ISS]                    |
| 11           | R             | - [With ISS]                       |
| 12           | G             | - [With QR25 engine]               |
| 12           | L             | - [With R&M engine]                |
| 13           | R             | - [With R&M engine]                |
| 13           | Y             | - [With MR20 or QR25 engine]       |
| 15           | L             | -                                  |
| 16           | LG            | -                                  |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | G             | -                           |
| 2            | W             | -                           |

|                |                  |
|----------------|------------------|
| Connector No.  | M1               |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS08FM-M2        |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1A           | L             | -                           |
| 2A           | LG            | -                           |
| 3A           | Y             | -                           |
| 4A           | LG            | -                           |
| 5A           | R             | -                           |
| 6A           | BG            | -                           |
| 7A           | BR            | -                           |
| 8A           | SB            | -                           |

| Terminal No. | Color Of Wire | Signal Name [Specification]        |
|--------------|---------------|------------------------------------|
| 10B          | GR            | - [With MR20 engine or R&M engine] |
| 10B          | LA/GR         | - [With QR25 Engine]               |
| 12B          | BR            | -                                  |
| 14B          | W             | -                                  |
| 16B          | W             | -                                  |
| 16B          | GR            | -                                  |
| 1B           | G             | -                                  |
| 2B           | R             | -                                  |
| 3B           | V             | -                                  |
| 6B           | LAL           | -                                  |
| 7B           | LAV           | -                                  |

|                |                  |
|----------------|------------------|
| Connector No.  | M3               |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FM-CS        |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 10C          | LG            | -                           |
| 13C          | LA/G          | -                           |
| 14C          | R             | -                           |
| 15C          | L             | -                           |
| 16C          | LAW           | -                           |
| 1C           | R             | -                           |
| 2C           | G             | -                           |
| 3C           | Y             | -                           |
| 4C           | LG            | -                           |

JRLWD5707GB



# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|    |       |                 |
|----|-------|-----------------|
| 5C | GR    | -               |
| 6C | LA/R  | -               |
| 7C | Y     | -               |
| 8C | BR    | - [With ISS]    |
| 8C | LA/BR | - [Without ISS] |
| 9C | L     | -               |

|                |                     |
|----------------|---------------------|
| Connector No.  | M4                  |
| Connector Name | DATA LINK CONNECTOR |
| Connector Type | BD16FW              |



|    |    |    |    |
|----|----|----|----|
| 11 | 14 | 15 | 16 |
| 3  | 4  | 5  | 6  |
| 8  |    |    |    |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3            | LG            | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | L             | -                           |
| 8            | Y             | -                           |
| 11           | SB            | -                           |
| 14           | P             | -                           |
| 15           | BR            | -                           |
| 16           | W             | -                           |

|                |                        |
|----------------|------------------------|
| Connector No.  | M6                     |
| Connector Name | HEADLAMP AIMING SWITCH |
| Connector Type | TH04FW-NH              |



|   |   |   |   |
|---|---|---|---|
| 2 | 1 | 3 | 4 |
|---|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | GR            | GND                         |
| 3            | G             | -                           |

|   |    |   |
|---|----|---|
| 4 | LG | - |
|---|----|---|

|                |              |
|----------------|--------------|
| Connector No.  | M18          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24MW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | B             | -                           |
| 3            | Y             | -                           |
| 4            | V             | -                           |
| 5            | BR            | -                           |
| 6            | LG            | -                           |
| 7            | L             | -                           |
| 8            | Y             | -                           |
| 9            | G             | -                           |
| 10           | SHIELD        | -                           |
| 11           | R             | -                           |
| 13           | GR            | -                           |
| 14           | LA/SE         | -                           |
| 15           | LA/GR         | -                           |
| 16           | LA/V          | -                           |
| 17           | LA/L          | -                           |
| 18           | LA/BG         | -                           |
| 19           | LA/R          | -                           |
| 22           | LA/G          | -                           |
| 23           | BG            | -                           |
| 24           | SB            | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | M19          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 |    |    |    |    |    |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | V             | -                           |
| 2            | R             | -                           |
| 3            | G             | -                           |
| 4            | B             | -                           |
| 5            | B             | -                           |
| 6            | Y             | -                           |
| 7            | R             | -                           |
| 8            | L             | -                           |
| 9            | BR            | -                           |
| 10           | GR            | -                           |
| 11           | Y             | -                           |
| 12           | BG            | -                           |
| 13           | G             | -                           |
| 14           | R             | -                           |
| 15           | P             | -                           |
| 16           | B             | -                           |

|                |              |
|----------------|--------------|
| Connector No.  | M20          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24MW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 3            | GR            | -                           |
| 4            | Y             | -                           |
| 5            | V             | -                           |

|    |        |   |
|----|--------|---|
| 6  | BR     | - |
| 7  | L      | - |
| 8  | Y      | - |
| 9  | G      | - |
| 10 | SHIELD | - |
| 11 | G      | - |
| 13 | LA/W   | - |
| 14 | LA/G   | - |
| 15 | LA/GR  | - |
| 16 | LA/P   | - |
| 17 | LA/SE  | - |
| 18 | LA/R   | - |
| 19 | GR     | - |
| 20 | GR     | - |
| 21 | LA/Y   | - |
| 22 | R      | - |
| 23 | SB     | - |
| 24 | BG     | - |

|                |              |
|----------------|--------------|
| Connector No.  | M21          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16MW-CS    |



|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 |    |    |    |    |    |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | B             | -                           |
| 2            | G             | -                           |
| 3            | R             | -                           |
| 4            | V             | -                           |
| 5            | W             | -                           |
| 6            | G             | -                           |
| 7            | L             | -                           |
| 8            | B             | -                           |
| 9            | BR            | -                           |
| 10           | GR            | -                           |
| 11           | Y             | -                           |
| 12           | BG            | -                           |
| 13           | GR            | -                           |
| 14           | W             | -                           |
| 15           | P             | -                           |
| 16           | B             | -                           |

JRLW5708GB

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|                |              |
|----------------|--------------|
| Connector No.  | M23          |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH24FW-NH    |



|    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 12 | 11 | 10 | 9  | 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1  |
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 7            | Y             | -                           |
| 8            | L             | -                           |
| 9            | R             | -                           |
| 13           | SB            | -                           |
| 15           | SB            | -                           |
| 16           | GR            | -                           |
| 17           | V             | -                           |
| 18           | G             | -                           |
| 19           | SB            | -                           |
| 20           | R             | -                           |
| 21           | B             | -                           |

|                |                    |
|----------------|--------------------|
| Connector No.  | M31                |
| Connector Name | COMBINATION SWITCH |
| Connector Type | TH16FW-NH          |



|    |    |    |    |    |    |    |   |
|----|----|----|----|----|----|----|---|
| 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1 |
| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | LG            | INPUT 5                     |
| 2            | SB            | OUTPUT 1                    |
| 3            | GR            | INPUT 4                     |
| 4            | EG            | OUTPUT 4                    |
| 5            | G             | INPUT 3                     |
| 6            | W             | INPUT 2                     |
| 7            | V             | -                           |
| 8            | V             | RR WASH MOTOR               |

|    |    |               |
|----|----|---------------|
| 10 | BR | OUTPUT 2      |
| 11 | Y  | FR WASH MOTOR |
| 14 | LG | IGN           |
| 15 | P  | OUTPUT 3      |
| 16 | GR | GND           |

|                |              |
|----------------|--------------|
| Connector No.  | M36          |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS08FW-CS    |



|   |   |   |
|---|---|---|
| 3 | 2 | 1 |
| 8 | 7 | 6 |
| 5 | 4 | 3 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | V             | -                           |
| 3            | B             | -                           |

|                |                   |
|----------------|-------------------|
| Connector No.  | M42               |
| Connector Name | COMBINATION METER |
| Connector Type | TH12FW-NH         |



|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 41 | 42 | 43 | 44 | 45 | 46 |
| 47 | 48 | 49 | 50 | 51 | 52 |

| Terminal No. | Color Of Wire | Signal Name [Specification]   |
|--------------|---------------|-------------------------------|
| 41           | L             | CANL                          |
| 42           | P             | CANH                          |
| 43           | W             | ILLUMINATION CONTROL SIGNAL   |
| 44           | LAV           | FUEL LEVEL SENSOR GROUND      |
| 45           | LAIG          | BATTERY POWER SUPPLY          |
| 46           | LABR          | IGNITION SIGNAL (Without ISS) |
| 47           | V             | IGNITION SIGNAL (With ISS)    |
| 48           | LG            | AV COMMUNICATION SIGNAL (I)   |
| 49           | Y             | AV COMMUNICATION SIGNAL (I)   |
| 50           | BG            | OIL LEVEL SENSOR SIGNAL       |

|    |     |                          |
|----|-----|--------------------------|
| 51 | LAL | FUEL LEVEL SENSOR SIGNAL |
| 52 | B   | GROUND                   |

|                |               |
|----------------|---------------|
| Connector No.  | M45           |
| Connector Name | HAZARD SWITCH |
| Connector Type | TH04FW-NH     |



|   |   |   |   |
|---|---|---|---|
| 3 | 1 | 2 | 4 |
|---|---|---|---|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1            | GR            | -                           |
| 2            | Y             | -                           |
| 3            | R             | -                           |
| 4            | GR            | -                           |

|                |                               |
|----------------|-------------------------------|
| Connector No.  | M59                           |
| Connector Name | AIR BAG DIAGNOSIS SENSOR UNIT |
| Connector Type | N#28FY-EX                     |



|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 | 41 | 42 |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 25           | LG            | INFLATOR AS-                |
| 26           | SB            | AST(-)                      |
| 27           | B             | AST(+)                      |
| 29           | Y             | DR1(-)                      |
| 30           | G             | DR1(+)                      |
| 31           | B             | EC2S(-)                     |
| 36           | BR            | DEACTIVE                    |
| 37           | R             | ACTIVE                      |
| 39           | SHIELD        | GND                         |
| 41           | W             | EC2S(+)                     |
| 45           | P             | CANL                        |
| 46           | L             | CANH                        |

|    |    |            |
|----|----|------------|
| 47 | GR | AB ON IND  |
| 48 | W  | AB OFF IND |
| 49 | BG | K-LINE     |
| 50 | R  | IGN        |

|                |                 |
|----------------|-----------------|
| Connector No.  | M77             |
| Connector Name | WIRE TO WIRE    |
| Connector Type | TH80MW-CS16-TM4 |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2            | LAPR          | -                           |
| 5            | V             | - [Without ISS]             |
| 6            | W             | - [With ISS]                |
| 8            | G             | -                           |
| 9            | Y             | -                           |
| 10           | R             | -                           |
| 20           | W             | -                           |
| 21           | B             | -                           |
| 22           | SHIELD        | -                           |
| 31           | V             | -                           |
| 32           | GR            | -                           |
| 33           | G             | -                           |
| 34           | LG            | -                           |
| 35           | BG            | -                           |
| 36           | LG            | -                           |
| 37           | V             | -                           |
| 38           | G             | -                           |
| 39           | BR            | -                           |
| 40           | L             | -                           |
| 41           | P             | -                           |
| 47           | Y             | -                           |
| 48           | BG            | -                           |
| 51           | GR            | -                           |
| 52           | SB            | -                           |
| 53           | R             | -                           |
| 54           | LAL           | -                           |
| 55           | BR            | -                           |
| 56           | P             | -                           |
| 57           | B             | -                           |
| 58           | L             | -                           |

JRLW5709GB

# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 59           | W      | -                           |
| 60           | LA/R   | -                           |
| 61           | P      | -                           |
| 62           | V      | -                           |
| 63           | LA/BR  | - [With SOW]                |
| 64           | Y      | - [Without SOW]             |
| 65           | GR     | -                           |
| 66           | BG     | -                           |
| 67           | L      | -                           |
| 68           | R      | -                           |
| 71           | V      | -                           |
| 72           | L      | -                           |
| 73           | Y      | -                           |
| 76           | L      | -                           |
| 77           | V      | -                           |
| 78           | LG     | -                           |
| 79           | SHIELD | -                           |
| 80           | L      | - [With ISS]                |
| 80           | LAL    | - [Without ISS]             |
| 82           | GR     | -                           |
| 83           | LG     | -                           |
| 84           | SB     | -                           |
| 85           | G      | -                           |
| 86           | G      | -                           |
| 87           | B      | -                           |
| 88           | B      | -                           |
| 91           | L      | -                           |
| 92           | W      | -                           |
| 93           | W      | -                           |
| 96           | LG     | -                           |
| 97           | BR     | -                           |
| 98           | V      | -                           |
| 99           | R      | -                           |

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M81           | WIRE TO WIRE | -                           |
| TH24MW-NH     | TH24MW-NH    | -                           |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 1            | B      | -                           |
| 3            | GR     | -                           |
| 3            | Y      | - [With SOW]                |
| 4            | V      | - [Without SOW]             |
| 5            | BR     | -                           |
| 6            | SB     | -                           |
| 7            | B      | -                           |
| 8            | L      | -                           |
| 9            | Y      | -                           |
| 10           | SHIELD | -                           |
| 11           | G      | -                           |
| 13           | LA/SE  | -                           |
| 14           | LA/GR  | -                           |
| 15           | LAV    | -                           |
| 16           | LAV    | -                           |
| 17           | LA/BS  | -                           |
| 18           | GR     | -                           |
| 21           | LAV    | -                           |

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M82           | WIRE TO WIRE | -                           |
| NS16MW-CS     | NS16MW-CS    | -                           |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M83           | WIRE TO WIRE | -                           |
| TH24MW-NH     | TH24MW-NH    | -                           |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| Terminal No. | Wire   | Signal Name [Specification] |
|--------------|--------|-----------------------------|
| 2            | B      | -                           |
| 3            | W      | -                           |
| 4            | P      | -                           |
| 5            | SB     | -                           |
| 6            | G      | -                           |
| 7            | B      | -                           |
| 8            | L      | -                           |
| 9            | Y      | -                           |
| 10           | SHIELD | -                           |
| 11           | R      | -                           |
| 13           | B      | -                           |
| 14           | LAV    | -                           |
| 15           | LA/G   | -                           |
| 16           | LA/GR  | -                           |
| 17           | LAP    | -                           |
| 18           | LA/SE  | -                           |
| 19           | B      | -                           |
| 20           | LG     | -                           |
| 21           | BR     | -                           |
| 22           | LA/G   | -                           |

| Connector No. | Wire         | Signal Name [Specification] |
|---------------|--------------|-----------------------------|
| M84           | WIRE TO WIRE | -                           |
| NS16MW-CS     | NS16MW-CS    | -                           |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| Terminal No. | Wire | Signal Name [Specification] |
|--------------|------|-----------------------------|
| 1            | L    | -                           |
| 2            | Y    | -                           |
| 3            | W    | -                           |
| 4            | B    | -                           |
| 5            | B    | -                           |
| 6            | Y    | -                           |
| 7            | R    | -                           |
| 9            | BR   | -                           |
| 10           | GR   | -                           |
| 11           | SB   | -                           |

| Connector No. | Wire                      | Signal Name [Specification] |
|---------------|---------------------------|-----------------------------|
| M85           | BCM (BODY CONTROL MODULE) | -                           |
| NS16BRC-CS    | NS16BRC-CS                | -                           |



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| Terminal No. | Wire | Signal Name [Specification]   |
|--------------|------|-------------------------------|
| 137          | W    | BAT POWER SUPPLY (E/SE)       |
| 138          | SB   | INT ROOM LAMP CONT            |
| 139          | L    | PASSENGER DOOR UNLOCK OUTPUT  |
| 141          | V    | FRONT DOOR LOCK OUTPUT        |
| 143          | LAV  | POWER SUPPLY (FR DOOR LK ACT) |
| 144          | BG   | POWER SUPPLY (TURN SIGNAL)    |
| 145          | GR   | POWER SUPPLY (STOP LAMP)      |
| 146          | B    | GROUND                        |
| 147          | B    | GROUND                        |
| 148          | G    | DRIVER DOOR UNLOCK OUTPUT     |

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# EXTERIOR LIGHTING SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## EXTERIOR LIGHTING SYSTEM

|     |    |                                 |
|-----|----|---------------------------------|
| 149 | W  | FRONT DOOR SUPERLOCK OUTPUT     |
| 151 | R  | POWER SUPPLY (REAR DOOR LK ACT) |
| 152 | LG | POWER SUPPLY (REAR WIPER)       |

|                |                           |
|----------------|---------------------------|
| Connector No.  | M86                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FB-NH                 |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|
| 100 | 99  |     |     | 95  | 94  |     |     | 90  |     | 88  | 87  | 86  | 85  | 84  |  | 82  | 81  |
| 127 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 | 111 | 110 | 109 | 107 | 105 | 104 |  | 102 | 100 |

| Terminal No. | Color Of Wire | Signal Name [Specification]             |
|--------------|---------------|---|
| 81           | L             | KEY SWITCH                              |
| 82           | LAR           | KEY SW (S) [Without Intelligent key]    |
| 82           | W             | PASS DOOR REQ SW [With Intelligent key] |
| 84           | BR            | COMBI SW OUTPUT 2                       |
| 85           | SB            | COMBI SW OUTPUT 1                       |
| 86           | P             | COMBI SW OUTPUT 3                       |
| 87           | BG            | COMBI SW OUTPUT 4                       |
| 88           | W             | PUSHBTN IGN SW ILL CONT                 |
| 90           | Y             | SIL CONDITION                           |
| 94           | G             | DETENTION SW                            |
| 95           | V             | EXTENDED STORAGE FUSE SW                |
| 99           | R             | STOP/START OFF SW                       |
| 100          | V             | DRIVER DOOR ANT +                       |
| 101          | Y             | PUSH SW                                 |
| 104          | R             | DR DOOR UNLK SENS                       |
| 105          | Y             | DR DOOR REQ SW                          |
| 106          | W             | ACC OUTPUT                              |
| 107          | V             | SENSOR CANCEL SW                        |
| 109          | P             | NATS ANTENNA AMP                        |
| 110          | BG            | DIMMER SIGNAL                           |
| 111          | R             | DOOR LK STAT IND OUTPUT                 |
| 112          | SB            | STOP/START OFF SW INDICATOR             |
| 113          | LG            | NATS ANTENNA AMP                        |
| 114          | Y             | NATS ANTENNA AMP                        |
| 115          | W             | NATS ANTENNA AMP                        |
| 116          | BG            | ROOM ANT 1 +                            |
| 117          | GR            | ROOM ANT 1 +                            |
| 118          | SB            | PASSENGER DOOR ANT -                    |
| 119          | P             | PASSENGER DOOR ANT +                    |
| 120          | BR            | DRIVER DOOR ANT +                       |

|                |                           |
|----------------|---------------------------|
| Connector No.  | M87                       |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40GY-NH                 |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 60 |    |    | 57 | 58 |    |    |    | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 |
| 90 | 79 | 78 | 77 | 76 | 75 | 74 | 73 |    |    |    |    | 68 | 67 |    |    | 65 | 64 | 63 |

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

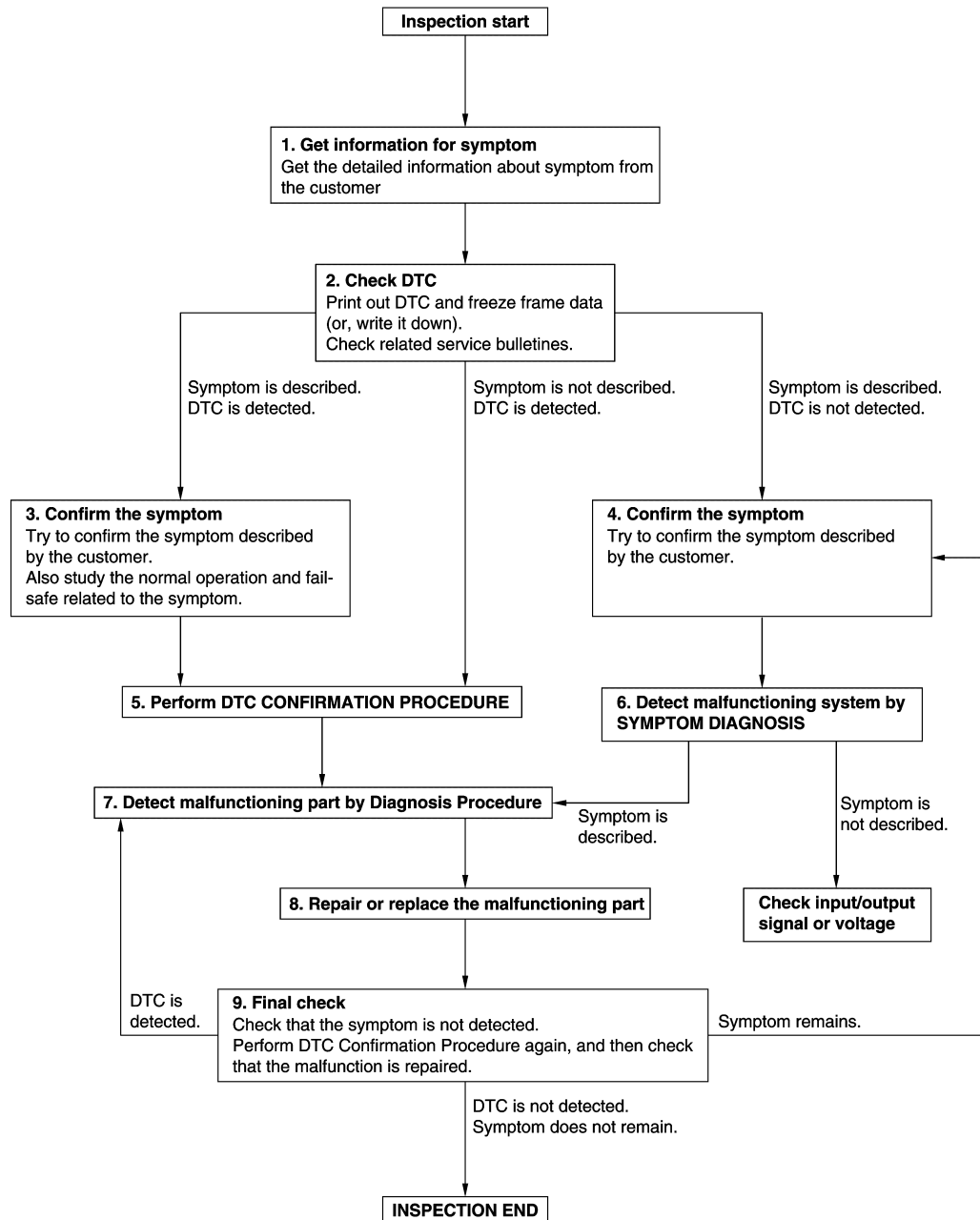
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010789820

OVERALL SEQUENCE



DETAILED FLOW

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

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## 1.GET INFORMATION FOR SYMPTOM

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1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

## 2.CHECK DTC

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1. Check DTC.
2. Perform the following procedure if DTC is detected.
  - Record DTC and freeze frame data (Print them out using CONSULT.)
  - Erase DTC.
  - Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.

