

# EXL

## SECTION EXL

### EXTERIOR LIGHTING SYSTEM

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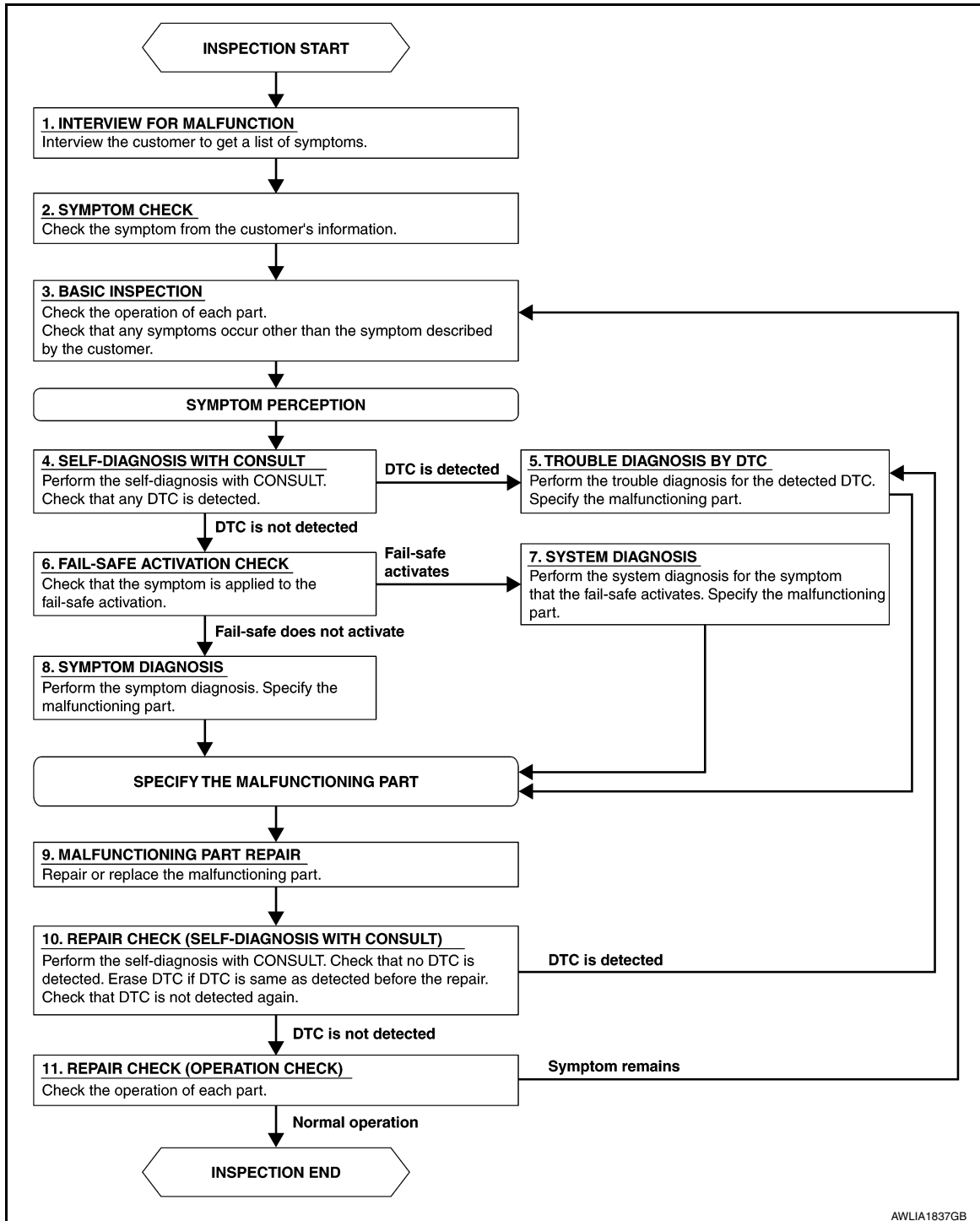
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000010050178

#### OVERALL SEQUENCE



AWLIA1837GB

#### DETAILED FLOW

### 1. INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

# DIAGNOSIS AND REPAIR WORKFLOW

[XENON TYPE]

< BASIC INSPECTION >

>> GO TO 2.

## 2. SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3.

## 3. BASIC INSPECTION

Check the operation of each part. Check if any concerns occur other than those mentioned in the customer interview.

>> GO TO 4.