Symptom is described, DTC is not detected>>GO TO 4.

Symptom is not described, DTC is detected>>GO TO 5.

## 3.CONFIRM THE SYMPTOM

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Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

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Try to confirm the symptom described by the customer.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

## 5.PERFORM DTC CONFIRMATION PROCEDURE

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Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time. If two or more DTCs are detected, refer to DTC INSPECTION PRIORITY CHART, and determine trouble diagnosis order.

### NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.  
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-44. "Intermittent Incident"](#).

## 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

## 7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

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## DIAGNOSIS AND REPAIR WORK FLOW

### < BASIC INSPECTION >

[HALOGEN HEADLAMP]

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-44. "Intermittent Incident"](#).

### 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement.
3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

### 9. FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

A

B

C

D

E

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G

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I

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EXL

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# B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## DTC/CIRCUIT DIAGNOSIS

### B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

#### DTC Description

INFOID:0000000010789821

#### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                             | DTC detection condition   |
|---------|---|---|
| B121A   | FR FOG LAMP LH PWR SPLY CIRC<br>(Front fog lamp left hand power supply circuit) | [CIRC SHORT TO GRND]<br>When front fog lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the front fog lamp LH power supply circuit. |

#### POSSIBLE CAUSE

- Harness or connector
- Front fog lamp LH bulb
- IPDM E/R

#### FAIL-SAFE

Shuts off the power supply to the front fog lamp LH power supply circuit until the front fog lamp ON conditions are no longer satisfied.

#### DTC CONFIRMATION PROCEDURE

##### 1. PRECONDITIONING

###### ⓘ With CONSULT

1. Turn ignition switch ON.
2. Select "F FOG LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item            | Monitor status |
|-------------------------|----------------|
| F FOG LH CIRC MALFUNCTN | 0              |
|                         | 1              |

###### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the front fog lamp LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-300, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

##### 2. PERFORM DTC CONFIRMATION PROCEDURE

###### ⓘ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST, and front fog lamp switch ON.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

###### Is DTC detected?

YES >> Refer to [EXL-300, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:0000000010789822

##### 1. CHECK FRONT FOG LAMP LH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.



# B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

- Turn lighting switch OFF, and front fog lamp switch OFF.
- Disconnect IPDM E/R connector and front fog lamp LH connector.
- Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 51       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK FRONT FOG LAMP LH POWER SUPPLY

With CONSULT

- Connect IPDM E/R connector.
- Turn ignition switch ON
- Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
- With operating the test items, check the voltage between front fog lamp LH harness connector and ground.

| +                 |          | -      | Test item      |     | Voltage  |
|-------------------|----------|--------|----------------|-----|----------|
| Front fog lamp LH |          |        |                |     |          |
| Connector         | Terminal |        |                |     |          |
| E159              | 1        | Ground | FRONT FOG LAMP | On  | 9 – 16 V |
|                   |          |        |                | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

## 3.CHECK FRONT FOG LAMP LH BULB

Check the front fog lamp LH bulb. Refer to [EXL-301. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp LH bulb. Refer to [EXL-379. "Replacement"](#).

## Component Inspection

INFOID:0000000010789823

EXL

## 1.CHECK FRONT FOG LAMP LH BULB

- Turn ignition switch OFF.
- Disconnect front fog lamp LH connector.
- Check resistance of front fog lamp LH terminals.

| Front fog lamp LH |   | Resistance |
|-------------------|---|------------|
| Terminal          |   |            |
| 1                 | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp LH bulb. Refer to [EXL-379. "Replacement"](#).

# B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010789824

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                              | DTC detection condition   |
|---------|--|---|
| B1231   | DTRL RH PWR SPLY CIRC<br>(Daytime running light right hand power supply circuit) | [CIRC SHORT TO GRND]<br>When daytime running light ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the daytime running light RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp RH internal circuit
  - LED (Daytime running light)
  - Control circuit
  - Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the daytime running light RH power supply circuit until the daytime running light ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Select "DTRL RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item           | Monitor status |
|------------------------|----------------|
| DTRL RH CIRC MALFUNCTN | 0              |
|                        | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the daytime running light RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-302, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓔ With CONSULT

1. Turn ignition switch OFF.
2. Start engine.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-302, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010789825

#### 1. CHECK DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT (SHORT)

# B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and front combination lamp RH connector.
3. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 58       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK DAYTIME RUNNING LIGHT RH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Test item                   |     | Voltage  |
|---------------------------|----------|--------|-----------------------------|-----|----------|
| Front combination lamp RH |          |        |                             |     |          |
| Connector                 | Terminal |        |                             |     |          |
| E151                      | 1        | Ground | DAYTIME<br>RUNNING<br>LIGHT | On  | 9 – 16 V |
|                           |          |        |                             | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

## 3.CHECK DAYTIME RUNNING LIGHT RH

Check the daytime running light RH. Refer to [EXL-303. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-376. "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010789826

EXL

## 1.CHECK DAYTIME RUNNING LIGHT RH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Check resistance of front combination lamp RH terminals.

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 1                         | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp RH. Refer to [EXL-376. "Removal and Installation"](#).

# B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:000000010789827

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                              | DTC detection condition   |
|---------|--|---|
| B1256   | FR FOG LAMP RH PWR SPLY CIRC<br>(Front fog lamp right hand power supply circuit) | [CIRC SHORT TO GRND]<br>When front fog lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the front fog lamp RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front fog lamp RH bulb
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the front fog lamp RH power supply circuit until the front fog lamp ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### With CONSULT

1. Turn ignition switch ON.
2. Select "F FOG RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item            | Monitor status |
|-------------------------|----------------|
| F FOG RH CIRC MALFUNCTN | 0              |
|                         | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the front fog lamp RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-304, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST, and front fog lamp switch ON.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-304, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010789828

#### 1. CHECK FRONT FOG LAMP RH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF, and front fog lamp switch OFF.
3. Disconnect IPDM E/R connector and front fog lamp RH connector.

# B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between IPDM E/R harness connector and ground.


| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 57       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK FRONT FOG LAMP RH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front fog lamp RH harness connector and ground.

| +                 |          | -      | Test item      |     | Voltage  |
|-------------------|----------|--------|----------------|-----|----------|
| Front fog lamp RH |          |        |                |     |          |
| Connector         | Terminal |        |                |     |          |
| E158              | 1        | Ground | FRONT FOG LAMP | On  | 9 – 16 V |
|                   |          |        |                | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

## 3.CHECK FRONT FOG LAMP RH BULB

Check the front fog lamp RH bulb. Refer to [EXL-305, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp RH bulb. Refer to [EXL-379, "Replacement"](#).

## Component Inspection

INFOID:0000000010789829

## 1.CHECK FRONT FOG LAMP RH BULB

1. Turn ignition switch OFF.
2. Disconnect front fog lamp RH connector.
3. Check resistance of front fog lamp RH terminals.

| Front fog lamp RH |   | Resistance |
|-------------------|---|------------|
| Terminal          |   |            |
| 1                 | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front fog lamp RH bulb. Refer to [EXL-379, "Replacement"](#).

# B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010789830

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                             | DTC detection condition   |
|---------|---|---|
| B20CB   | DTRL LH PWR SPLY CIRC<br>(Daytime running light left hand power supply circuit) | [CIRC SHORT TO GRND]<br>When daytime running light ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the daytime running light LH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED (Daytime running light)
  - Control circuit
  - Harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the daytime running light LH power supply circuit until the daytime running light ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Select "DTRL LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item           | Monitor status |
|------------------------|----------------|
| DTRL LH CIRC MALFUNCTN | 0              |
|                        | 1              |

##### What is the monitor status?

- "0" >> GO TO 2.
- "1" >> A short circuit is detected multiple times in the daytime running light LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-306, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓔ With CONSULT

1. Turn ignition switch OFF.
2. Start engine.
3. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
4. Check DTC.

##### Is DTC detected?

- YES >> Refer to [EXL-306, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010789831

#### 1. CHECK DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT (SHORT)

# B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and front combination lamp LH connector.
3. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 49       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK DAYTIME RUNNING LIGHT LH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Test item                   |     | Voltage  |
|---------------------------|----------|--------|-----------------------------|-----|----------|
| Front combination lamp LH |          |        |                             |     |          |
| Connector                 | Terminal |        |                             |     |          |
| E153                      | 1        | Ground | DAYTIME<br>RUNNING<br>LIGHT | On  | 9 – 16 V |
|                           |          |        |                             | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

## 3.CHECK DAYTIME RUNNING LIGHT LH

Check the daytime running light LH. Refer to [EXL-307. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-376. "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010789832

EXL

## 1.CHECK DAYTIME RUNNING LIGHT LH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Check resistance of front combination lamp LH terminals.

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 1                         | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front combination lamp LH. Refer to [EXL-376. "Removal and Installation"](#).

# B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010789833

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                          | DTC detection condition   |
|---------|--|---|
| B20CE   | HL (HI) LH PWR SPLY CIRC<br>[Headlamp (high) left hand power supply circuit] | [CIRC SHORT TO GRND]<br>When headlamp (HI) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (HI) LH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Headlamp (HI) LH bulb
- Headlamp (HI) LH harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (HI) LH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### With CONSULT

1. Turn ignition switch ON.
2. Select "HL (HI) LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (HI) LH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

- "0" >> GO TO 2.
- "1" >> A short circuit is detected multiple times in the headlamp (HI) LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-308, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND, and lighting switch HI.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

- YES >> Refer to [EXL-308, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010789834

#### 1. CHECK HEADLAMP (HI) LH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.



## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

### < DTC/CIRCUIT DIAGNOSIS >

3. Disconnect IPDM E/R connector and front combination lamp LH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 59       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (HI) LH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Test item     |     | Voltage  |
|---------------------------|----------|--------|---------------|-----|----------|
| Front combination lamp LH |          |        |               |     |          |
| Connector                 | Terminal |        |               |     |          |
| E153                      | 6        | Ground | HEADLAMP (HI) | On  | 9 – 16 V |
|                           |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3.CHECK HEADLAMP (HI) LH

Check the headlamp (HI) LH. Refer to [EXL-309. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

### Component Inspection

INFOID:0000000010789835

EXL

### 1.CHECK HEADLAMP (HI) LH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Check resistance of front combination lamp LH terminals.

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 6                         | 5 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2.CHECK HEADLAMP (HI) LH

1. Remove headlamp (HI) LH bulb.
2. Check resistance of front combination lamp LH terminals.

## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 6                         | 5 | Except 0 Ω |

Is the inspection result normal?

- YES >> Replace headlamp (HI) LH bulb. Refer to [EXL-376. "Replacement"](#).  
NO >> Repair or replace the headlamp (HI) LH harness.

# B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010789836

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                          |                      | DTC detection condition   |
|---------|--|----------------------|---|
| B20CF   | HL (HI) RH PWR SPLY CIRC<br>[Headlamp (high) left hand power supply circuit] | [CIRC SHORT TO GRND] | When headlamp (HI) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (HI) RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Headlamp (HI) RH bulb
- Headlamp (HI) RH harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (HI) RH power supply circuit until the headlamp (HI) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

ⓘ With CONSULT

1. Turn ignition switch ON.
2. Select "HL (HI) RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (HI) RH CIRC MALFUNCTN | 0              |
|                           | 1              |

What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (HI) RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-311, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

ⓘ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND, and lighting switch HI.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

Is DTC detected?

YES >> Refer to [EXL-311, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010789837

#### 1. CHECK HEADLAMP (HI) RH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

### < DTC/CIRCUIT DIAGNOSIS >

3. Disconnect IPDM E/R connector and front combination lamp RH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 54       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (HI) RH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Test item        |     | Voltage  |
|---------------------------|----------|--------|------------------|-----|----------|
| Front combination lamp RH |          |        |                  |     |          |
| Connector                 | Terminal |        |                  |     |          |
| E151                      | 6        | Ground | HEADLAMP<br>(HI) | On  | 9 – 16 V |
|                           |          |        |                  | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3.CHECK HEADLAMP (HI) RH

Check the headlamp (HI) RH. Refer to [EXL-312. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:0000000010789838

### 1.CHECK HEADLAMP (HI) RH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Check resistance of front combination lamp RH terminals.

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 6                         | 5 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2.CHECK HEADLAMP (HI) RH

1. Remove headlamp (HI) RH bulb.
2. Check resistance of front combination lamp RH terminals.

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 6                         | 5 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace headlamp (HI) RH bulb. Refer to [EXL-376. "Replacement"](#).  
NO >> Repair or replace the headlamp (HI) RH harness.

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# B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:000000010789839

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                         | DTC detection condition   |
|---------|---|---|
| B20D0   | HL (LO) LH PWR SPLY CIRC<br>[Headlamp (low) left hand power supply circuit] | [CIRC SHORT TO GRND]<br>When headlamp (LO) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (LO) LH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Headlamp (LO) LH bulb
- Headlamp (LO) LH harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (LO) LH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### With CONSULT

1. Turn ignition switch ON.
2. Select "HL (LO) LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (LO) LH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (LO) LH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-314, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-314, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010789840

#### 1. CHECK HEADLAMP (LO) LH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

### < DTC/CIRCUIT DIAGNOSIS >

3. Disconnect IPDM E/R connector and front combination lamp LH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E148      | 50       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (LO) LH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp LH harness connector and ground.

| +                         |          | -      | Test item        |     | Voltage  |
|---------------------------|----------|--------|------------------|-----|----------|
| Front combination lamp LH |          |        |                  |     |          |
| Connector                 | Terminal |        |                  |     |          |
| E154                      | 7        | Ground | HEADLAMP<br>(LO) | On  | 9 – 16 V |
|                           |          |        |                  | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3.CHECK HEADLAMP (LO) LH

Check the headlamp (LO) LH bulb. Refer to [EXL-315. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:000000010789841

EXL

### 1.CHECK HEADLAMP (LO) LH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp LH connector.
3. Check resistance of front combination lamp LH terminals.

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 7                         | 8 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2.CHECK HEADLAMP (LO) LH

1. Remove headlamp (HI) LH bulb.
2. Check resistance of front combination lamp LH terminals.

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 7                         | 8 | Except 0 Ω |

Is the inspection result normal?

- YES >> Replace headlamp (LO) LH bulb. Refer to [EXL-376. "Replacement"](#).  
NO >> Repair or replace the headlamp (LO) LH harness.



# B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010789842

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                         |                      | DTC detection condition   |
|---------|---|----------------------|---|
| B20D1   | HL (LO) RH PWR SPLY CIRC<br>[Headlamp (low) left hand power supply circuit] | [CIRC SHORT TO GRND] | When headlamp (LO) ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the headlamp (LO) RH power supply circuit. |

### POSSIBLE CAUSE

- Harness or connector
- Headlamp (LO) RH bulb
- Headlamp (LO) RH harness
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the headlamp (LO) RH power supply circuit until the headlamp (LO) ON conditions are no longer satisfied.

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Select "HL (LO) RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item              | Monitor status |
|---------------------------|----------------|
| HL (LO) RH CIRC MALFUNCTN | 0              |
|                           | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the headlamp (LO) RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-317, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓐ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 2ND.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-317, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000010789843

#### 1. CHECK HEADLAMP (LO) RH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

### < DTC/CIRCUIT DIAGNOSIS >

3. Disconnect IPDM E/R connector and front combination lamp RH connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E149      | 62       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK HEADLAMP (LO) RH POWER SUPPLY

 With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp RH harness connector and ground.

| +                         |          | -      | Test item     |     | Voltage  |
|---------------------------|----------|--------|---------------|-----|----------|
| Front combination lamp RH |          |        |               |     |          |
| Connector                 | Terminal |        |               |     |          |
| E152                      | 7        | Ground | HEADLAMP (LO) | On  | 9 – 16 V |
|                           |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3.CHECK HEADLAMP (LO) RH

Check the headlamp (LO) RH bulb. Refer to [EXL-318. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:0000000010789844

### 1.CHECK HEADLAMP (LO) RH

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH connector.
3. Check resistance of front combination lamp RH terminals.

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 7                         | 8 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2.CHECK HEADLAMP (LO) RH

1. Remove headlamp (HI) RH bulb.
2. Check resistance of front combination lamp RH terminals.

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 7                         | 8 | Except 0 Ω |

Is the inspection result normal?

- YES >> Replace headlamp (LO) RH bulb. Refer to [EXL-376. "Replacement"](#).  
NO >> Repair or replace the headlamp (LO) RH harness.

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## B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

#### DTC Description

INFOID:000000010789845

#### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)               |                            | DTC detection condition  |
|---------|---|----------------------------|--|
| B20D2   | PARKING LAMP PWR SPLY CIRC<br>(Parking lamp power supply circuit) | [CIRC<br>SHORT TO<br>GRND] | When the parking lamp, license plate lamp, and tail lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the parking lamp LH power supply circuit or parking lamp RH power supply circuit. |

#### POSSIBLE CAUSE

- Harness or connector
- Front combination lamp LH internal circuit
  - LED (Parking lamp)
  - Control circuit
  - Harness
- Front combination lamp RH internal circuit
  - LED (parking lamp)
  - Control circuit
  - Harness
- IPDM E/R

#### FAIL-SAFE

Shuts off the power supply to the parking lamp (LH/RH) power supply circuit until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.

#### DTC CONFIRMATION PROCEDURE

##### 1. PRECONDITIONING

###### With CONSULT

1. Turn ignition switch ON.
2. Select "P LAMP CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item          | Monitor status |
|-----------------------|----------------|
| P LAMP CIRC MALFUNCTN | 0              |
|                       | 1              |

###### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the parking lamp LH or parking lamp RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-321, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

##### 2. PERFORM DTC CONFIRMATION PROCEDURE

###### With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

###### Is DTC detected?

YES >> Refer to [EXL-321, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

# B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

NO-2 >> Confirmation after repair: INSPECTION END

## Diagnosis Procedure

INFOID:000000010789846

### 1.CHECK PARKING LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect IPDM E/R connector and front combination lamp connector.
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |      |          | —      | Continuity  |
|-----------|------|----------|--------|-------------|
| Connector |      | Terminal |        |             |
| RH        | E149 | 61       | Ground | Not existed |
| LH        | E148 | 56       |        |             |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2.CHECK PARKING LAMP POWER SUPPLY

Ⓜ With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "PARKING LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between front combination lamp harness connector and ground.

| +                      |      |   | -      | Test item    |     | Voltage  |
|------------------------|------|---|--------|--------------|-----|----------|
| Front combination lamp |      |   |        |              |     |          |
| Connector              |      |   |        | Terminal     |     |          |
| RH                     | E151 | 3 | Ground | PARKING LAMP | On  | 9 – 16 V |
|                        |      |   |        |              | Off | 0 – 1 V  |
| LH                     | E153 |   |        |              | On  | 9 – 16 V |
|                        |      |   |        |              | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

### 3.CHECK PARKING LAMP

Check the parking lamp. Refer to [EXL-321, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the corresponding front combination lamp. Refer to [EXL-376, "Removal and Installation"](#).

## Component Inspection

INFOID:000000010789847

### 1.CHECK PARKING LAMP

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Check resistance of front combination lamp terminals.

Parking lamp LH

| Front combination lamp LH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 3                         | 2 | Except 0 Ω |

## B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Parking lamp RH

| Front combination lamp RH |   | Resistance |
|---------------------------|---|------------|
| Terminal                  |   |            |
| 3                         | 2 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the corresponding front combination lamp. Refer to [EXL-376. "Removal and Installation"](#).

# B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

### DTC Description

INFOID:0000000010789848

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                      |                            | DTC detection condition   |
|---------|--|----------------------------|---|
| B20D4   | TAIL LAMP LH PWR SPLY CIRC<br>(Tail lamp left hand power supply circuit) | [CIRC<br>SHORT TO<br>GRND] | When the parking lamp, license plate lamp, and tail lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the following power supply circuit. <ul style="list-style-type: none"><li>• Tail lamp LH (body side)</li><li>• Tail lamp LH (back door side)</li><li>• License plate lamp LH</li><li>• License plate lamp RH</li></ul> |

### POSSIBLE CAUSE

- Harness or connector
- Tail lamp LH (body side) bulb
- Tail lamp LH (back door side) bulb
- Tail lamp LH (body side) bulb socket or harness
- Tail lamp LH (back door side) bulb socket or harness
- License plate lamp LH bulb
- License plate lamp RH bulb
- License plate lamp LH bulb socket
- License plate lamp RH bulb socket
- IPDM E/R

### FAIL-SAFE

Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.

- Tail lamp LH (body side)
- Tail lamp LH (back door side)
- License plate lamp LH
- License plate lamp RH

### DTC CONFIRMATION PROCEDURE

#### 1. PRECONDITIONING

##### Ⓔ With CONSULT

1. Turn ignition switch ON.
2. Select "T LAMP LH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item             | Monitor status |
|--------------------------|----------------|
| T LAMP LH CIRC MALFUNCTN | 0              |
|                          | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the tail lamp LH (body side), tail lamp LH (back door side), license plate lamp LH or license plate lamp RH power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-324, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓔ With CONSULT

# B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

### Is DTC detected?

- YES >> Refer to [EXL-324. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

## Diagnosis Procedure

INFOID:000000010789849

### 1. CHECK TAIL LAMP LH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect the following connectors.
  - IPDM E/R
  - Rear combination lamp LH (body side)
  - Rear combination lamp LH (back door side)
  - License plate lamp LH
  - License plate lamp RH
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E10       | 4        | Ground | Not existed |

### Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace harness.

### 2. CHECK TAIL LAMP LH POWER SUPPLY

#### With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between rear combination lamp LH (body side) harness connector and ground.

| +                                    |          | -      | Test item |     | Voltage  |
|--------------------------------------|----------|--------|-----------|-----|----------|
| Rear combination lamp LH (body side) |          |        |           |     |          |
| Connector                            | Terminal |        |           |     |          |
| B80                                  | 1        | Ground | TAIL LAMP | On  | 9 – 16 V |
|                                      |          |        |           | Off | 0 – 1 V  |

### Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3. CHECK TAIL LAMP LH

Check the tail lamp LH. Refer to [EXL-325. "Component Inspection \(Tail Lamp\)"](#).

### Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace the malfunctioning part.

### 4. CHECK LICENSE PLATE LAMP



# B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

[HALOGEN HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

Check the license plate lamp. Refer to [EXL-325, "Component Inspection \(License Plate Lamp\)"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection (Tail Lamp)

INFOID:0000000010789850

### 1.CHECK TAIL LAMP LH

1. Turn ignition switch OFF.
2. Disconnect rear combination lamp LH (body side) and rear combination lamp LH (back door side) connector.
3. Check resistance of rear combination lamp LH (body side) and rear combination lamp LH (back door side) terminals.

Rear combination lamp LH (body side)

| Rear combination lamp LH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp LH (back door side)

| Rear combination lamp LH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2.CHECK TAIL LAMP LH

1. Remove tail lamp LH bulb
2. Check resistance of rear combination lamp LH (body side) and rear combination lamp LH (back door side) terminals.

Rear combination lamp LH (body side)

| Rear combination lamp LH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp LH (back door side)

| Rear combination lamp LH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace the corresponding tail lamp LH bulb. Refer to [EXL-389, "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (body side) or [EXL-391, "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Replacement"](#) (back door side).

NO >> Repair or replace the corresponding tail lamp LH bulb socket and harness.

## Component Inspection (License Plate Lamp)

INFOID:0000000010789851

### 1.CHECK LICENSE PLATE LAMP

1. Turn ignition switch OFF.
2. Disconnect license plate lamp connector.
3. Check resistance of license plate lamp terminals.

## B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

License plate lamp LH

| License plate lamp LH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

License plate lamp RH

| License plate lamp RH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2. CHECK LICENSE PLATE LAMP

1. Remove license plate lamp bulb.
2. Check resistance of license plate lamp terminals.

License plate lamp LH

| License plate lamp LH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

License plate lamp RH

| License plate lamp RH |   | Resistance |
|-----------------------|---|------------|
| Terminal              |   |            |
| 2                     | 1 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace the corresponding license plate lamp bulb. Refer to [EXL-394. "Replacement"](#).

NO >> Repair or replace the corresponding license plate lamp bulb socket.

## B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

#### DTC Description

INFOID:0000000010789852

#### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms<br>(Trouble diagnosis content)                       |                            | DTC detection condition   |
|---------|---|----------------------------|---|
| B20D5   | TAIL LAMP RH PWR SPLY CIRC<br>(Tail lamp right hand power supply circuit) | [CIRC<br>SHORT TO<br>GRND] | When the parking lamp, license plate lamp, and tail lamp ON conditions are satisfied (smart FET inside IPDM E/R is ON), and overcurrent is detected in the following power supply circuit. <ul style="list-style-type: none"><li>• Tail lamp RH (body side)</li><li>• Tail lamp RH (back door side)</li></ul> |

#### POSSIBLE CAUSE

- Harness or connector
- Tail lamp RH (body side) bulb
- Tail lamp RH (back door side) bulb
- Tail lamp RH (body side) bulb socket or harness
- Tail lamp RH (back door side) bulb socket or harness
- IPDM E/R

#### FAIL-SAFE

Shuts off the power supply to the following power supply circuits until the parking lamp, license plate lamp, and tail lamp ON conditions are no longer satisfied.

- Tail lamp RH (body side)
- Tail lamp RH (back door side)

#### DTC CONFIRMATION PROCEDURE

##### 1. PRECONDITIONING

ⓘ With CONSULT

1. Turn ignition switch ON.
2. Select "T LAMP RH CIRC MALFUNCTN" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
3. Check the monitor status.

| Monitor item             | Monitor status |
|--------------------------|----------------|
| T LAMP RH CIRC MALFUNCTN | 0              |
|                          | 1              |

##### What is the monitor status?

"0" >> GO TO 2.

"1" >> A short circuit is detected multiple times in the tail lamp RH (body side) or tail lamp RH (back door side) power supply circuit, and damage accumulates at the smart FET inside the IPDM E/R. For this reason, IPDM E/R does not turn ON the smart FET. Because the DTC cannot be reproduced in this state, perform [EXL-328, "Diagnosis Procedure"](#) and replace IPDM E/R after the malfunctioning part is repaired. Refer to [PCS-60, "Removal and Installation"](#).

##### 2. PERFORM DTC CONFIRMATION PROCEDURE

ⓘ With CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Turn lighting switch 1ST.
4. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
5. Check DTC.

##### Is DTC detected?

YES >> Refer to [EXL-328, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

# B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## Diagnosis Procedure

INFOID:000000010789853

### 1. CHECK TAIL LAMP RH POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Turn lighting switch OFF.
3. Disconnect the following connectors.
  - IPDM E/R
  - Rear combination lamp RH (body side)
  - Rear combination lamp RH (back door side)
4. Check continuity between IPDM E/R harness connector and ground.

| IPDM E/R  |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| E10       | 17       | Ground | Not existed |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

### 2. CHECK TAIL LAMP RH POWER SUPPLY

With CONSULT

1. Connect IPDM E/R connector.
2. Turn ignition switch ON
3. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
4. With operating the test items, check the voltage between rear combination lamp RH (body side) harness connector and ground.

| +                                    |          | -      | Test item |     | Voltage  |
|--------------------------------------|----------|--------|-----------|-----|----------|
| Rear combination lamp RH (body side) |          |        |           |     |          |
| Connector                            | Terminal |        |           |     |          |
| B59                                  | 1        | Ground | TAIL LAMP | On  | 9 – 16 V |
|                                      |          |        |           | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

### 3. CHECK TAIL LAMP RH

Check the tail lamp RH. Refer to [EXL-328. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:000000010789854

### 1. CHECK TAIL LAMP RH

1. Turn ignition switch OFF.
2. Disconnect rear combination lamp RH (body side) and rear combination lamp RH (back door side) connector.
3. Check resistance of rear combination lamp RH (body side) and rear combination lamp RH (back door side) terminals.

## B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Rear combination lamp RH (body side)

| Rear combination lamp RH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp RH (back door side)

| Rear combination lamp RH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2. CHECK TAIL LAMP RH

1. Remove tail lamp RH bulb
2. Check resistance of rear combination lamp RH (body side) and rear combination lamp RH (back door side) terminals.

Rear combination lamp RH (body side)

| Rear combination lamp RH (body side) |   | Resistance |
|--------------------------------------|---|------------|
| Terminal                             |   |            |
| 1                                    | 4 | Except 0 Ω |

Tail lamp RH (back door side)

| Rear combination lamp RH (back door side) |   | Resistance |
|---|---|------------|
| Terminal                                  |   |            |
| 1   | 3 | Except 0 Ω |

Is the inspection result normal?

YES >> Replace the corresponding tail lamp RH bulb. Refer to [EXL-389. "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (body side) or [EXL-391. "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Replacement"](#) (back door side).

NO >> Repair or replace the corresponding tail lamp RH bulb socket and harness.

# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## HEADLAMP (HI) CIRCUIT

### Component Function Check

INFOID:000000010789855

#### 1.CHECK HEADLAMP (HI) OPERATION

④ With CONSULT

1. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the headlamp (HI) is turned ON.

On : Headlamp (HI) ON

Off : Headlamp (HI) OFF

Is the inspection result normal?

- YES >> Headlamp (HI) circuit is normal.  
NO >> Refer to [EXL-330, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010789856

#### 1.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "HEADLAMP (HI)" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item     |     | Voltage  |
|-----------|------|----------|--------|---------------|-----|----------|
| IPDM E/R  |      |          |        |               |     |          |
| Connector |      | Terminal |        |               |     |          |
| RH        | E148 | 54       | Ground | HEADLAMP (HI) | On  | 9 – 16 V |
|           |      |          |        |               | Off | 0 – 1 V  |
| LH        | E149 | 59       |        |               | On  | 9 – 16 V |
|           |      |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E148 | 54       | E151                   | 6        | Existed    |
| LH        | E149 | 59       | E153                   |          |            |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness.

#### 3.CHECK HEADLAMP (HI) GROUND CIRCUIT

Check continuity between front combination lamp connector and ground.

# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| RH                     | E151     | Ground | Existed    |
| LH                     | E153     |        |            |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK HEADLAMP (HI) BULB

Check the applicable headlamp (HI) bulb.

Is the inspection result normal?

YES >> Check the corresponding headlamp (HI) harness. Repair or replace if necessary.

NO >> Replace the corresponding headlamp (HI) bulb. Refer to [EXL-376, "Replacement"](#).

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# HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## HEADLAMP (LO) CIRCUIT

### Component Function Check

INFOID:000000010789857

#### 1.CHECK HEADLAMP (LO) OPERATION

④ With CONSULT

1. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the headlamp (LO) is turned ON.

**Lo** : Headlamp (LO) ON

**Off** : Headlamp (LO) OFF

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.

NO >> Refer to [EXL-332, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010789858

#### 1.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "HEADLAMP (LO)" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item     |     | Voltage  |
|-----------|------|----------|--------|---------------|-----|----------|
| IPDM E/R  |      |          |        |               |     |          |
| Connector |      | Terminal |        |               |     |          |
| RH        | E149 | 62       | Ground | HEADLAMP (LO) | On  | 9 – 16 V |
|           |      |          |        |               | Off | 0 – 1 V  |
| LH        | E148 | 50       |        |               | On  | 9 – 16 V |
|           |      |          |        |               | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK HEADLAMP (LO) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E149 | 62       | E152                   | 7        | Existed    |
| LH        | E148 | 50       | E154                   |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK HEADLAMP (LO) GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.



HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| RH                     | E152     | Ground | Existed    |
| LH                     | E154     |        |            |

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace harness.

4.CHECK HEADLAMP (LO) BULB

Check the applicable headlamp (LO) bulb.

Is the inspection result normal?

- YES >> Check the corresponding headlamp (LO) harness. Repair or replace if necessary.
- NO >> Replace the corresponding headlamp (LO) bulb. Refer to [EXL-376, "Replacement"](#).

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# PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## PARKING LAMP CIRCUIT

### Component Function Check

INFOID:000000010789859

#### 1.CHECK PARKING LAMP OPERATION

④With CONSULT

1. Select "PARKING LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the parking lamp is turned ON.

On : Parking lamp ON

Off : Parking lamp OFF

Is the inspection result normal?

YES >> Parking lamp circuit is normal.

NO >> Refer to [EXL-334, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010789860

#### 1.CHECK PARKING LAMP OUTPUT VOLTAGE

④With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "PARKING LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item    |     | Voltage  |
|-----------|------|----------|--------|--------------|-----|----------|
| IPDM E/R  |      |          |        |              |     |          |
| Connector |      | Terminal |        |              |     |          |
| RH        | E149 | 61       | Ground | PARKING LAMP | On  | 9 – 16 V |
|           |      |          |        |              | Off | 0 – 1 V  |
| LH        | E148 | 56       |        |              | On  | 9 – 16 V |
|           |      |          |        |              | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK PARKING LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E149 | 61       | E151                   | 3        | Existed    |
| LH        | E148 | 56       | E153                   |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK PARKING LAMP GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.

## PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp |          | — | Continuity |
|------------------------|----------|---|------------|
| Connector              | Terminal |   |            |
| RH                     | E151     | 2 | Ground     |
| LH                     | E153     |   |            |

Is the inspection result normal?

YES >> Replace the corresponding front combination lamp. Refer to [EXL-376, "Removal and Installation"](#).  
NO >> Repair or replace harness.

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# TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## TAIL LAMP CIRCUIT

### Component Function Check

INFOID:000000010789861

#### 1.CHECK TAIL LAMP OPERATION

① With CONSULT

1. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the tail lamp is turned ON.

On : Tail Lamp ON

Off : Tail lamp OFF

Is the inspection result normal?

YES >> Tail lamp circuit is normal.

NO >> Refer to [EXL-336. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010789862

#### 1.CHECK TAIL LAMP OUTPUT VOLTAGE

① With CONSULT

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - Rear combination lamp LH (body side)
  - Rear combination lamp RH (body side)
  - Rear combination lamp LH (back door side)
  - Rear combination lamp RH (back door side)
3. Turn ignition switch ON.
4. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |     |          | -      | Test item |     | Voltage  |
|-----------|-----|----------|--------|-----------|-----|----------|
| IPDM E/R  |     |          |        |           |     |          |
| Connector |     | Terminal |        |           |     |          |
| RH        | E10 | 17       | Ground | TAIL LAMP | On  | 9 – 16 V |
|           |     |          |        |           | Off | 0 – 1 V  |
| LH        |     | 4        |        |           | On  | 9 – 16 V |
|           |     |          |        |           | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60. "Removal and Installation"](#).

#### 2.CHECK TAIL LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and each rear combination lamp harness connector.

Body side

| IPDM E/R  |     |          | Rear combination lamp (body side) |          | Continuity |
|-----------|-----|----------|-----------------------------------|----------|------------|
| Connector |     | Terminal | Connector                         | Terminal |            |
| RH        | E10 | 17       | B59                               | 1        | Existed    |
| LH        |     | 4        | B80                               |          |            |

# TAIL LAMP CIRCUIT

[HALOGEN HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

Back door side

| IPDM E/R  |          | Rear combination lamp (back door side) |          | Continuity |
|-----------|----------|--|----------|------------|
| Connector | Terminal | Connector                              | Terminal |            |
| RH        | E10      | D156                                   | 1        | Existed    |
| LH        |          | D155                                   |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between each tail lamp harness connector and ground.

Body side

| Rear combination lamp (body side) |          | — | Continuity        |
|-----------------------------------|----------|---|-------------------|
| Connector                         | Terminal |   |                   |
| RH                                | B59      | 1 | Ground<br>Existed |
| LH                                | B80      |   |                   |

Back door side

| Rear combination lamp (back door side) |          |          | —      | Continuity |
|--|----------|----------|--------|------------|
| Connector                              | Terminal | Terminal |        |            |
| RH                                     | D156     | 1        | Ground | Existed    |
| LH                                     | D155     |          |        |            |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK TAIL LAMP BULB

Check the applicable tail lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding tail lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding tail lamp bulb. Refer to [EXL-389. "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (body side) or [EXL-391. "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Replacement"](#) (back door side).

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# LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## LICENSE PLATE LAMP CIRCUIT

### Component Function Check

INFOID:000000010789863

#### 1.CHECK TAIL LAMP LH OPERATION

Check that tail lamp LH is turned ON when lighting switch is turned 1ST.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check tail lamp circuit. Refer to [EXL-336, "Component Function Check"](#).

#### 2.CHECK LICENSE PLATE LAMP OPERATION

Ⓔ With CONSULT

1. Select "TAIL LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.

2. With operating the test items, check that the license plate lamp is turned ON.

**On : License plate lamp ON**

**Off : License plate lamp OFF**

Is the inspection result normal?

YES >> License plate lamp circuit is normal.

NO >> Refer to [EXL-338, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010789864

#### 1.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector and license plate lamp connector.

3. Check continuity between IPDM E/R harness connector and license plate lamp harness connector.

| IPDM E/R  |     |          | License plate lamp |          | Continuity |
|-----------|-----|----------|--------------------|----------|------------|
| Connector |     | Terminal | Connector          | Terminal |            |
| RH        | E10 | 4        | D161               | 2        | Existed    |
| LH        |     |          | D162               |          |            |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between license plate lamp harness connector and ground.

| License plate lamp |      |          | —      | Continuity |
|--------------------|------|----------|--------|------------|
| Connector          |      | Terminal |        |            |
| RH                 | D161 | 1        | Ground | Existed    |
| LH                 | D162 |          |        |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK LICENSE PLATE LAMP BULB

Check the applicable license plate lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding license plate lamp bulb socket. Repair or replace if necessary.

NO >> Replace the corresponding license plate lamp bulb. Refer to [EXL-394, "Replacement"](#).

# DAYTIME RUNNING LIGHT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## DAYTIME RUNNING LIGHT CIRCUIT

### Component Function Check

INFOID:000000010789865

#### 1.CHECK DAYTIME RUNNING LIGHT OPERATION

④With CONSULT

1. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the daytime running light is turned ON.

**On** : Daytime running light ON

**Off** : Daytime running light OFF

Is the inspection result normal?

- YES >> Daytime running light circuit is normal.  
NO >> Refer to [EXL-339, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010789865

#### 1.CHECK DAYTIME RUNNING LIGHT OUTPUT VOLTAGE

④With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Turn ignition switch ON.
4. Select "DAYTIME RUNNING LIGHT" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item                  |     | Voltage  |
|-----------|------|----------|--------|----------------------------|-----|----------|
| IPDM E/R  |      |          |        |                            |     |          |
| Connector |      | Terminal |        |                            |     |          |
| RH        | E149 | 58       | Ground | DAYTIME RUN-<br>NING LIGHT | On  | 9 – 16 V |
|           |      |          |        |                            | Off | 0 – 1 V  |
| LH        | E148 | 49       |        |                            | On  | 9 – 16 V |
|           |      |          |        |                            | Off | 0 – 1 V  |

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK DAYTIME RUNNING LIGHT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

| IPDM E/R  |      |          | Front combination lamp |          | Continuity |
|-----------|------|----------|------------------------|----------|------------|
| Connector |      | Terminal | Connector              | Terminal |            |
| RH        | E149 | 58       | E151                   | 1        | Existed    |
| LH        | E148 | 49       | E153                   |          |            |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness.

#### 3.CHECK DAYTIME RUNNING LIGHT GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.

## DAYTIME RUNNING LIGHT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front combination lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| RH                     | E151     | Ground | Existed    |
| LH                     | E153     |        |            |

Is the inspection result normal?

- YES >> Replace the corresponding front combination lamp. Refer to [EXL-376, "Removal and Installation"](#).  
NO >> Repair or replace harness.



# STOP LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## STOP LAMP CIRCUIT

### Component Function Check

INFOID:0000000010789867

#### 1.CHECK STOP LAMP OPERATION

1. Turn ignition switch ON.
2. With operating the brake pedal, check that the stop lamp and high-mounted stop lamp is turned ON.

**Depressed** : Stop lamp and high-mounted stop lamp  
ON  
**Fully re-leased** : Stop lamp and high-mounted stop lamp  
OFF

Is the inspection result normal?

- YES >> Stop lamp circuit is normal.  
NO >> Refer to [EXL-341, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010789868

#### 1.CHECK SYMPTOM

Check symptom (A or B)

| Symptom |   |
|---------|---|
| A       | All of stop lamp and high-mounted stop lamp are not turned ON |
| B       | Any of stop lamp and high-mounted stop lamp are not turned ON |

Which symptom is detected?

- A >> GO TO 2.  
B >> GO TO 7.

#### 2.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Except R9M engine models with M/T

| Unit                        | Location         | Fuse No. | Capacity |
|-----------------------------|------------------|----------|----------|
| • BCM<br>• Stop lamp switch | Fuse block (J/B) | #10      | 10 A     |
| Stop lamp switch            |                  | #30      |          |

R9M engine models with M/T

| Unit                        | Location         | Fuse No. | Capacity |
|-----------------------------|------------------|----------|----------|
| • BCM<br>• Stop lamp switch | Fuse block (J/B) | #10      | 10 A     |
| Stop lamp switch            |                  | #20      |          |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 3.CHECK BCM POWER SUPPLY (STOP LAMP)

1. Disconnect BCM connector.
2. Check voltage between BCM harness connector and ground.

# STOP LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| +         |          | -      | Voltage  |
|-----------|----------|--------|----------|
| BCM       |          |        |          |
| Connector | Terminal |        |          |
| M85       | 145      | Ground | 9 – 16 V |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK STOP LAMP SWITCH POWER SUPPLY

1. Disconnect stop lamp switch connector.
2. Connect BCM connector.
3. Turn ignition switch ON.
4. Check voltage between stop lamp switch harness connector and ground.

CVT models

| +                |          | -      | Voltage  |
|------------------|----------|--------|----------|
| Stop lamp switch |          |        |          |
| Connector        | Terminal |        |          |
| E115             | 1        | Ground | 9 – 16 V |
|                  | 3        |        |          |

MR20DD engine models with M/T

| +                |          | -      | Voltage  |
|------------------|----------|--------|----------|
| Stop lamp switch |          |        |          |
| Connector        | Terminal |        |          |
| E120             | 1        | Ground | 9 – 16 V |
|                  | 3        |        |          |

R9M engine models with M/T

| +                |          | -      | Voltage  |
|------------------|----------|--------|----------|
| Stop lamp switch |          |        |          |
| Connector        | Terminal |        |          |
| E121             | 1        | Ground | 9 – 16 V |
|                  | 3        |        |          |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK STOP LAMP SWITCH SIGNAL CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and stop lamp switch harness connector.

CVT models

| BCM       |          | Stop lamp switch |          | Continuity |
|-----------|----------|------------------|----------|------------|
| Connector | Terminal | Connector        | Terminal |            |
| E23       | 157      | E115             | 2        | Existed    |
|           | 158      |                  | 4        |            |

# STOP LAMP CIRCUIT

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

MR20DD engine models with M/T

| BCM       |          | Stop lamp switch |          | Continuity |
|-----------|----------|------------------|----------|------------|
| Connector | Terminal | Connector        | Terminal |            |
| E23       | 157      | E120             | 2        | Existed    |
|           | 158      |                  | 4        |            |

R9M engine models with M/T

| BCM       |          | Stop lamp switch |          | Continuity |
|-----------|----------|------------------|----------|------------|
| Connector | Terminal | Connector        | Terminal |            |
| E23       | 157      | E121             | 2        | Existed    |
|           | 158      |                  | 4        |            |

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6.CHECK STOP LAMP SWITCH

Check stop lamp switch. Refer to [EXL-345. "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-121. "Removal and Installation"](#).