## 4. SELF-DIAGNOSIS WITH CONSULT

Perform the self diagnosis with CONSULT. Check if any DTC is detected.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

## 5. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9.

## 6. FAIL-SAFE ACTIVATION CHECK

Determine if the customer's concern is related to fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7.

NO >> GO TO 8.

## 7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system in which the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9.

## 8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

## 9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

## 10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

Perform the self diagnosis with CONSULT. Verify that no DTCs are detected. Erase all DTCs which were detected prior to the repair. Perform the self diagnosis with CONSULT again. Verify that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 11.

## 11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

A

B

C

D

E

F

G

H

I

J

K

EXL

M

N

O

P

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[XENON TYPE]

---

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 3.



# HEADLAMP

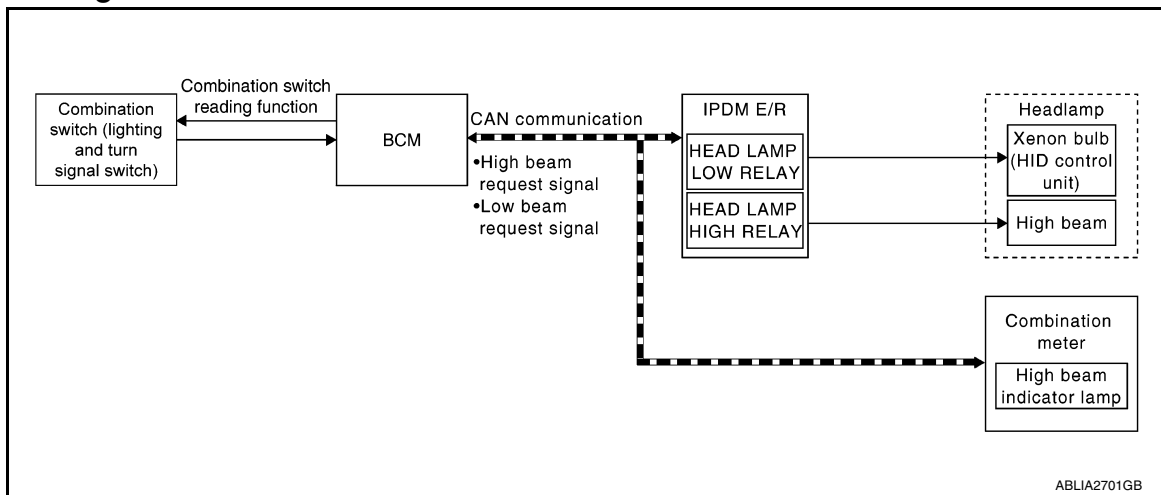
< SYSTEM DESCRIPTION >

[XENON TYPE]

## SYSTEM DESCRIPTION

### HEADLAMP

#### System Diagram



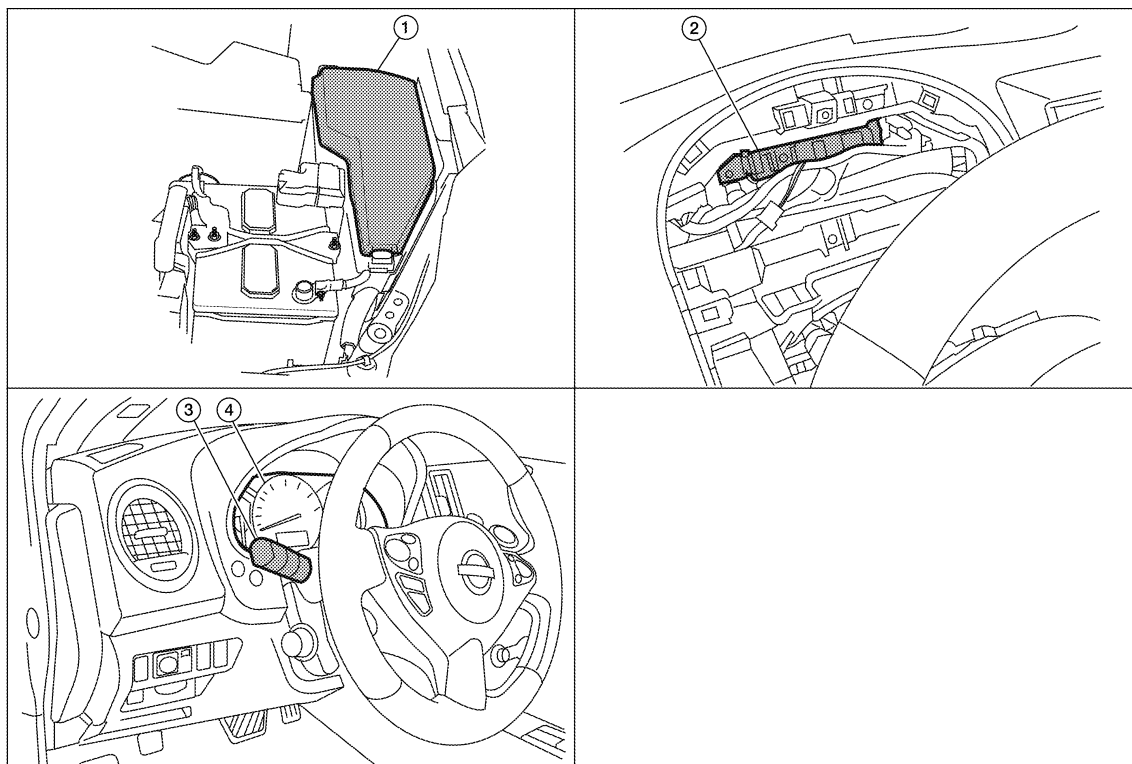
#### System Description

INFOID:0000000010050180

Control of the headlamp system is dependent upon the position of the combination switch (lighting and turn signal switch). When the lighting switch is placed in the 2nd position, the BCM (body control module) receives input requesting the headlamps and park lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the headlamp high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

#### Component Parts Location

INFOID:0000000010050181



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

# HEADLAMP

< SYSTEM DESCRIPTION >

[XENON TYPE]

1. IPDM E/R E17, E18, E200
2. BCM M16, M17, M18, M19 (view with combination meter removed)
3. Combination Switch (lighting and turn signal switch) M28
4. Combination Meter M24

## Component Description

INFOID:000000010050182

### XENON HEADLAMP

A Xenon type headlamp is adapted to the low beam headlamps. Xenon bulbs do not use a filament. Instead, they produce light when a high voltage current is passed between two tungsten electrodes through a mixture of Xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic control of the power supply gives the headlamps stable quality and tone color.

Following are some of the many advantages of the Xenon-type headlamp.

- The light produced by the headlamps is a white color comparable to sunlight that is easy on the eyes.
- Light output is nearly double that of halogen headlamps, affording increased area of illumination.
- The light features a high relative spectral distribution at wavelengths to which the human eye is most sensitive. This means that even in the rain, more light is reflected back from the road surface toward the vehicle for added visibility.
- Power consumption is approximately 25 percent less than halogen headlamps, reducing battery load.

### HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the lighting switch in the 2ND position and placed in HIGH position, the BCM receives input requesting the headlamp high beams to illuminate. The flash-to-pass feature can be used any time and also sends a signal to the BCM. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the combination meter controls the ON/OFF status of the HIGH BEAM indicator. The CPU of the IPDM E/R controls the headlamp high relay coil which directs power to the high beam headlamps.

### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to [EXL-28. "BATTERY SAVER : CONSULT Function \(BCM - BATTERY SAVER\)".](#)

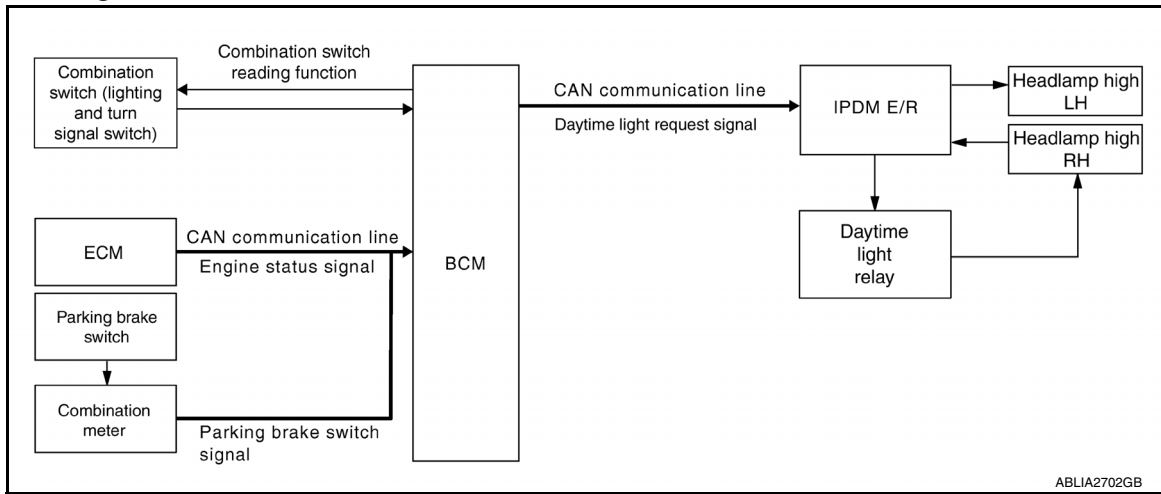
# DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