NO >> Replace stop lamp switch. Refer to [BR-21. "Removal and Installation"](#) (LHD models) or [BR-85. "Removal and Installation"](#) (RHD models).

## 7.CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP OUTPUT VOLTAGE

 With CONSULT

1. Disconnect rear combination lamp (body side) and high-mounted stop lamp connectors.
2. Turn ignition switch ON.
3. Select "HEAD LAMP" of "BCM" using CONSULT.
4. Select "STOP LAMP 1", "STOP LAMP 2" or "STOP LAMP 3" in "Active Test" mode.
5. With operating the test items, check voltage between BCM harness connector and ground.

Stop lamp RH

| +         |          | -      | Test item   |     | Voltage<br>(Approx.) |
|-----------|----------|--------|-------------|-----|----------------------|
| BCM       |          |        |             |     |                      |
| Connector | Terminal |        |             |     |                      |
| B46       | 129      | Ground | STOP LAMP 1 | On  | 9 – 16 V             |
|           |          |        |             | Off | 0 V                  |

Stop lamp LH

| +         |          | -      | Test item   |     | Voltage<br>(Approx.) |
|-----------|----------|--------|-------------|-----|----------------------|
| BCM       |          |        |             |     |                      |
| Connector | Terminal |        |             |     |                      |
| B46       | 134      | Ground | STOP LAMP 2 | On  | 9 – 16 V             |
|           |          |        |             | Off | 0 V                  |

High-mounted stop lamp

| +         |          | -      | Test item   |     | Voltage<br>(Approx.) |
|-----------|----------|--------|-------------|-----|----------------------|
| BCM       |          |        |             |     |                      |
| Connector | Terminal |        |             |     |                      |
| B47       | 39       | Ground | STOP LAMP 3 | On  | 9 – 16 V             |
|           |          |        |             | Off | 0 V                  |

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

# STOP LAMP CIRCUIT

[HALOGEN HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

## 8.CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and ground.

Stop lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | B46 | 129      | Ground | Not existed |
| LH        |     | 134      |        |             |

High-mounted stop lamp

| BCM       |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| B47       | 39       | Ground | Not existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-121. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 9.CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and each stop lamp harness connector.

Stop lamp

| BCM       |          |     | Rear combination lamp (body side) |          | Continuity |
|-----------|----------|-----|-----------------------------------|----------|------------|
| Connector | Terminal |     | Connector                         | Terminal |            |
| RH        | B46      | 129 | B59                               | 2        | Existed    |
| LH        |          | 134 | B80                               |          |            |

High-mounted stop lamp

| BCM       |          | High-mounted stop lamp |          | Continuity |
|-----------|----------|------------------------|----------|------------|
| Connector | Terminal | Connector              | Terminal |            |
| B47       | 39       | D154                   | 1        | Existed    |

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness.

## 10.CHECK STOP LAMP / HIGH-MOUNTED STOP LAMP GROUND CIRCUIT

Check continuity between each stop lamp harness connector and ground.

Stop lamp

| Rear combination lamp (body side) |     |          | —      | Continuity |
|-----------------------------------|-----|----------|--------|------------|
| Connector                         |     | Terminal |        |            |
| RH                                | B59 | 4        | Ground | Existed    |
| LH                                | B80 |          |        |            |

High-mounted stop lamp

| High-mounted stop lamp |          | —      | Continuity |
|------------------------|----------|--------|------------|
| Connector              | Terminal |        |            |
| D154                   | 2        | Ground | Existed    |

Is the inspection result normal?

YES-1 >> Stop lamp: GO TO 11.

# STOP LAMP CIRCUIT

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

- YES-2 >> High-mounted stop lamp: Replace high-mounted stop lamp. Refer to [EXL-392. "Removal and Installation"](#).  
NO >> Repair or replace harness.

## 11.CHECK STOP LAMP BULB

Check the applicable stop lamp bulb.

Is the inspection result normal?

- YES >> Check the corresponding stop lamp bulb socket and harness. Repair or replace if necessary.  
NO >> Replace the corresponding stop lamp bulb. Refer to [EXL-389. "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#).

## Component Inspection

INFOID:0000000010789869

## 1.CHECK STOP LAMP SWITCH-1

1. Turn ignition switch OFF.
2. Disconnect stop lamp switch connector.
3. Check continuity of stop lamp switch terminals.

Except R9M engine models with M/T

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |

R9M engine models with M/T

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Not existed |
|                  |   |             | Fully released | Existed     |

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> GO TO 2.

## 2.CHECK STOP LAMP SWITCH-2

1. Adjust stop lamp switch installation. Refer to [BR-11. "Inspection and Adjustment"](#) (LHD models) or [BR-75. "Inspection and Adjustment"](#) (RHD models).
2. Check continuity of stop lamp switch terminals.

Except R9M engine models with M/T

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |

## STOP LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

R9M engine models with M/T

| Stop lamp switch |   | Condition   |                | Continuity  |
|------------------|---|-------------|----------------|-------------|
| Terminal         |   |             |                |             |
| 1                | 2 | Brake pedal | Depressed      | Existed     |
|                  |   |             | Fully released | Not existed |
| 3                | 4 |             | Depressed      | Not existed |
|                  |   |             | Fully released | Existed     |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to [BR-21, "Removal and Installation"](#) (LHD models) or [BR-85, "Removal and Installation"](#) (RHD models).

# FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## FRONT FOG LAMP CIRCUIT

### Component Function Check

INFOID:0000000010789870

#### 1.CHECK FRONT FOG LAMP OPERATION

④ With CONSULT

1. Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
2. With operating the test items, check that the front fog lamp is turned ON.

**On** : Front fog lamp ON

**Off** : Front fog lamp OFF

Is the inspection result normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to [EXL-347, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010789871

#### 1.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

④ With CONSULT

1. Turn ignition switch OFF.
2. Disconnect front fog lamp connector.
3. Turn ignition switch ON.
4. Select "FRONT FOG LAMP" in "Active Test" mode of "IPDM E/R" using CONSULT.
5. With operating the test items, check voltage between IPDM E/R harness connector and ground.

| +         |      |          | -      | Test item      |     | Voltage  |
|-----------|------|----------|--------|----------------|-----|----------|
| IPDM E/R  |      |          |        |                |     |          |
| Connector |      | Terminal |        |                |     |          |
| RH        | E149 | 57       | Ground | FRONT FOG LAMP | On  | 9 – 16 V |
|           |      |          |        |                | Off | 0 – 1 V  |
| LH        | E148 | 51       |        |                | On  | 9 – 16 V |
|           |      |          |        |                | Off | 0 – 1 V  |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

#### 2.CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front fog lamp harness connector.

| IPDM E/R  |      |          | Front fog lamp |          | Continuity |
|-----------|------|----------|----------------|----------|------------|
| Connector |      | Terminal | Connector      | Terminal |            |
| RH        | E149 | 57       | E158           | 1        | Existed    |
| LH        | E148 | 51       | E159           |          |            |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

## FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| Front fog lamp |          | —      | Continuity |
|----------------|----------|--------|------------|
| Connector      | Terminal |        |            |
| RH             | E158     | Ground | Existed    |
| LH             | E159     |        |            |

Is the inspection result normal?

- YES    >> Replace the corresponding front fog lamp bulb. Refer to [EXL-379, "Replacement"](#).  
NO     >> Repair or replace harness.



# REAR FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## REAR FOG LAMP CIRCUIT

### Component Function Check

INFOID:0000000010789872

#### 1.CHECK REAR FOG LAMP OPERATION

① With CONSULT

1. Select "HEAD LAMP" of "BCM" using CONSULT.
2. Select "RR FOG LAMP" in "Active Test" mode.
3. With operating the test items, check that the rear fog lamp is turned ON.

On : Rear fog lamp ON

Off : Rear fog lamp OFF

Is the inspection result normal?

YES >> Rear fog lamp circuit is normal.

NO >> Refer to [EXL-349, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010789873

#### 1.CHECK REAR FOG LAMP OUTPUT VOLTAGE

① With CONSULT

1. Turn ignition switch OFF.
2. Disconnect rear fog lamp connector.
3. Turn ignition switch ON.
4. Select "HEAD LAMP" of "BCM" using CONSULT.
5. Select "RR FOG LAMP" in "Active Test" mode.
6. With operating the test items, check voltage between rear fog lamp harness connector and ground.

| +             |          | -      | Test item   |     | Voltage  |
|---------------|----------|--------|-------------|-----|----------|
| Rear fog lamp |          |        |             |     |          |
| Connector     | Terminal |        |             |     |          |
| B152          | 2        | Ground | RR FOG LAMP | On  | 9 – 16 V |
|               |          |        |             | Off | 0 V      |

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

#### 2.CHECK REAR FOG LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and rear fog lamp harness connector.

| BCM       |          | Rear fog lamp |          | Continuity |
|-----------|----------|---------------|----------|------------|
| Connector | Terminal | Connector     | Terminal |            |
| B46       | 122      | B152          | 2        | Existed    |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK REAR FOG LAMP POWER SUPPLY CIRCUIT (SHORT)

Check continuity between BCM harness connector and ground.

## REAR FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

| BCM       |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| B46       | 122      | Ground | Not existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 4.CHECK REAR FOG LAMP GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear fog lamp harness connector and ground.

| Rear fog lamp |          | —      | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| B152          | 1        | Ground | Existed    |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5.CHECK REAR FOG LAMP BULB

Check rear fog lamp bulb.

Is the inspection result normal?

YES >> Check rear fog lamp bulb socket. Repair or replace if necessary.

NO >> Replace rear fog lamp bulb. Refer to [EXL-396, "Replacement"](#).

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## TURN SIGNAL LAMP CIRCUIT

### Component Function Check

INFOID:0000000010789874

#### 1.CHECK TURN SIGNAL LAMP OPERATION

1. Turn ignition switch ON.
2. With operating the turn signal switch, check that the turn signal lamp is blinks.

**Right** : Turn signal lamps RH blink  
**Left** : Turn signal lamps LH blink  
**Center** : Turn signal lamps OFF

Is the inspection result normal?

- YES >> Turn signal lamp circuit is normal.  
NO >> Refer to [EXL-351, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010789875

#### 1.CHECK SYMPTOM

Check symptom (A or B)

| Symptom |  |
|---------|--|
| A       | All of turn signal lamp are not blinks           |
| B       | Applicable side performs high flasher activation |

Which symptom is detected?

- A >> GO TO 2.  
B >> GO TO 4.

#### 2.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

| Unit | Location         | Fuse No. | Capacity |
|------|------------------|----------|----------|
| BCM  | Fuse block (J/B) | #1       | 15 A     |

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 3.CHECK BCM POWER SUPPLY (TURN SIGNAL LAMP)

1. Disconnect BCM connector.
2. Check voltage between BCM harness connector and ground.

| +         |          | -      | Voltage  |
|-----------|----------|--------|----------|
| BCM       |          |        |          |
| Connector | Terminal |        |          |
| M85       | 144      | Ground | 9 – 16 V |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).  
NO >> Repair or replace harness.

#### 4.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
  - Front turn signal lamp

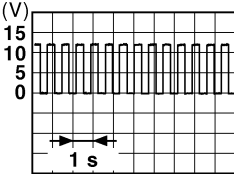
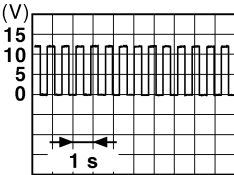
# TURN SIGNAL LAMP CIRCUIT

[HALOGEN HEADLAMP]

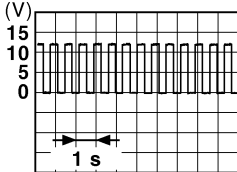
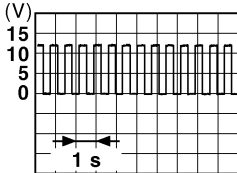
< DTC/CIRCUIT DIAGNOSIS >

- Door mirror
- Rear combination lamp (body side)
- 3. Turn ignition switch ON.
- 4. With operating the turn signal switch, check voltage between BCM harness connector and ground.

Front turn signal lamp

| +         |          |     | -      | Test item             | Voltage<br>(Approx.) |  |  |
|-----------|----------|-----|--------|-----------------------|----------------------|--|--|
| BCM       |          |     |        |                       |                      |  |  |
| Connector | Terminal |     |        |                       |                      |  |  |
| RH        | E23      | 168 | Ground | Turn signal<br>switch | Right                |  <div>PKID0926E</div> |  |
|           |          |     |        |                       | Center               | 0 V  |  |
| LH        |          |     |        |                       | 167                  | Left   |  <div>PKID0926E</div> |
|           |          |     |        |                       |                      | Center   | 0 V  |

Side turn signal lamp

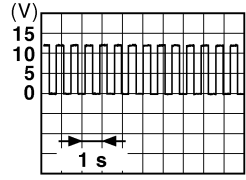
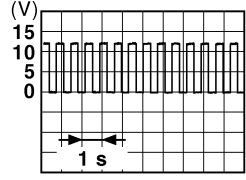
| +         |          | -      | Test item             | Voltage<br>(Approx.)   |        |  |
|-----------|----------|--------|-----------------------|--|--------|--|
| BCM       |          |        |                       |  |        |  |
| Connector | Terminal |        |                       |  |        |  |
| RH        | M87      | Ground | Turn signal<br>switch | <br>PKID0926E |        |  |
|           |          |        |                       | Center   | 0 V    |  |
| LH        |          |        |                       | 42   | Left   | <br>PKID0926E |
|           |          |        |                       |  | Center | 0 V  |

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Rear turn signal lamp

| +         |          |     | -      | Test item | Voltage<br>(Approx.)  |
|-----------|----------|-----|--------|-----------|---|
| BCM       |          |     |        |           |   |
| Connector | Terminal |     |        |           |   |
| RH        | B46      | 136 | Ground | Right     |  |
|           |          |     |        | Center    | 0 V   |
| LH        |          | 133 |        | Left      |  |
|           |          |     |        | Center    | 0 V   |

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

## 5.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and ground.

Front turn signal lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | E23 | 168      | Ground | Not existed |
| LH        |     | 167      |        |             |

Side turn signal lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | M87 | 43       | Ground | Not existed |
| LH        |     | 42       |        |             |

Rear turn signal lamp

| BCM       |     |          | —      | Continuity  |
|-----------|-----|----------|--------|-------------|
| Connector |     | Terminal |        |             |
| RH        | B46 | 136      | Ground | Not existed |
| LH        |     | 133      |        |             |

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 6.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

3. Check continuity between BCM harness connector and each turn signal lamp harness connector.

Front turn signal lamp

| BCM       |     |          | Front turn signal lamp |          | Continuity |
|-----------|-----|----------|------------------------|----------|------------|
| Connector |     | Terminal | Connector              | Terminal |            |
| RH        | E23 | 168      | E46                    | 1        | Existed    |
| LH        |     | 167      | E27                    |          |            |

Side turn signal lamp (LHD models)

| BCM       |     |          | Door mirror |          | Continuity |
|-----------|-----|----------|-------------|----------|------------|
| Connector |     | Terminal | Connector   | Terminal |            |
| RH        | M87 | 43       | D43         | 13       | Existed    |
| LH        |     | 42       | D3          |          |            |

Side turn signal lamp (RHD models)

| BCM       |     |          | Door mirror |          | Continuity |
|-----------|-----|----------|-------------|----------|------------|
| Connector |     | Terminal | Connector   | Terminal |            |
| RH        | M87 | 43       | D23         | 13       | Existed    |
| LH        |     | 42       | D98         |          |            |

Rear turn signal lamp

| BCM       |     |          | Rear combination lamp (body side) |          | Continuity |
|-----------|-----|----------|-----------------------------------|----------|------------|
| Connector |     | Terminal | Connector                         | Terminal |            |
| RH        | B46 | 136      | B59                               | 3        | Existed    |
| LH        |     | 133      | B80                               |          |            |

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 7. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

Check continuity between each turn signal lamp harness connector and ground.

Front turn signal lamp

| Front combination lamp |     |          | —      | Continuity |
|------------------------|-----|----------|--------|------------|
| Connector              |     | Terminal |        |            |
| RH                     | E46 | 2        | Ground | Existed    |
| LH                     | E27 |          |        |            |

Side turn signal lamp (LHD models)

| Door mirror |     |          | —      | Continuity |
|-------------|-----|----------|--------|------------|
| Connector   |     | Terminal |        |            |
| RH          | D43 | 14       | Ground | Existed    |
| LH          | D3  |          |        |            |

Side turn signal lamp (RHD models)

| Door mirror |     |          | —      | Continuity |
|-------------|-----|----------|--------|------------|
| Connector   |     | Terminal |        |            |
| RH          | D23 | 14       | Ground | Existed    |
| LH          | D98 |          |        |            |

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Rear turn signal lamp

| Rear turn signal lamp |          | — | Continuity |
|-----------------------|----------|---|------------|
| Connector             | Terminal |   |            |
| RH                    | B59      | 4 | Ground     |
| LH                    | B80      |   |            |

Is the inspection result normal?

YES-1 >> Front turn signal lamp or rear turn signal lamp: GO TO 8.

YES-2 >> Side turn signal lamp: Replace side turn signal lamp. Refer to [EXL-385, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 8.CHECK TURN SIGNAL LAMP BULB

Check the applicable turn signal lamp bulb.

Is the inspection result normal?

YES-1 >> Front turn signal lamp: Check the corresponding front turn signal lamp bulb socket. Repair or replace if necessary.

YES-2 >> Rear turn signal lamp: Check the corresponding rear turn signal lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding turn signal lamp bulb. Refer to [EXL-376, "Replacement"](#) (front turn signal lamp) or [EXL-389, "REAR COMBINATION LAMP \(BODY SIDE\) : Replacement"](#) (rear turn signal lamp).

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EXL

## LIGHT & RAIN SENSOR

### Component Function Check

INFOID:0000000011008678

#### 1.CHECK LIGHT & RAIN SENSOR

1. Clean light & rain sensor detection area of windshield fully.
2. Turn ignition switch ON.
3. Turn lighting switch AUTO.
4. With the light & rain sensor illuminating, check the auto light function.

| Condition           |                         | Auto light function |
|---------------------|-------------------------|---------------------|
| Light & rain sensor | When illuminating       | Not operating       |
|                     | When shutting off light | Operating           |

Is the inspection result normal?

- YES >> Light & rain sensor is normal.  
 NO >> Refer to [EXL-356, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011008679

#### 1.CHECK LIGHT & RAIN SENSOR POWER SUPPLY

1. Turn ignition switch OFF
2. Disconnect light & rain sensor connector.
3. Turn ignition switch ON.
4. Check voltage between light & rain sensor harness connector and ground.

| +                   |          | -      | Voltage         |
|---------------------|----------|--------|-----------------|
| Light & rain sensor |          |        |                 |
| Connector           | Terminal |        |                 |
| R20                 | 1        | Ground | Battery voltage |

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> GO TO 2.

#### 2.CHECK LIGHT & RAIN SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove interior room lamp relay.
3. Check continuity between interior room lamp relay harness connector and light & rain sensor harness connector.

| Interior Room lamp relay |          | Light & rain sensor |          | Continuity |
|--------------------------|----------|---------------------|----------|------------|
| Connector                | Terminal | Connector           | Terminal |            |
| M44                      | 5        | R20                 | 1        | Existed    |

Is the inspection result normal?

- YES >> Perform the interior interior room lamp power supply circuit diagnosis. Refer to [INL-65, "Diagnosis Procedure"](#).  
 NO >> Repair or replace harness.

#### 3.CHECK LIGHT & RAIN SENSOR GROUND CIRCUIT

Check continuity between light & rain sensor harness connector and ground.

|                     |          |        |            |
|---------------------|----------|--------|------------|
| Light & rain sensor |          | —      | Continuity |
| Connector           | Terminal |        |            |
| R20                 | 3        | Ground | Existed    |



# LIGHT & RAIN SENSOR

[HALOGEN HEADLAMP]

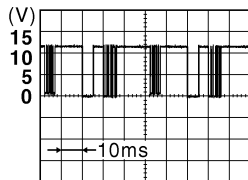
## < DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Repair or replace harness.

### 4.CHECK LIGHT & RAIN SENSOR SIGNAL

1. Connect light & rain sensor connector.
2. Turn ignition switch ON.
3. Check voltage between BCM harness connector and ground.

| +         |          | -      | Condition             | Voltage<br>(Approx.)   |
|-----------|----------|--------|-----------------------|--|
| BCM       |          |        |                       |  |
| Connector | Terminal |        |                       |  |
| M87       | 47       | Ground | Ignition switch<br>ON | <div><p>8.7V</p></div> |

Is the inspection result normal?

- YES >> Replace light & rain sensor. Refer to [EXL-381, "Removal and Installation"](#).  
NO >> GO TO 5.

### 5.CHECK LIGHT & RAIN SENSOR SIGNAL CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector and light & rain sensor connector.
3. Check continuity between BCM harness connector and light & rain sensor harness connector.

| BCM       |          | Light & rain sensor |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| M87       | 47       | R20                 | 2        | Existed    |

Is the inspection result normal?

- YES >> GO TO 6.  
NO >> Repair or replace harness.

### 6.CHECK LIGHT & RAIN SENSOR SIGNAL CIRCUIT (SHORT)

Check continuity between BCM harness connector and ground.

| BCM       |          | —      | Continuity  |
|-----------|----------|--------|-------------|
| Connector | Terminal |        |             |
| M87       | 47       | Ground | Not existed |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).  
NO >> Repair or replace harness.

## HAZARD SWITCH

## Component Function Check

INFOID:000000010789878

## 1.CHECK HAZARD SWITCH SIGNAL

## ④ With CONSULT

1. Turn ignition switch ON.
2. Select "FLASHER" of "BCM" using CONSULT.
3. Select "HAZARD SW" in "Data Monitor" mode.
4. With operating the hazard switch, check the monitor status.

| Monitor item | Condition     |     | Monitor status |
|--------------|---------------|-----|----------------|
| HAZARD SW    | Hazard switch | ON  | On             |
|              |               | OFF | Off            |

Is the inspection result normal?

YES &gt;&gt; Hazard switch circuit is normal.

NO >> Refer to [EXL-358, "Diagnosis Procedure"](#).

## Diagnosis Procedure

INFOID:000000010789879

## 1.CHECK HAZARD SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Check voltage between hazard switch connector and ground.

|               |          |        |          |
|---------------|----------|--------|----------|
| +             |          | -      | Voltage  |
| Hazard switch |          |        |          |
| Connector     | Terminal |        |          |
| M45           | 2        | Ground | 9 – 16 V |

Is the inspection result normal?

YES &gt;&gt; GO TO 4.

NO &gt;&gt; GO TO 2.

## 2.CHECK HAZARD SWITCH SIGNAL CIRCUIT (OPEN)

1. Disconnect BCM connector.
2. Check continuity between hazard switch harness connector and BCM harness connector.

| Hazard switch |          | BCM       |          | Continuity |
|---------------|----------|-----------|----------|------------|
| Connector     | Terminal | Connector | Terminal |            |
| M45           | 2        | M87       | 51       | Existed    |

Is the inspection result normal?

YES &gt;&gt; GO TO 3.

NO &gt;&gt; Repair or replace harness.

## 3.CHECK HAZARD SWITCH SIGNAL CIRCUIT (SHORT)

Check continuity between hazard switch harness connector and ground.

|               |          |        |             |
|---------------|----------|--------|-------------|
| Hazard switch |          | —      | Continuity  |
| Connector     | Terminal |        |             |
| M45           | 2        | Ground | Not existed |

Is the inspection result normal?YES >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

# HAZARD SWITCH

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness.

### 4.CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

| Hazard switch |          | —      | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| M45           | 1        | Ground | Existed    |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5.CHECK HAZARD SWITCH

Check hazard switch. Refer to [EXL-359, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hazard switch. Refer to [EXL-383, "Removal and Installation"](#).

## Component Inspection

INFOID:0000000010789880

### 1.CHECK HAZARD SWITCH

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Check continuity of hazard switch terminals.

| Hazard switch |   | Condition     |     | Continuity  |
|---------------|---|---------------|-----|-------------|
| Terminal      |   |               |     |             |
| 1             | 2 | Hazard switch | ON  | Existed     |
|               |   |               | OFF | Not existed |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hazard switch. Refer to [EXL-383, "Removal and Installation"](#).

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EXL

# HEADLAMP AIMING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

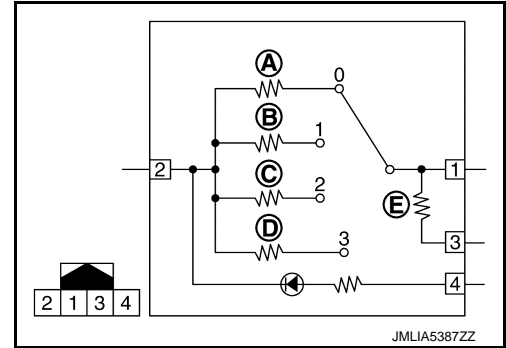
## HEADLAMP AIMING SWITCH

### Component Inspection

INFOID:000000010789881

#### 1. CHECK HEADLAMP AIMING SWITCH

1. Turn ignition switch OFF.
2. Remove headlamp aiming switch.
3. Check resistance among each headlamp aiming switch terminals.



2-row seat models

| Headlamp aiming switch |   | Condition       |   | Resistance (Approx.) |
|------------------------|---|-----------------|---|----------------------|
| Terminal               |   |                 |   |                      |
| 1                      | 2 | Switch position | 0 | Ⓐ: 910 Ω             |
|                        |   |                 | 1 | Ⓑ: 510 Ω             |
|                        |   |                 | 2 | Ⓒ: 243 Ω             |
|                        |   |                 | 3 | Ⓓ: 140 Ω             |
|                        | 3 |                 | — | Ⓔ: 390 Ω             |

3-row seat models

| Headlamp aiming switch |   | Condition       |          | Resistance (Approx.) |
|------------------------|---|-----------------|----------|----------------------|
| Terminal               |   |                 |          |                      |
| 1                      | 2 | Switch position | 0        | Ⓐ: 910 Ω             |
|                        |   |                 | 1        | Ⓑ: 316 Ω             |
|                        |   |                 | 2        | Ⓒ: 162 Ω             |
|                        |   |                 | 3        | Ⓓ: 68 Ω              |
|                        | 3 | —               | Ⓔ: 390 Ω |                      |

Is the inspection result normal?

- YES >> Headlamp aiming switch is normal.
- NO >> Replace headlamp aiming switch. Refer to [EXL-384, "Removal and Installation"](#).

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## SYMPTOM DIAGNOSIS

### EXTERIOR LIGHTING SYSTEM SYMPTOMS

#### Symptom Table

INFOID:0000000010789882

#### NOTE:

Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

| Symptom   |            | Possible cause  | Inspection item  |
|---|------------|---|--|
| Headlamp (HI) is not turned ON  | One side   | <ul style="list-style-type: none"><li>Headlamp (HI) power supply/ground circuit</li><li>Headlamp (HI) bulb</li><li>Headlamp (HI) harness</li><li>IPDM E/R</li></ul>   | Headlamp (HI) circuit<br>Refer to <a href="#">EXL-330, "Component Function Check"</a> .      |
|   | Both sides | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-365, "Diagnosis Procedure"</a> .   |  |
| High beam indicator lamp is not turned ON<br>[Headlamp (HI) is turned ON]   |            | Combination meter   | Combination meter<br>Data monitor "HI-BEAM IND"  |
| Headlamp (LO) is not turned ON  | One side   | <ul style="list-style-type: none"><li>Headlamp (LO) power supply/ground circuit</li><li>Headlamp (LO) bulb</li><li>Headlamp (LO) harness</li><li>IPDM E/R</li></ul>   | Headlamp (LO) circuit<br>Refer to <a href="#">EXL-332, "Component Function Check"</a> .      |
|   | Both sides | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-366, "Diagnosis Procedure"</a> .   |  |
| Dipped beam indicator lamp is not turned ON<br>[Headlamp (LO) is turned ON] |            | Combination meter   | Combination meter<br>Data monitor "DIPPED BEAM IND"  |
| Each lamp is not turned ON/OFF with lighting switch AUTO                    |            | <ul style="list-style-type: none"><li>Combination switch input/output signal circuit</li><li>Combination switch</li><li>BCM</li></ul>   | Combination switch<br>Refer to <a href="#">BCS-119, "Symptom Table"</a> .                    |
|   |            | <ul style="list-style-type: none"><li>Light &amp; rain sensor power supply/ground/signal circuit</li><li>Light &amp; rain sensor</li><li>BCM</li></ul>  | Light & rain sensor<br>Refer to <a href="#">EXL-356, "Component Function Check"</a> .        |
| Parking lamp is not turned ON   |            | <ul style="list-style-type: none"><li>Parking lamp power supply/ground circuit</li><li>Front combination lamp internal circuit<ul style="list-style-type: none"><li>- LED (Parking lamp)</li><li>- Control circuit</li><li>- Harness</li></ul></li><li>IPDM E/R</li></ul> | Parking lamp circuit<br>Refer to <a href="#">EXL-334, "Component Function Check"</a> .       |
| Tail lamp is not turned ON  |            | <ul style="list-style-type: none"><li>Tail lamp power supply/ground circuit</li><li>Tail lamp bulb</li><li>Tail lamp bulb socket/harness</li><li>IPDM E/R</li></ul>   | Tail lamp circuit<br>Refer to <a href="#">EXL-336, "Component Function Check"</a> .          |
| License plate lamp is not turned ON   |            | <ul style="list-style-type: none"><li>License plate lamp power supply/ground circuit</li><li>License plate lamp bulb</li><li>License plate lamp bulb socket</li></ul>   | License plate lamp circuit<br>Refer to <a href="#">EXL-338, "Component Function Check"</a> . |
| Parking lamp, license plate lamp and tail lamp are not turned ON            |            | <b>Symptom diagnosis</b><br>"PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-367, "Diagnosis Procedure"</a> .  |  |

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

| Symptom   |   | Possible cause   | Inspection item   |
|---|---|--|---|
| Position lamp indicator is not turned ON<br>(Parking lamp, license plate lamp and tail lamp are turned ON)  |   | Combination meter  | Combination meter<br>Data monitor "LIGHT IND"   |
| Daytime running light is not turned ON  |   | <ul style="list-style-type: none"> <li>Daytime running light power supply/ground circuit</li> <li>Front combination lamp internal circuit</li> <li>- LED (Daytime running light)</li> <li>- Control circuit</li> <li>- Harness</li> <li>IPDM E/R</li> </ul>  | Daytime running light circuit<br>Refer to <a href="#">EXL-339, "Component Function Check"</a> .                                       |
| Turn signal lamp does not blink   | Indicator lamp is normal<br>(All of turn signal lamp is not blinks)               | <ul style="list-style-type: none"> <li>Fuse</li> <li>BCM power supply (turn signal lamp) circuit</li> <li>BCM</li> </ul>   | Turn signal lamp circuit<br>Refer to <a href="#">EXL-351, "Component Function Check"</a> .  |
|   | Indicator lamp is normal<br>(Applicable side performs high flasher activation)    | <ul style="list-style-type: none"> <li>Front turn signal lamp</li> <li>- Front turn signal lamp power supply/ground circuit</li> <li>- Front turn signal lamp bulb</li> <li>- Front turn signal lamp bulb socket</li> <li>- BCM</li> <li>Side turn signal lamp</li> <li>- Side turn signal lamp power supply/ground circuit</li> <li>- Side turn signal lamp</li> <li>- BCM</li> <li>Rear turn signal lamp</li> <li>- Rear turn signal lamp power supply/ground circuit</li> <li>- Rear turn signal lamp bulb</li> <li>- Rear turn signal lamp bulb socket/harness</li> <li>- BCM</li> </ul> |   |
|   | Indicator lamp is included  | <ul style="list-style-type: none"> <li>Combination switch input/output signal circuit</li> <li>Combination switch</li> <li>BCM</li> </ul>  | Combination switch<br>Refer to <a href="#">BCS-119, "Symptom Table"</a> .   |
| Turn signal indicator lamp does not blink<br>(Turn signal lamp is normal)   | One side  | Combination meter  | —   |
|   | Both sides<br>(Always)  | <ul style="list-style-type: none"> <li>Turn indicator signal</li> <li>BCM</li> <li>Combination meter</li> </ul>  | Combination meter<br>Data monitor "TURN IND"  |
|   | Both sides<br>(Only when activating hazard warning lamp with ignition switch OFF) | <ul style="list-style-type: none"> <li>Combination meter power supply/ground circuit</li> <li>Combination meter</li> </ul>   | Combination meter<br>Power supply and ground circuit<br>Refer to <a href="#">MWI-129, "COMBINATION METER : Diagnosis Procedure"</a> . |
| <ul style="list-style-type: none"> <li>Hazard warning lamp does not activate<br/>(Turn signal is normal)</li> <li>Hazard warning lamp continues activating</li> </ul> |   | <ul style="list-style-type: none"> <li>Hazard switch signal/ground circuit</li> <li>Hazard switch</li> <li>BCM</li> </ul>  | Hazard switch<br>Refer to <a href="#">EXL-358, "Component Function Check"</a> .   |

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

| Symptom   |   | Possible cause  | Inspection item  |
|---|---|---|--|
| Stop lamp and high-mounted stop lamp are not turned ON                          | All of stop lamp and high-mounted stop lamp are not turned ON | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• BCM power supply (stop lamp) circuit</li> <li>• Stop lamp switch power supply/signal circuit</li> <li>• Stop lamp switch</li> <li>• BCM</li> </ul>   | Stop lamp circuit<br>Refer to <a href="#">EXL-341, "Component Function Check"</a> .  |
|   | Any of stop lamp and high-mounted stop lamp are not turned ON | <ul style="list-style-type: none"> <li>• Stop lamp</li> <li>- Stop lamp power supply/ground circuit</li> <li>- Stop lamp bulb</li> <li>- Stop lamp bulb socket/harness</li> <li>- BCM</li> <li>• High-mounted stop lamp</li> <li>- High-mounted stop lamp power supply/ground circuit</li> <li>- High-mounted stop lamp</li> <li>- BCM</li> </ul> |  |
| Front fog lamp is not turned ON   | One side  | <ul style="list-style-type: none"> <li>• Front fog lamp power supply/ground circuit</li> <li>• Front fog lamp bulb</li> <li>• IPDM E/R</li> </ul>   | Front fog lamp circuit<br>Refer to <a href="#">EXL-347, "Component Function Check"</a> .   |
|   | Both sides  | <b>Symptom diagnosis</b><br>"BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-368, "Diagnosis Procedure"</a> .  |  |
| Front fog lamp indicator lamp is not turned ON<br>(Front fog lamp is turned ON) |   | Combination meter   | <ul style="list-style-type: none"> <li>• Combination meter</li> <li>Data monitor "FR FOG IND"</li> <li>• BCM (HEAD LAMP)</li> <li>Active test "FR FOG LAMP"</li> </ul> |
| Rear fog lamp is not turned ON  | Rear fog lamp indicator lamp is normal                        | <ul style="list-style-type: none"> <li>• Rear fog lamp power supply/ground circuit</li> <li>• Rear fog lamp bulb</li> <li>• Rear fog lamp bulb socket</li> <li>• BCM</li> </ul>   | Rear fog lamp circuit<br>Refer to <a href="#">EXL-349, "Component Function Check"</a> .  |
|   | Rear fog lamp indicator lamp is included                      | <ul style="list-style-type: none"> <li>• Combination switch input/output signal circuit</li> <li>• Combination switch</li> <li>• BCM</li> </ul>   | Combination switch<br>Refer to <a href="#">BCS-119, "Symptom Table"</a> .  |
| Rear fog lamp indicator lamp is not turned ON<br>(Rear fog lamp is turned ON)   |   | <ul style="list-style-type: none"> <li>• Rear fog lamp status signal</li> <li>• BCM</li> <li>• Combination meter</li> </ul>   | <ul style="list-style-type: none"> <li>• Combination meter</li> <li>Data monitor "RR FOG IND"</li> <li>• BCM (HEAD LAMP)</li> <li>Active test "RR FOG LAMP"</li> </ul> |

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**NORMAL OPERATING CONDITION****Description**

INFOID:0000000010789883

**AUTO LIGHT SYSTEM**

The headlamp may not be turned ON/OFF immediately after passing dark area or bright area (short tunnel, sky bridge, shadowed area etc.) while using the auto light system. This causes for the control difference. This is normal.

**HIGH BEAM ASSIST SYSTEM**

When driving while using the high beam assist system, the headlamp beam may not switch or the beam switching timing may vary according to the ambient environment (the condition of the vehicle ahead, the condition of the road, the position of the vehicle, etc.). This is due to control differences and is not a malfunction.



# BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

### Description

INFOID:0000000010789884

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

### Diagnosis Procedure

INFOID:0000000010789885

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK HIGH BEAM REQUEST SIGNAL

④ With CONSULT

1. Select "HIGH BEAM REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the lighting switch, check the monitor status.

| Monitor item  | Condition             |            | Monitor status |
|---------------|-----------------------|------------|----------------|
| HIGH BEAM REQ | Lighting switch (2ND) | HI or PASS | On             |
|               |                       | LO         | Off            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

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# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

### Description

INFOID:0000000010789886

Both side headlamps (LO) are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000010789887

#### 1.CHECK COMBINATION SWITCH

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK LOW BEAM REQUEST SIGNAL

Ⓔ With CONSULT

1. Select "LOW BEAM REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the lighting switch, check the monitor status.

| Monitor item | Condition       |     | Monitor status |
|--------------|-----------------|-----|----------------|
| LOW BEAM REQ | Lighting switch | 2ND | On             |
|              |                 | OFF | Off            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

# PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000010789888

The parking, license plate and tail lamps are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000010789889

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK POSITION LIGHT REQUEST SIGNAL

Ⓔ With CONSULT

1. Select "POSITION LIGHT REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the lighting switch, check the monitor status.

| Monitor item       | Condition       |     | Monitor status |
|--------------------|-----------------|-----|----------------|
| POSITION LIGHT REQ | Lighting switch | 1ST | On             |
|                    |                 | OFF | Off            |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000010789890

Both side front fog lamps are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000010789891

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-119, "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK FRONT FOG LIGHT REQUEST SIGNAL

Ⓔ With CONSULT

1. Select "FRONT FOG LAMP REQ" in "Data Monitor" mode of "IPDM E/R" using CONSULT.
2. With operating the front fog lamp switch, check the monitor status.

| Monitor item       | Condition   |     | Monitor status |
|--------------------|---|-----|----------------|
| FRONT FOG LAMP REQ | Front fog lamp switch<br>(With lighting switch 1ST) | ON  | On             |
|                    |   | OFF | Off            |

Is the item status normal?

YES >> Replace IPDM E/R. Refer to [PCS-60, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-121, "Removal and Installation"](#).

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

## PERIODIC MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT

#### LHD MODELS

#### LHD MODELS : Description

INFOID:0000000011008552

#### PREPARATION BEFORE ADJUSTING

##### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming adjustment if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

##### NOTE:

Never remove the temporary tire, jack and on-vehicle tool.

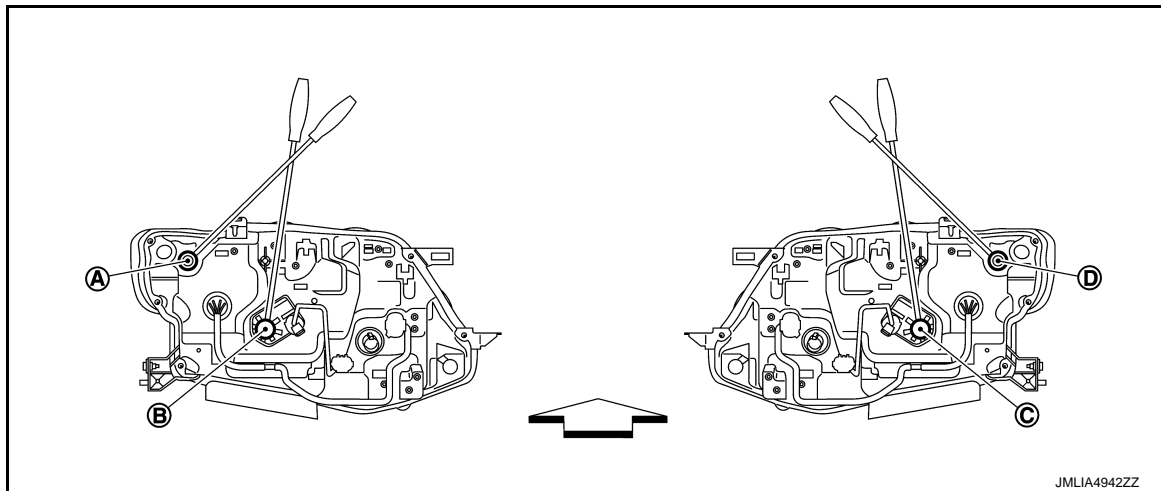
- Wipe out dirt on the headlamp.

##### CAUTION:

**Never use organic solvent (thinner, gasoline etc.).**

- Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW



Ⓐ Headlamp LH (INSIDE/OUTSIDE) adjustment screw

Ⓑ Headlamp LH (UP/DOWN) adjustment screw

Ⓒ Headlamp RH (UP/DOWN) adjustment screw

Ⓓ Headlamp RH (INSIDE/OUTSIDE) adjustment screw

↔ : Vehicle front

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| Ⓐ                | Headlamp LH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |
| Ⓑ                | Headlamp LH (UP/DOWN)        | Clockwise            | UP               |
|                  |                              | Counterclockwise     | DOWN             |
| Ⓒ                | Headlamp RH (UP/DOWN)        | Clockwise            | UP               |
|                  |                              | Counterclockwise     | DOWN             |

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| ①                | Headlamp RH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |

## LHD MODELS : Aiming Adjustment Procedure

INFOID:000000011008553

1. Place the screen.

**NOTE:**

- Stop the vehicle at the perpendicular angle to the wall.
- Set the screen so that it is perpendicular to a level road surface.

2. Face the vehicle squarely toward the screen and make the distance between the headlamp center and the screen 10 m (32.8 ft).

3. Start the engine and illuminate the headlamp (LO).

**CAUTION:**

**Never cover lens surface with tape, etc. because it is made from plastic.**

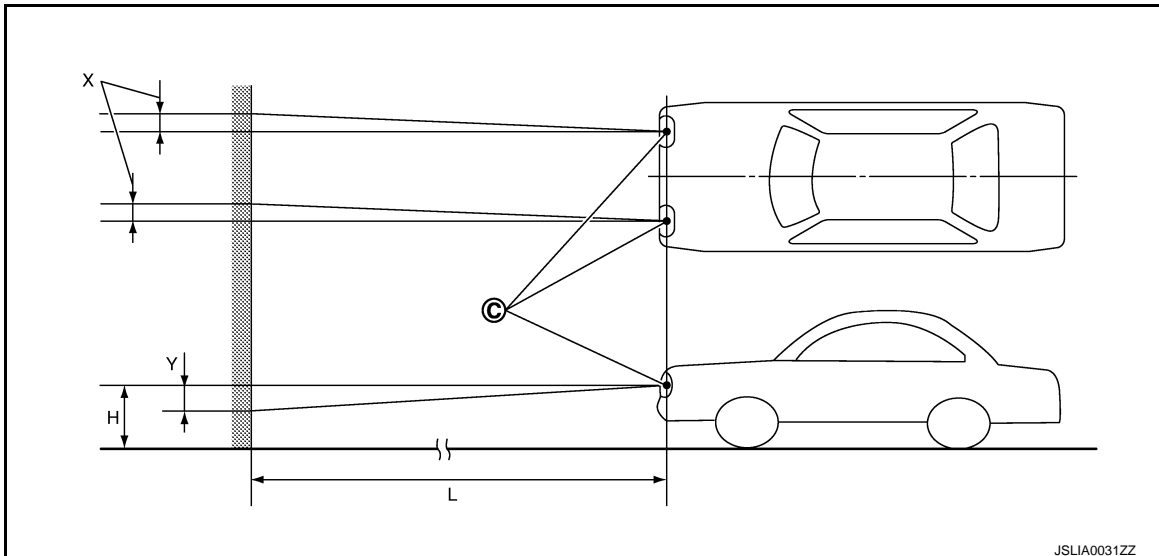
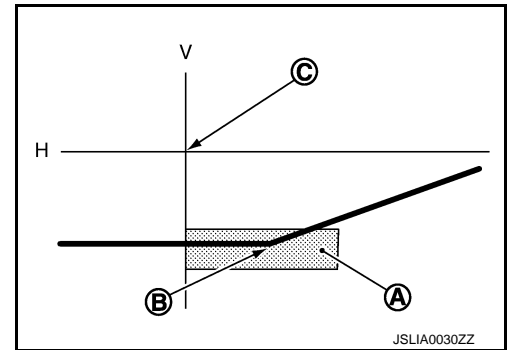
**NOTE:**

Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

4. Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

Low beam distribution on the screen

- ① Aiming adjustment area
- ② Elbow point
- ③ Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp



- ③ Vertical center line of headlamp
- H. Horizontal center line of headlamp
- L. Distance from headlamp center to screen
- X. Aiming adjustment area (Lateral)
- Y. Aiming adjustment area (Vertical)

**Distance from headlamp center to screen (L) : 10 m (32.8 ft)**

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

Unit: mm (in)

| Aiming adjustment area   |            |   |
|--|------------|---|
| Vertical direction (Y)<br>(Lower side from headlamp center height) |            | Lateral direction (X)<br>(Right side from headlamp center line) |
| Highest light axis   | 100 (3.94) | 0 - 100 (3.94)  |
| Target light axis  | 100 (3.94) |   |
| Lowest light axis  | 130 (5.12) |   |

## RHD MODELS

### RHD MODELS : Description

INFOID:0000000011008554

### PREPARATION BEFORE ADJUSTING

#### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming adjustment if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

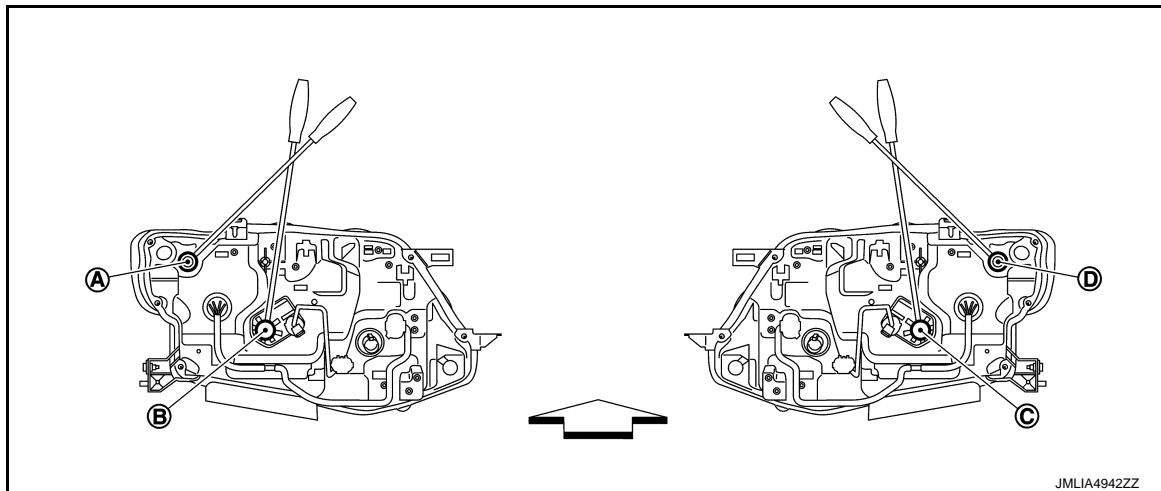
#### NOTE:

- Never remove the temporary tire, jack and on-vehicle tool.
- Wipe out dirt on the headlamp.

#### CAUTION:

- **Never use organic solvent (thinner, gasoline etc.).**
- Ride alone on the driver seat.

### AIMING ADJUSTMENT SCREW



- (A) Headlamp LH (INSIDE/OUTSIDE) adjustment screw     
 (B) Headlamp LH (UP/DOWN) adjustment screw     
 (C) Headlamp RH (UP/DOWN) adjustment screw     
 (D) Headlamp RH (INSIDE/OUTSIDE) adjustment screw

↔ : Vehicle front

| Adjustment screw |                              | Screwdriver rotation | Facing direction |
|------------------|------------------------------|----------------------|------------------|
| (A)              | Headlamp LH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|                  |                              | Counterclockwise     | OUTSIDE          |

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

|   | Adjustment screw             | Screwdriver rotation | Facing direction |
|---|------------------------------|----------------------|------------------|
| Ⓑ | Headlamp LH (UP/DOWN)        | Clockwise            | UP               |
|   |                              | Counterclockwise     | DOWN             |
| Ⓒ | Headlamp RH (UP/DOWN)        | Clockwise            | UP               |
|   |                              | Counterclockwise     | DOWN             |
| Ⓓ | Headlamp RH (INSIDE/OUTSIDE) | Clockwise            | INSIDE           |
|   |                              | Counterclockwise     | OUTSIDE          |

## RHD MODELS : Aiming Adjustment Procedure

INFOID:000000011008555

1. Place the screen.

### NOTE:

- Stop the vehicle at the perpendicular angle to the wall.
- Set the screen so that it is perpendicular to a level load surface.

2. Face the vehicle squarely toward the screen and make the distance between the headlamp center and the screen 10 m (32.8 ft).

3. Start the engine and illuminate the headlamp (LO).

### CAUTION:

**Never cover lens surface with tape, etc. because it is made from plastic.**

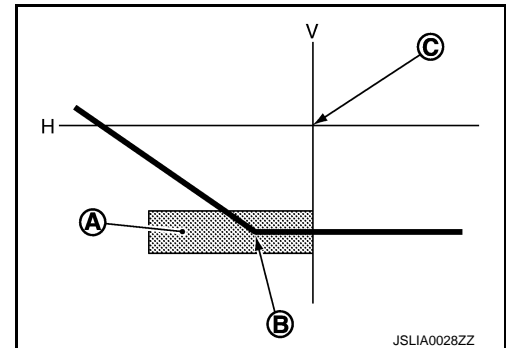
### NOTE:

Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

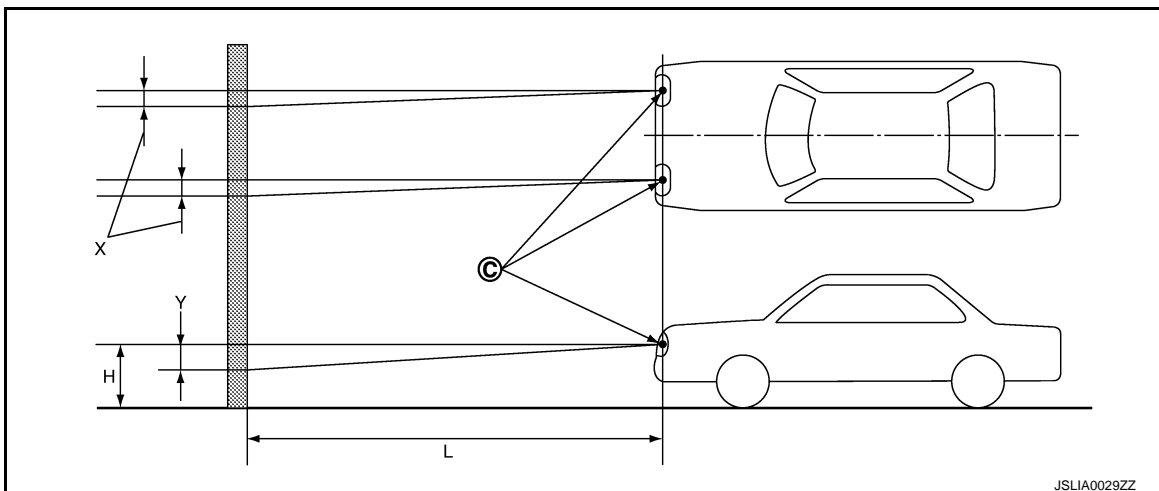
4. Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

Low beam distribution on the screen

- Ⓐ Aiming adjustment area
- Ⓑ Elbow point
- Ⓒ Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp



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- Ⓒ Vertical center line of headlamp
- H. Horizontal center line of headlamp
- L. Distance from headlamp center to screen
- X. Aiming adjustment area (Lateral)
- Y. Aiming adjustment area (Vertical)



# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

Distance from headlamp center to screen (L) : 10 m (32.8 ft)

Unit: mm (in)

## Aiming adjustment area

| Vertical direction (Y)<br>(Lower side from headlamp center height) |            | Lateral direction (X)<br>(Left side from headlamp center line) |
|--|------------|--|
| Highest light axis   | 100 (3.94) | 0 - 100 (3.94)   |
| Target light axis  | 100 (3.94) |  |
| Lowest light axis  | 130 (5.12) |  |

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# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

## FRONT FOG LAMP AIMING ADJUSTMENT

### Description

INFOID:0000000011008556

### PREPARATION BEFORE ADJUSTING

#### NOTE:

For details, refer to the regulations in your own country.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

#### NOTE:

Never remove the temporary tire, jack and on-vehicle tool.

- Wipe out dirt on the headlamp.

#### CAUTION:

**Never use organic solvent (thinner, gasoline etc.).**

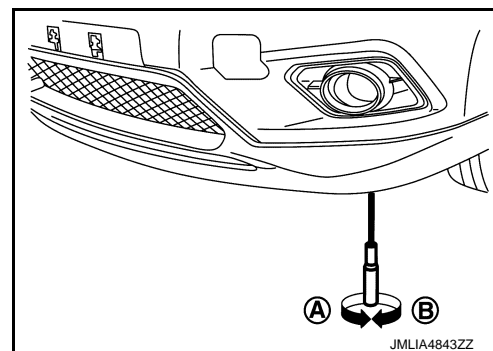
- Ride alone on the driver seat.

### AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment.

Ⓐ: DOWN

Ⓑ: UP



### Aiming Adjustment Procedure

INFOID:0000000011008557

1. Place the screen.

#### NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.

2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.

3. Start the engine. Turn the front fog lamp ON.

#### CAUTION:

**Never cover the lens surface with a tape etc. The lens is made of resin.**

#### NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.

4. Adjust the cutoff line height Ⓐ with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and Ⓐ becomes 150 mm (5.90 in).

Front fog lamp light distribution on the screen

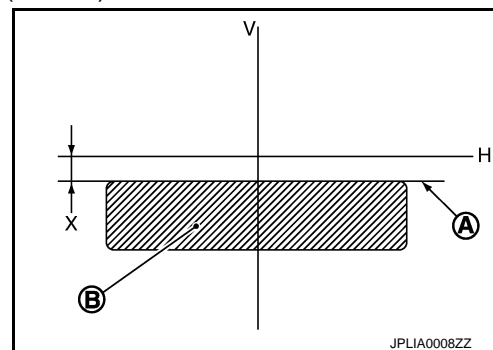
Ⓐ : Cutoff line

Ⓑ : High illuminance area

H : Horizontal center line of front fog lamp

V : Vertical center line of front fog lamp

X : Cutoff line height



# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

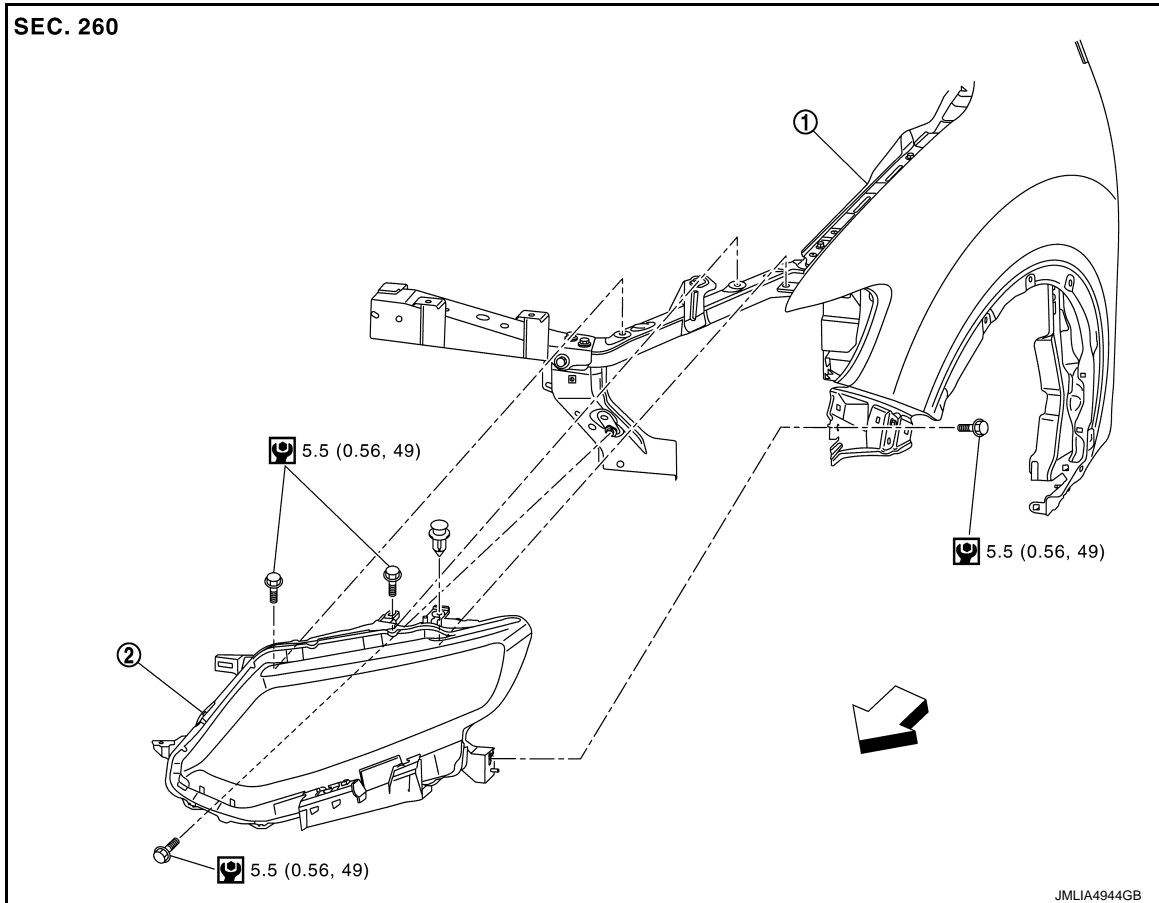
## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View

INFOID:0000000010789898


#### REMOVAL



① Front fender panel

② Front combination lamp

← : Vehicle front

 : N·m (kg-m, in-lb)

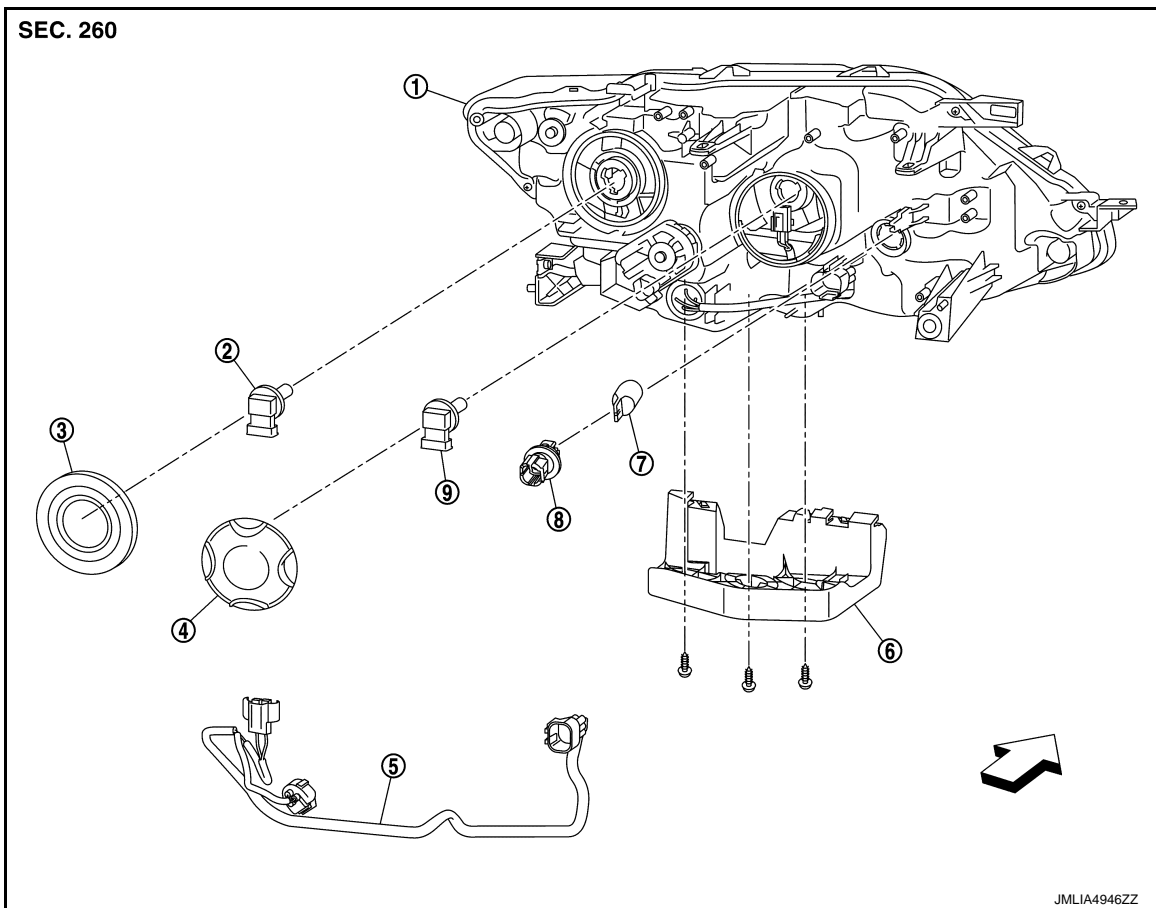
#### DISASSEMBLY

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# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]



- |                                  |                                      |                                  |
|----------------------------------|--------------------------------------|----------------------------------|
| ① Front combination lamp housing | ② Headlamp bulb (Lo)                 | ③ Socket cover                   |
| ④ Back cover                     | ⑤ Front combination lamp harness     | ⑥ Front combination lamp bracket |
| ⑦ Front turn signal lamp bulb    | ⑧ Front turn signal lamp bulb socket | ⑨ Headlamp bulb (Hi)             |

← : Vehicle front

## Removal and Installation

INFOID:0000000010789899

### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Remove front bumper fascia. Refer to [EXT-15, "Removal and Installation"](#).
2. Remove front combination lamp assembly mounting bolts and clip.
3. Remove harness clip of front combination lamp bracket.
4. Pull out front combination lamp forward the vehicle.
5. Disconnect front combination lamp harness connectors, and then remove front combination lamp.

### INSTALLATION

Note the following item, and then install in the reverse order of removal.

### CAUTION:

After installation, perform aiming adjustment. Refer to the following:

- LHD MODELS: Refer to [EXL-369, "LHD MODELS : Description"](#).
- RHD MODELS: Refer to [EXL-371, "RHD MODELS : Description"](#).

## Replacement

INFOID:0000000010789900

### CAUTION:

# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).
- After installing the bulb, install the socket cover, back cover, and bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

## HEADLAMP BULB (HI)

LH side

1. Remove air duct 1. Refer to the following.
  - MR20DD: Refer to [EM-31, "Removal and Installation"](#).
  - QR25DE: Refer to [EM-175, "Removal and Installation"](#).
  - R9M: Refer to [EM-308, "Removal and Installation"](#).
2. Remove back cover.
3. Disconnect headlamp bulb harness connector.
4. Rotate headlamp bulb counterclockwise and unlock it, and then remove headlamp bulb.

RH side

1. Remove back cover.
2. Disconnect headlamp bulb harness connector.
3. Rotate headlamp bulb counterclockwise and unlock it, and then remove headlamp bulb.

## HEADLAMP BULB (LO)

LH side

1. Remove air duct 1. Refer to the following.
  - MR20DD: Refer to [EM-31, "Removal and Installation"](#).
  - QR25DE: Refer to [EM-175, "Removal and Installation"](#).
  - R9M: Refer to [EM-308, "Removal and Installation"](#).
2. Remove back cover.
3. Disconnect headlamp bulb harness connector.
4. Rotate headlamp bulb counterclockwise and unlock it, and then remove headlamp bulb.

RH side

1. Remove back cover.
2. Disconnect headlamp bulb harness connector.
3. Rotate headlamp bulb counterclockwise and unlock it, and then remove headlamp bulb.

## DAYTIME RUNNING LIGHT/ PARKING LAMP BULB

### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace front combination lamp as a set. Refer to [EXL-376, "Removal and Installation"](#).

## FRONT TURN SIGNAL LAMP BULB

LH side

1. Remove air duct 1. Refer to the following.
  - MR20DD: Refer to [EM-31, "Removal and Installation"](#).
  - QR25DE: Refer to [EM-175, "Removal and Installation"](#).
  - R9M: Refer to [EM-308, "Removal and Installation"](#).
2. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
3. Remove front turn signal lamp bulb from turn signal lamp bulb socket.

RH side

1. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
2. Remove front turn signal lamp bulb from turn signal lamp bulb socket.

## FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### Disassembly and Assembly

INFOID:0000000010789901

#### DISASSEMBLY

1. Remove front combination lamp bracket fixing screws, and then remove front combination lamp bracket.
2. Disconnect front combination lamp harness.
3. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
4. Remove front turn signal lamp bulb from front turn signal lamp bulb socket.
5. Remove back cover.
6. Remove headlamp bulb (Hi)
7. Remove socket cover.
8. Remove headlamp bulb (Lo).

#### ASSEMBLY

Note the following items, and then install in the reverse order of removal.

#### **CAUTION:**

- After installing the bulb, install the socket cover, back cover, and bulb socket securely watertightness.
- After installation, perform aiming adjustment. Refer to following.
- LHD MODELS: Refer to [EXL-369, "LHD MODELS : Description"](#).
- RHD MODELS: Refer to [EXL-371, "RHD MODELS : Description"](#).

# FRONT FOG LAMP

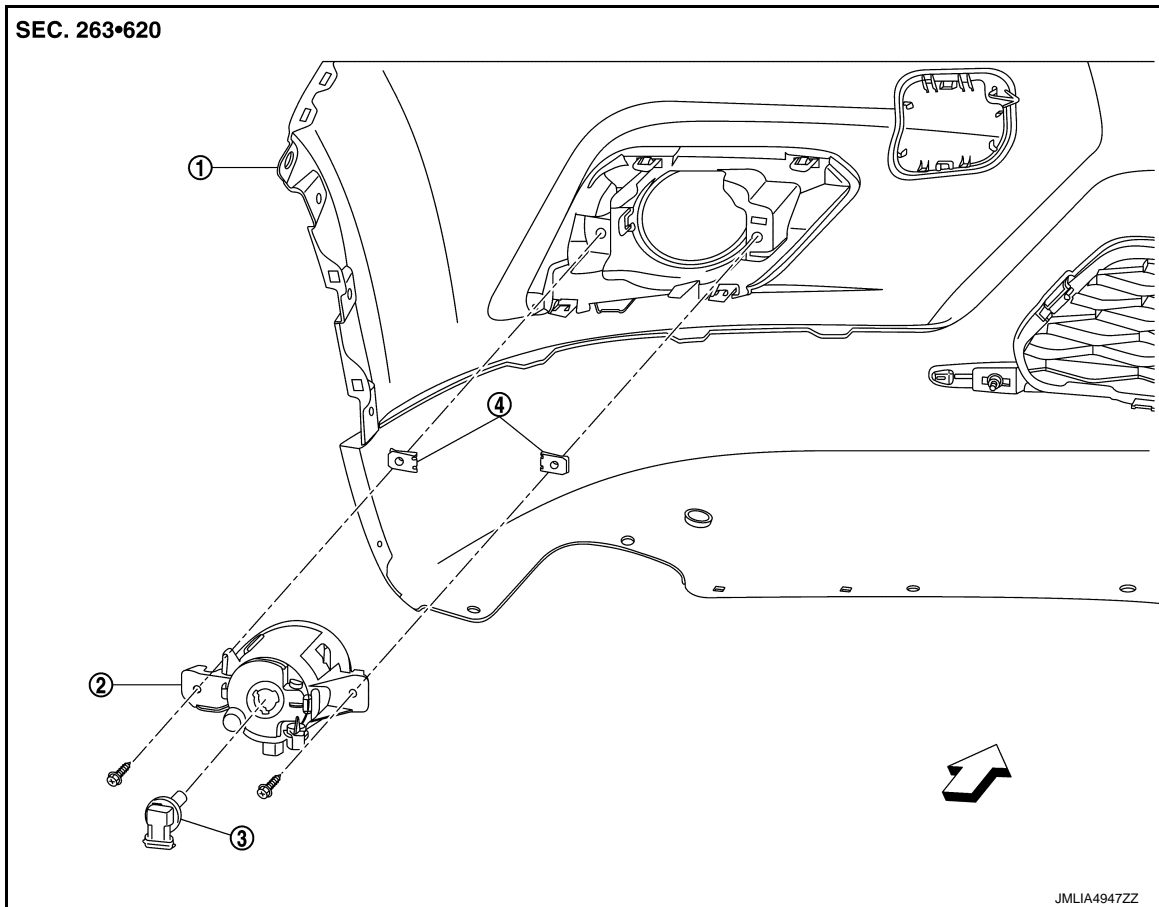
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## FRONT FOG LAMP

Exploded View

INFOID:0000000010789902



① Front bumper fascia

② Front fog lamp

③ Front fog lamp bulb

④ Spring nut

⇐ : Vehicle front

## Removal and Installation

INFOID:0000000010789903

### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Remove front fender protector to make work space. Refer to [EXT-35, "FENDER PROTECTOR : Removal and Installation"](#).
2. Disconnect front fog lamp harness connector.
3. Remove front fog lamp fixing screws, and then remove front fog lamp.

### INSTALLATION

Note the following item, and then install in the reverse order of removal.

### CAUTION:

After installation, perform aiming adjustment. Refer to [EXL-374, "Description"](#).

## Replacement

INFOID:0000000010789904

### CAUTION:

## FRONT FOG LAMP

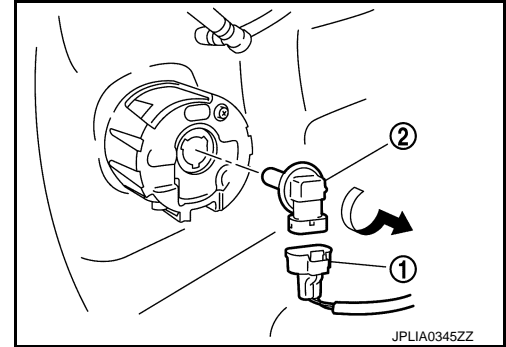
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

### FRONT FOG LAMP BULB

1. Remove fender protector to make work space. Refer to [EXT-35, "FENDER PROTECTOR : Removal and Installation"](#).
2. Disconnect front fog lamp harness connector ①.
3. Rotate front fog lamp bulb ② counterclockwise and unlock it.





## LIGHT & RAIN SENSOR

### Exploded View

INFOID:0000000011008692

Refer to [WW-109, "Exploded View"](#).

### Removal and Installation

INFOID:0000000011008693

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

Remove light & rain sensor. Refer to [WW-109, "Removal and Installation"](#).

#### INSTALLATION

Install in the reverse order of removal.

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## LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

---

### LIGHTING & TURN SIGNAL SWITCH

#### Removal and Installation

INFOID:0000000010789906

#### **CAUTION:**

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

Remove lighting & turn signal switch (combination switch). Refer to [BCS-122, "Removal and Installation"](#).

#### INSTALLATION

Install in the reverse order of removal.

## HAZARD SWITCH

## Removal and Installation

INFOID:0000000010789907

**CAUTION:**

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

## REMOVAL

1. Remove center ventilator grille. Refer to following.
  - LHD MODELS: Refer to [IP-14, "Removal and Installation"](#).
  - RHD MODELS: Refer to [IP-41, "Removal and Installation"](#).
2. Disengage fixing pawls, and then remove hazard switch from center ventilator grille.

## INSTALLATION

Install in the reverse order of removal.

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## HEADLAMP AIMING SWITCH

### Removal and Installation

INFOID:000000010789908

#### REMOVAL

1. Remove instrument lower panel RH. Refer to the following.
  - LHD MODELS: [IP-14, "Removal and Installation"](#).
  - RHD MODELS: [IP-41, "Removal and Installation"](#).
2. Disengage headlamp aiming switch fixing pawls, and then remove headlamp aiming switch from instrument lower panel RH.

#### INSTALLATION

Install in the reverse order of removal.

## SIDE TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### SIDE TURN SIGNAL LAMP

#### Exploded View

INFOID:0000000010789909

Refer to [MIR-27, "Exploded View"](#).

#### Removal and Installation

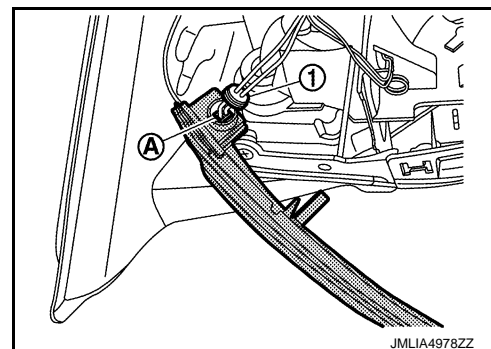
INFOID:0000000010789910

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Remove door mirror cover. Refer to [MIR-30, "DOOR MIRROR COVER : Removal and Installation"](#).
2. Remove side turn signal lamp fixing screws.
3. Remove seal packing ① and disconnect side turn signal lamp harness connector ②, and then remove side turn signal lamp from door mirror housing.



#### INSTALLATION

Install in the reverse order of removal.

#### Replacement

INFOID:0000000010789911

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### SIDE TURN SIGNAL LAMP BULB

#### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace side turn signal lamp as a set. Refer to [EXL-385, "Removal and Installation"](#).

EXL

# REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

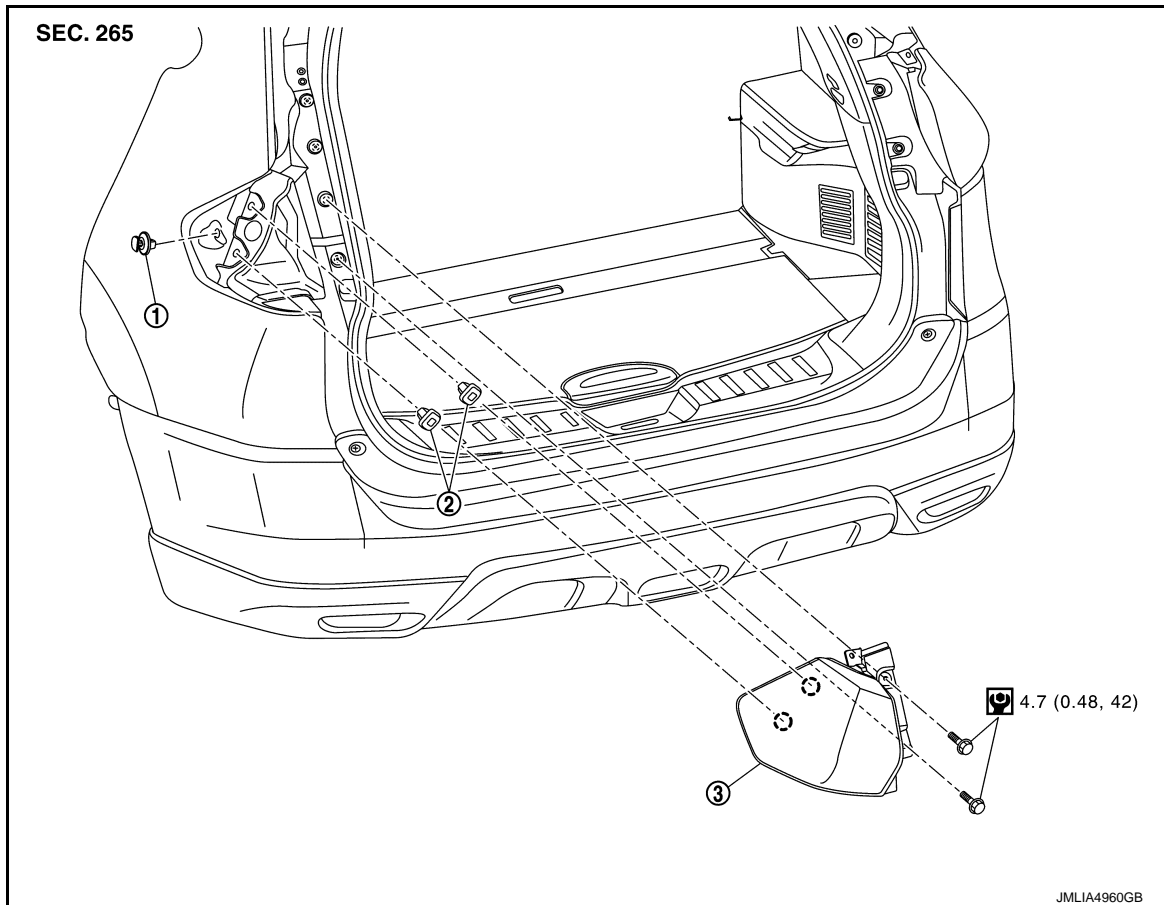
## REAR COMBINATION LAMP

### Exploded View

INFOID:000000010789912

### REMOVAL

#### Body Side



① Clip

② Grommet

③ Rear combination lamp  
(body side)

⊖ : Clip

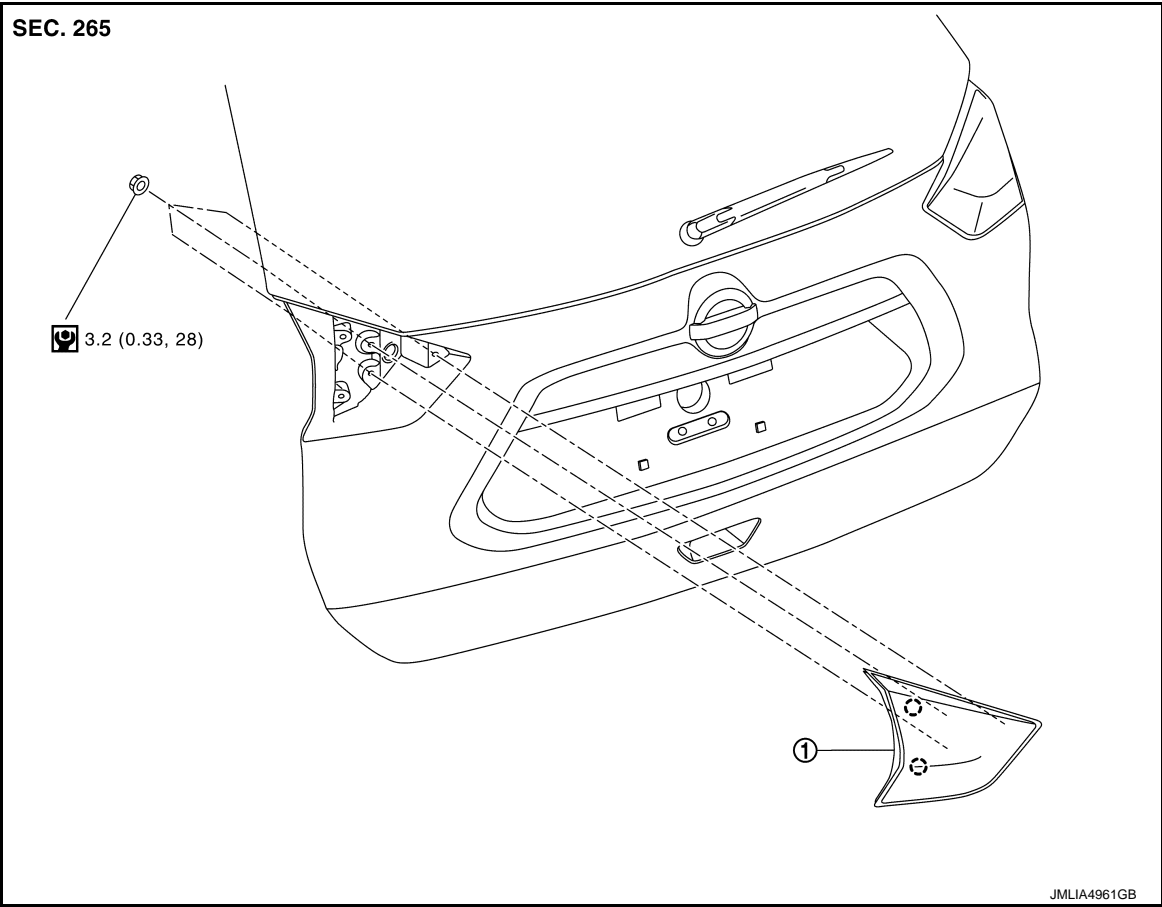
⊖ : N·m (kg·m, in·lb)

#### Back Door Side

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]



① Rear combination lamp  
(back door side)

⊖ : Clip

⊙ : N·m (kg·m, in·lb)

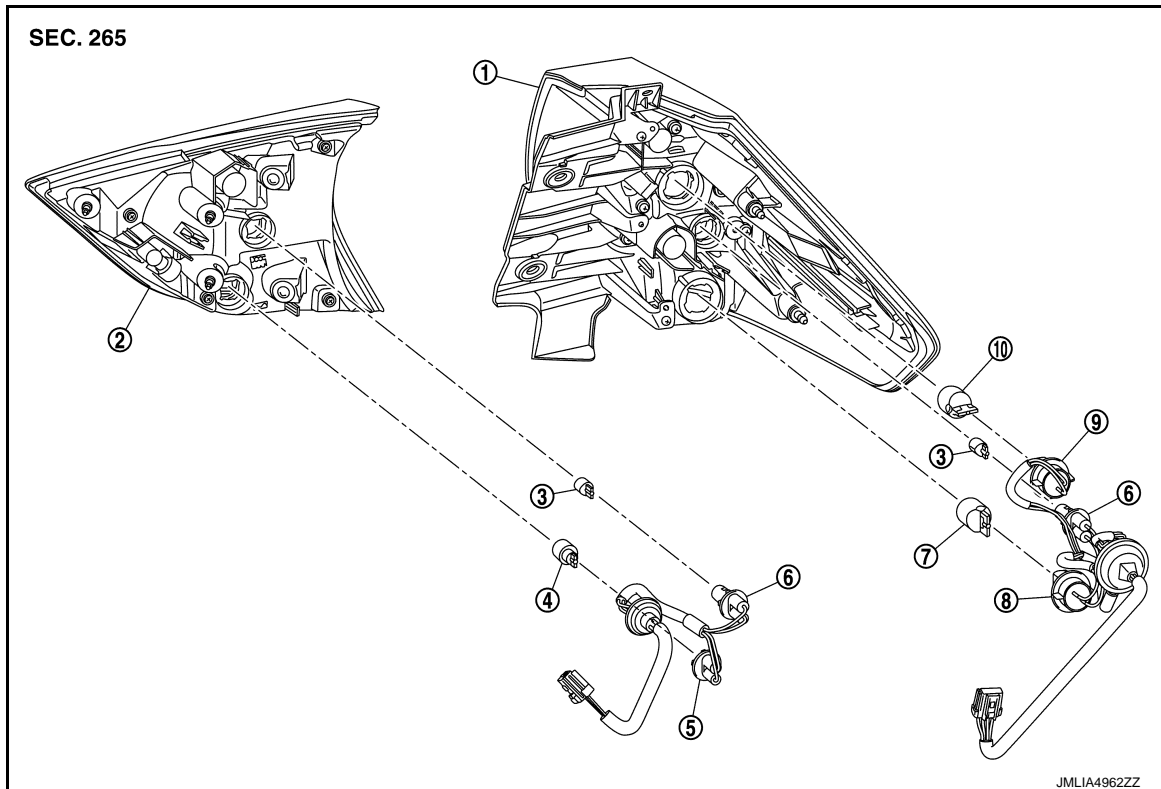
DISASSEMBLY

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# REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]



- |                                     |  |                         |
|-------------------------------------|--|-------------------------|
| ① Rear combination lamp (body side) | ② Rear combination lamp (back door side) | ③ Tail lamp bulb        |
| ④ Back-up lamp bulb                 | ⑤ Back-up lamp bulb socket               | ⑥ Tail lamp bulb socket |
| ⑦ Rear turn signal lamp bulb        | ⑧ Rear turn signal lamp bulb socket      | ⑨ Stop lamp bulb socket |
| ⑩ Stop lamp bulb                    |  |                         |

## REAR COMBINATION LAMP (BODY SIDE)

### REAR COMBINATION LAMP (BODY SIDE) : Removal and Installation

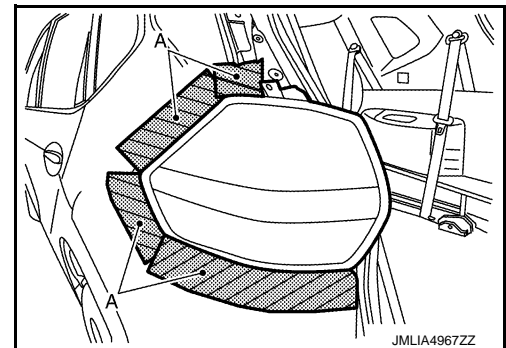
INFOID:0000000010789913

#### CAUTION:

Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Fully open back door.
2. Remove rear spoiler. Refer to [EXT-64, "Removal and Installation"](#).
3. Remove rear combination lamp (body side) mounting bolts.
4. Apply protective tapes (A) on the part to protect it from damage.



5. Remove luggage side lower finisher. Refer to [INT-43, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).

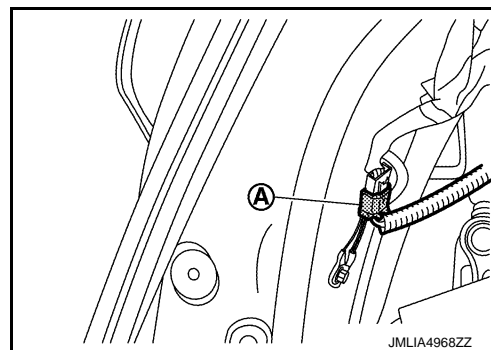


## REAR COMBINATION LAMP


### < REMOVAL AND INSTALLATION >

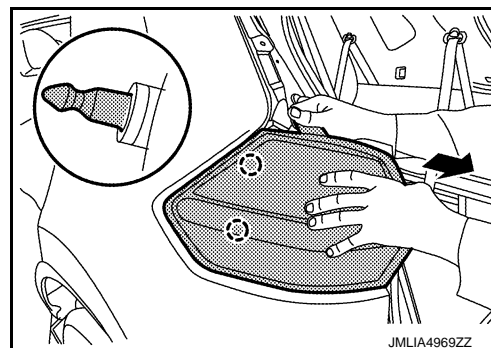
[HALOGEN HEADLAMP]

6. Disconnect rear combination lamp (body side) harness connector (A).



7. Pull rear combination lamp (body side) toward vehicle rear to disengage fixing clips, and then remove rear combination lamp (body side).

 : Clip



### INSTALLATION

Install in the reverse order of removal.

### REAR COMBINATION LAMP (BODY SIDE) : Replacement

INFOID:0000000010789914

#### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

### TAIL LAMP BULB

1. Remove rear combination lamp (body side). Refer to [EXL-388, "REAR COMBINATION LAMP \(BODY SIDE\) : Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise, and then remove tail lamp bulb socket.
3. Remove tail lamp bulb from tail lamp bulb socket.

### STOP LAMP BULB

1. Remove rear combination lamp (body side). Refer to [EXL-388, "REAR COMBINATION LAMP \(BODY SIDE\) : Removal and Installation"](#).
2. Rotate stop lamp bulb socket counterclockwise, and then remove stop lamp bulb socket.
3. Remove stop lamp bulb from stop lamp bulb socket.

### REAR TURN SIGNAL LAMP BULB

1. Remove rear combination lamp (body side). Refer to [EXL-388, "REAR COMBINATION LAMP \(BODY SIDE\) : Removal and Installation"](#).
2. Rotate rear turn signal lamp bulb socket counterclockwise, and then remove rear turn signal lamp bulb socket.
3. Remove rear turn signal lamp bulb from rear turn signal lamp bulb socket.

### REAR COMBINATION LAMP (BACK DOOR SIDE)

## REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### REAR COMBINATION LAMP (BACK DOOR SIDE) : Removal and Installation

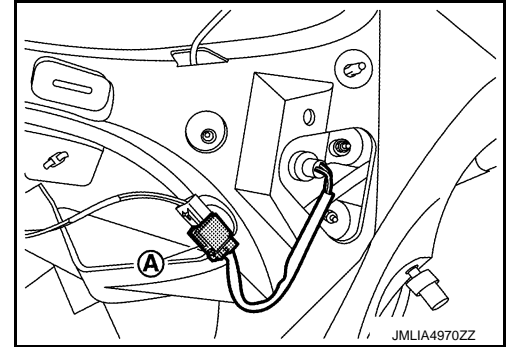
INFOID:000000010789915

#### CAUTION:

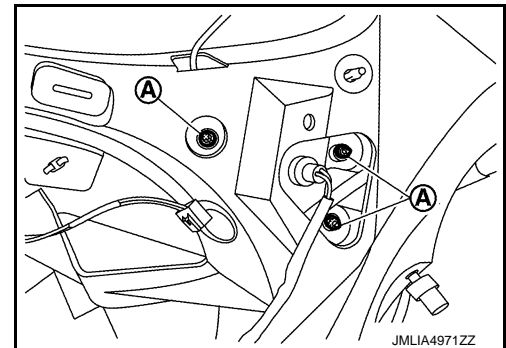
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

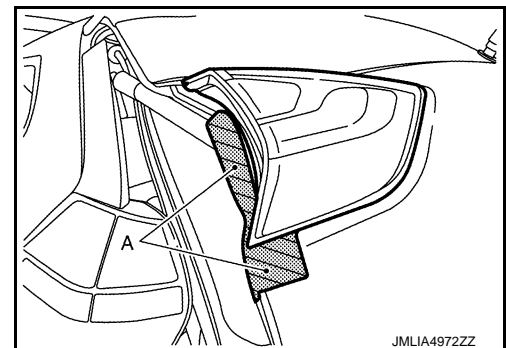
1. Fully open back door.
2. Remove back door inner finisher. Refer to [INT-47, "Removal and Installation"](#).
3. Disconnect rear combination lamp (back door side) harness connector (A).




4. Remove rear combination lamp (back door side) mounting nuts (A).

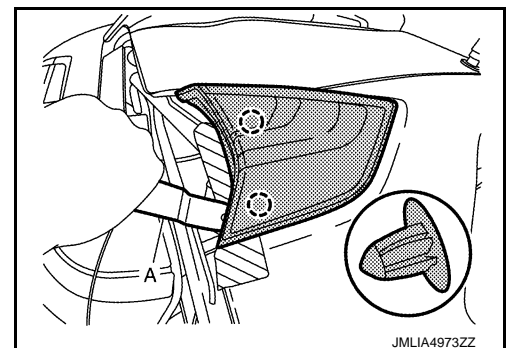


5. Apply protective tape (A) on the part to protect it from damage.



6. Disengage rear combination lamp (back door side) fixing clips using a remover tool (A), and then remove rear combination lamp (back door side).

 : Clip



#### INSTALLATION

# REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

Install in the reverse order of removal.

## REAR COMBINATION LAMP (BACK DOOR SIDE) : Replacement

INFOID:000000010789916

### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

### TAIL LAMP BULB

1. Remove rear combination lamp (back door side). Refer to [EXL-390, "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise, and then remove tail lamp bulb socket.
3. Remove tail lamp bulb from tail lamp bulb socket.

### BACK-UP LAMP BULB

1. Remove rear combination lamp (back door side). Refer to [EXL-390, "REAR COMBINATION LAMP \(BACK DOOR SIDE\) : Removal and Installation"](#).
2. Rotate back-up lamp bulb socket counterclockwise, and then remove back-up lamp bulb socket.
3. Remove back-up lamp bulb from back-up lamp bulb socket.

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EXL

# HIGH-MOUNTED STOP LAMP

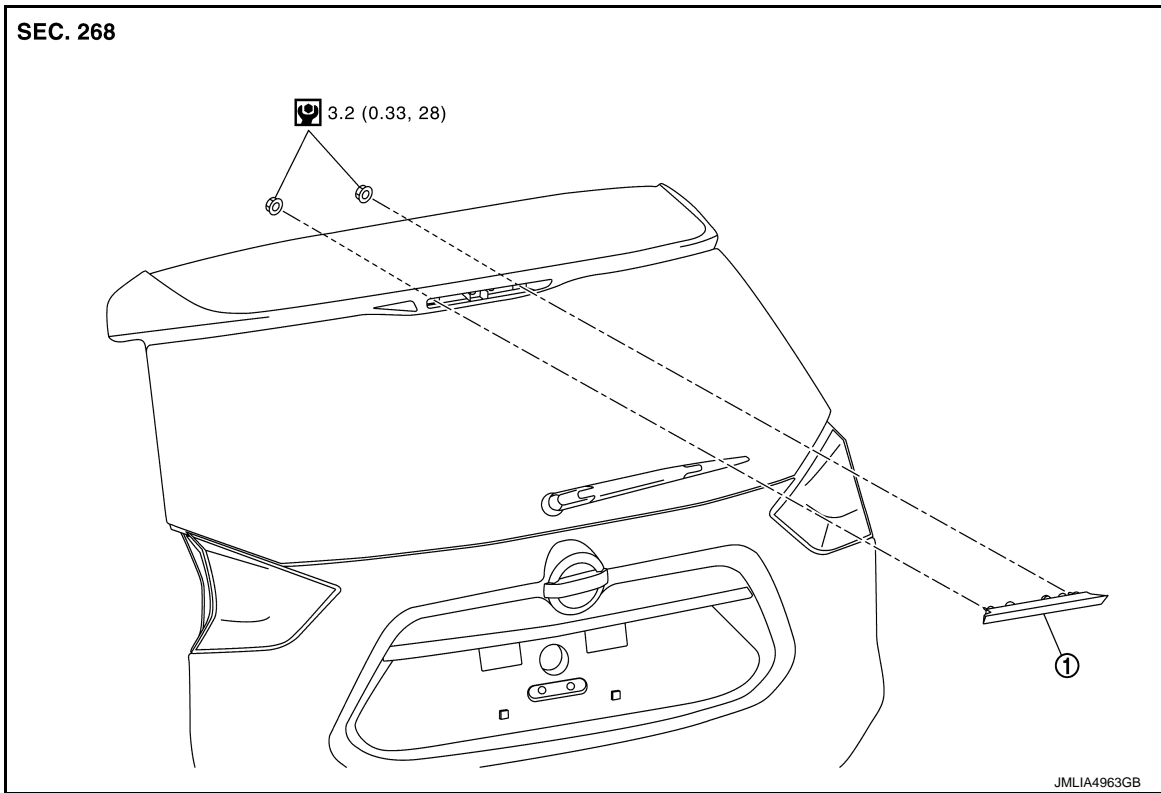
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000010789917



① High-mounted stop lamp

: N·m (kg·m, in-lb)

## Removal and Installation

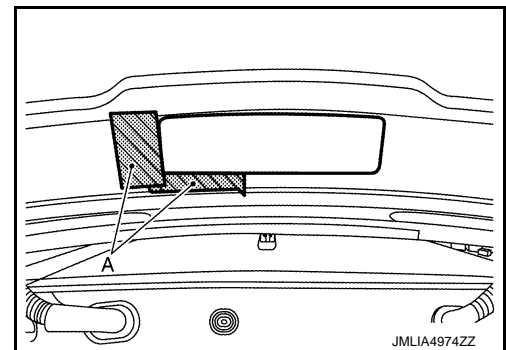
INFOID:0000000010789918

### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Fully open back door.
2. Apply protective tapes (A) on the part to protect it from damage.

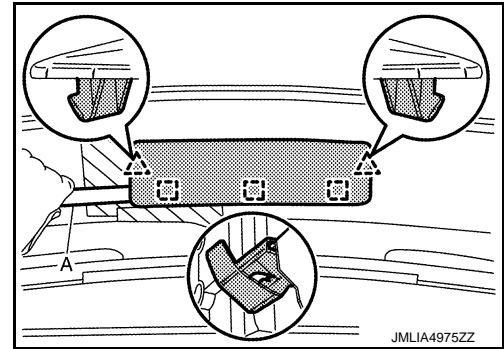
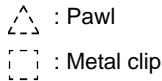


# HIGH-MOUNTED STOP LAMP

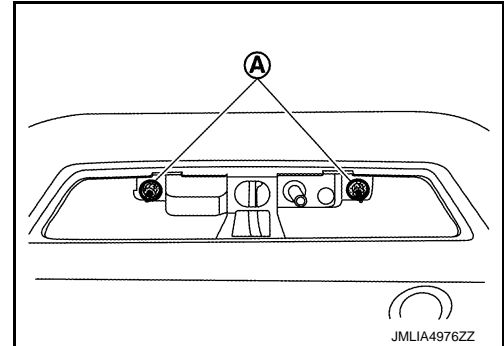
## < REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

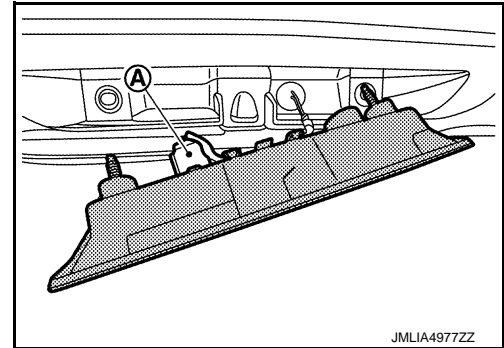
3. Disengage back door cover fixing metal clips and pawls using a remover tool (A), and then remove back door cover.



4. Remove high-mounted stop lamp mounting nuts (A).



5. Disconnect high-mounted stop lamp harness connector (A), and then remove high-mounted stop lamp.



## INSTALLATION

Install in the reverse order of removal.

## Replacement

INFOID:0000000010789919

### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

## HIGH-MOUNTED STOP LAMP BULB

### CAUTION:

Replacement of a single part is not possible due to the adoption of LED bulb. For replacement, replace high-mounted stop lamp unit as a set. Refer to [EXL-392, "Removal and Installation"](#).

# LICENSE PLATE LAMP

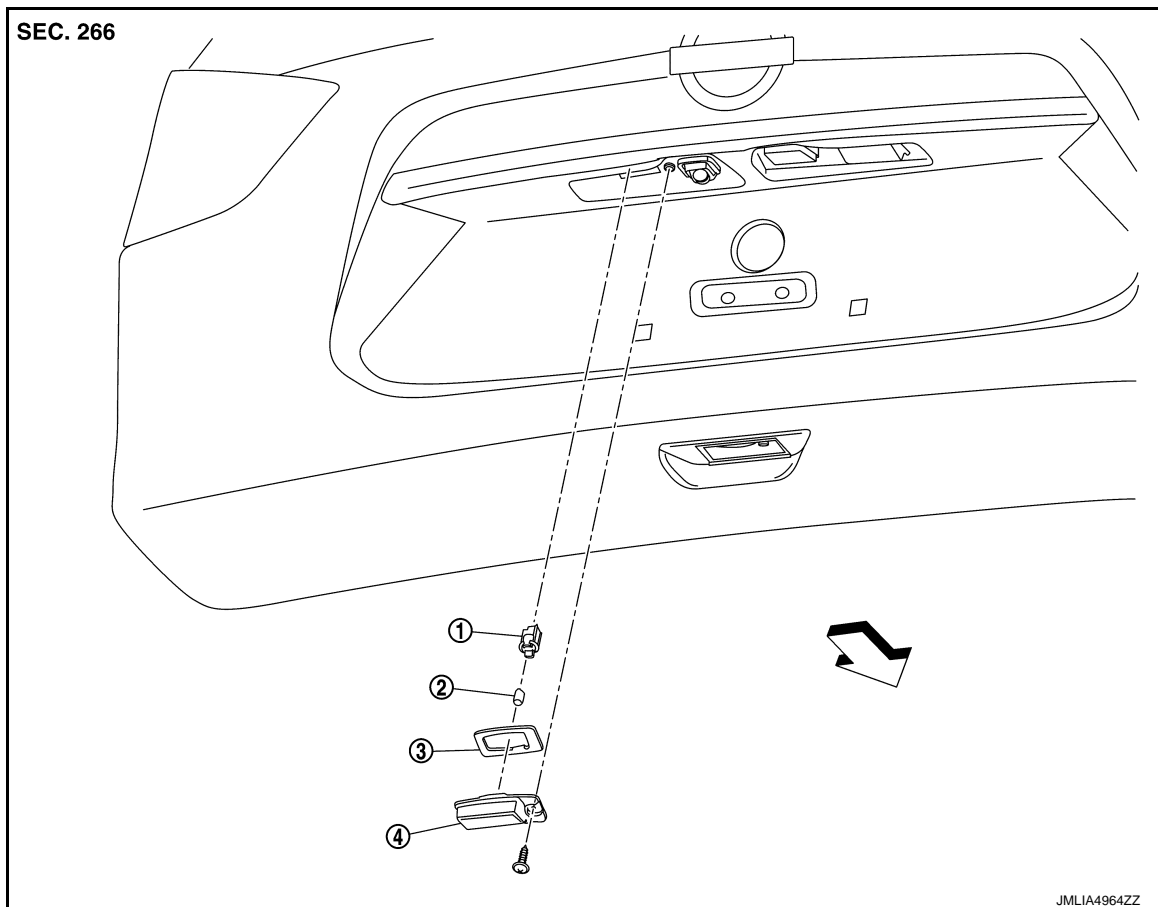
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## LICENSE PLATE LAMP

Exploded View

INFOID:0000000010789920



① License plate lamp bulb socket

② License plate lamp bulb

③ Seal packing

④ License plate lamp housing

↙ : Vehicle front

## Removal and Installation

INFOID:0000000010789921

### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

### REMOVAL

1. Remove back door finisher cap. Refer to [EXT-66, "Removal and Installation"](#).
2. Remove license plate lamp fixing screw.
3. Disengage license plate lamp housing fixing portion from back door.
4. Disconnect license plate lamp harness connector, and then remove license plate lamp.

### INSTALLATION

Install in the reverse order of removal.

## Replacement

INFOID:0000000010789922

### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

# LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned OFF.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

## LICENSE PLATE LAMP BULB

1. Remove license plate lamp. Refer to [EXL-394, "Removal and Installation"](#).
2. Rotate license plate lamp bulb socket counterclockwise and unlock it.
3. Remove license plate lamp bulb from license plate lamp bulb socket.

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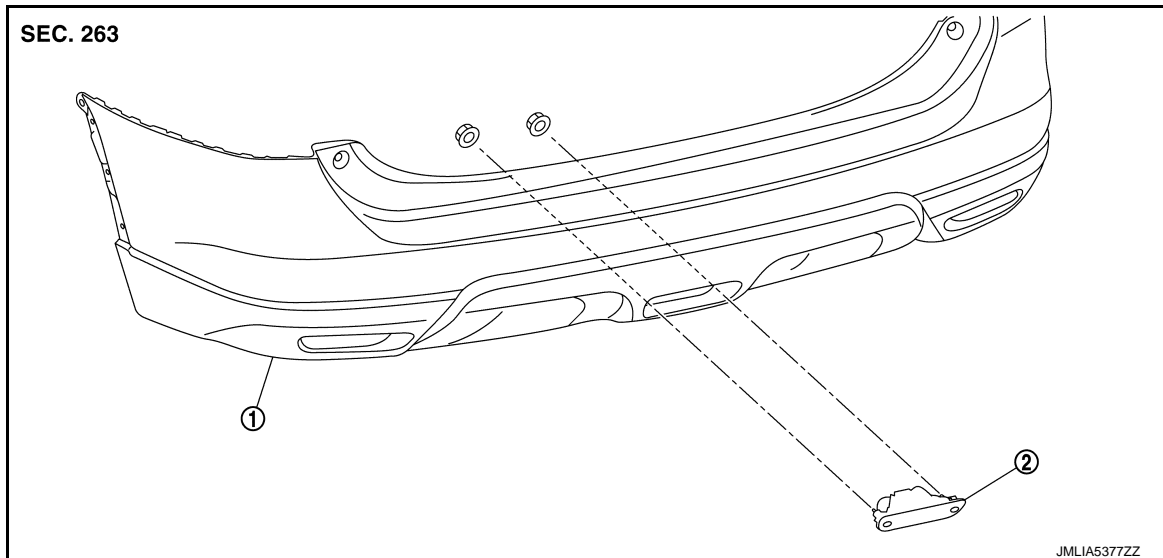
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## REAR FOG LAMP

### Exploded View

INFOID:000000010789923



① Rear bumper fascia

② Rear fog lamp

### Removal and Installation

INFOID:000000010789924

#### CAUTION:

Disconnect battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).

#### REMOVAL

1. Remove rear bumper fascia. Refer to [EXT-18, "Removal and Installation"](#).
2. Remove rear fog lamp mounting nuts.
3. Remove rear fog lamp from rear bumper fascia.

#### INSTALLATION

Install in the reverse order of removal.

### Replacement

INFOID:000000010789925

#### CAUTION:

- Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to [EXL-214, "Precautions for Removing Battery Terminal"](#).
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned OFF.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

#### REAR FOG LAMP BULB

1. Remove rear bumper fascia. Refer to [EXT-18, "Removal and Installation"](#).
2. Disconnect rear fog lamp bulb harness connector.
3. Rotate rear fog lamp bulb socket counterclockwise and unlock it.
4. Remove rear fog lamp bulb from rear fog lamp bulb socket.



# REAR REFLEX REFLECTOR

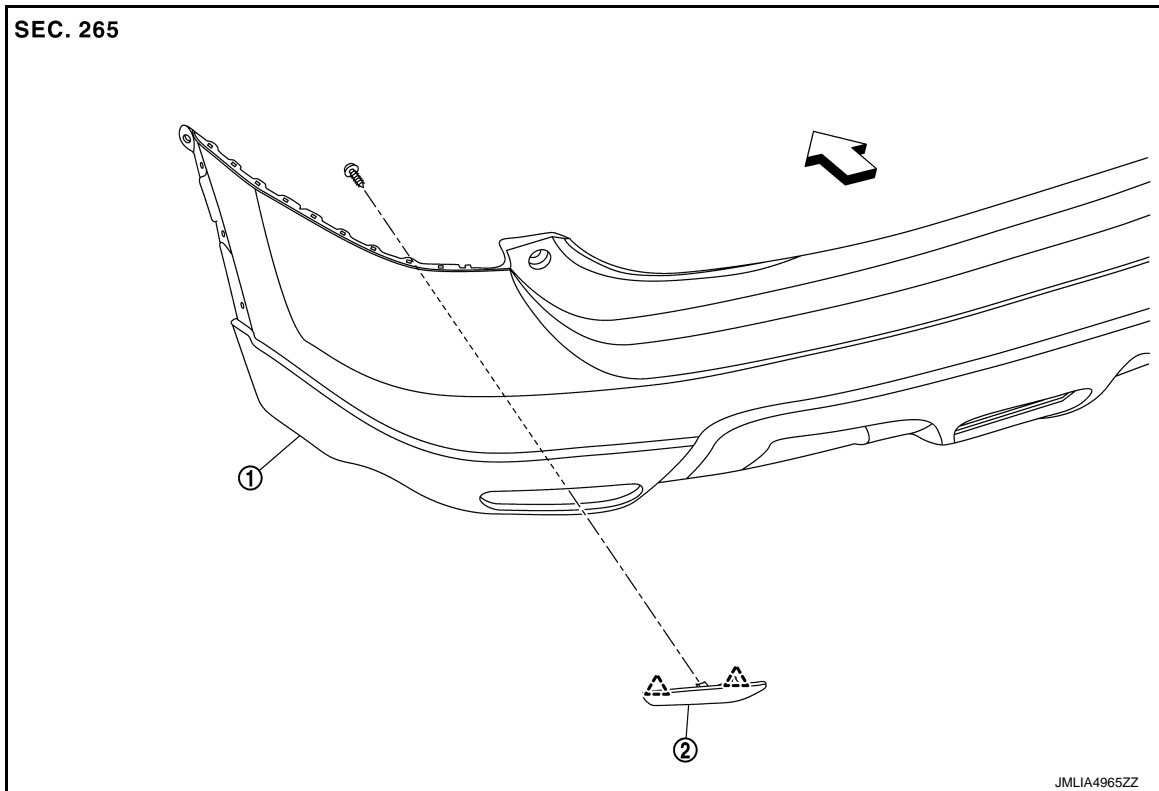
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## REAR REFLEX REFLECTOR

Exploded View

INFOID:0000000010789926



① Rear bumper fascia

② Rear reflex reflector

△ : Pawl

⇐ : Vehicle front

## Removal and Installation

INFOID:0000000010789927

### REMOVAL

1. Remove rear bumper fascia. Refer to [EXT-18, "Removal and Installation"](#).
2. Remove rear reflex reflector fixing screw and pawls, and then remove rear reflex reflector.

### INSTALLATION

Install in the reverse order of removal.

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## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN HEADLAMP]

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Bulb Specifications

INFOID:0000000010789928

#### Bulb Specifications

| Item                   |  | Type          | Wattage (W) |
|------------------------|--|---------------|-------------|
| Front combination lamp | Headlamp (Hi)                          | H9            | 65          |
|                        | Headlamp (Lo)                          | H11           | 55          |
|                        | Parking lamp/<br>daytime running light | LED           | —           |
|                        | Front turn signal lamp                 | WY21W (Amber) | 21          |
| Front fog lamp         |  | H11           | 55          |
| Side turn signal lamp  |  | LED           | —           |
| Rear combination lamp  | Stop lamp                              | W21W          | 21          |
|                        | Tail lamp                              | W5W           | 5           |
|                        | Rear turn signal lamp                  | WY21W         | 21          |
|                        | Back-up lamp                           | W16W          | 16          |
| Rear fog lamp          |  | W21W          | 21          |
| License plate lamp     |  | W5W           | 5           |
| High-mounted stop lamp |  | LED           | —           |