## DAYTIME RUNNING LIGHT SYSTEM

### System Diagram



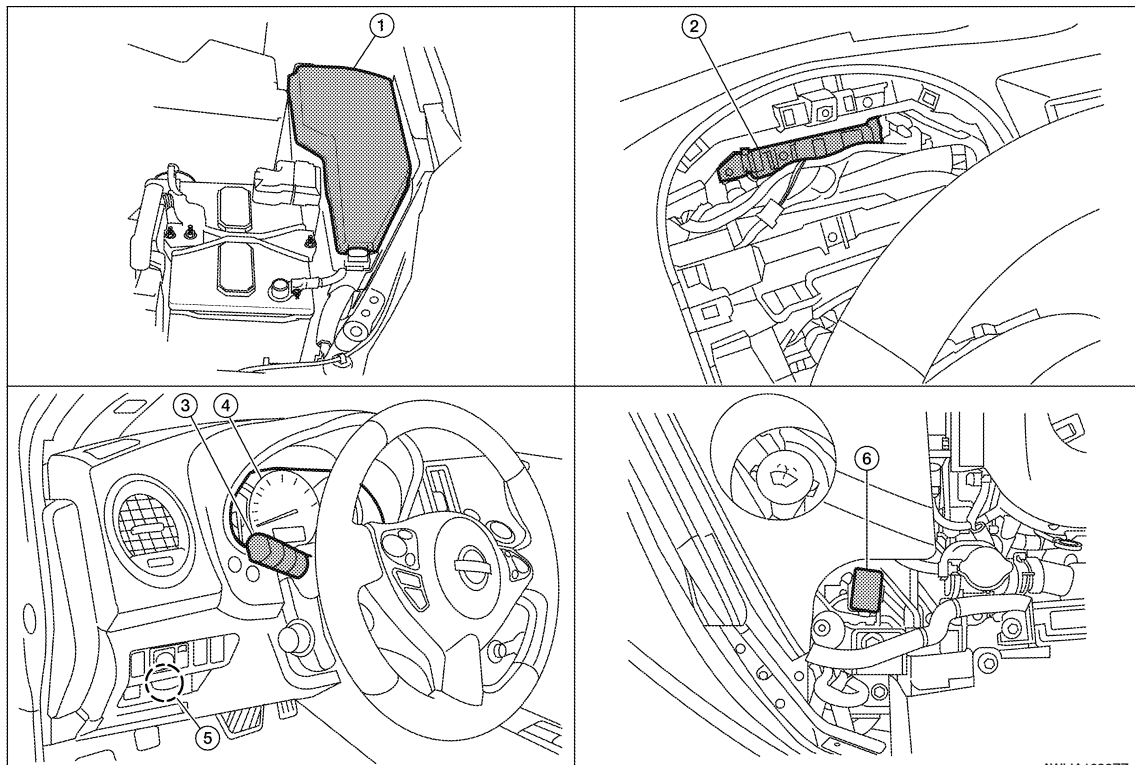
### System Description

INFOID:000000010050184

The headlamp system for Canada vehicles is equipped with a daytime light relay that activates the high beam headlamps at approximately half illumination whenever the engine is running. If the parking brake is depressed before the engine is started, the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is depressed.

### Component Parts Location

INFOID:000000010050185



- |                                  |   |   |
|----------------------------------|---|---|
| 1. IPDM E/R E17, E18, E200, E201 | 2. BCM M16, M17, M18, M19 (view with combination meter removed) | 3. Combination switch (lighting and turn signal switch) M28 |
| 4. Combination meter M24         | 5. Parking brake switch E35                                     | 6. Daytime light relay E228                                 |

# DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

INFOID:000000010050186

After starting the engine with the parking brake released and the lighting switch in the OFF or 1ST position, the headlamp high beam automatically turns on. With the lighting switch in the 2nd position or with autolamps ON, the headlamps function the same as conventional light systems.

## OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay which in turn, provides power to the ground side of the RH high beam lamp. Power flows backward through the RH high beam lamp to the IPDM E/R, through the high beam fuses, through the LH high beam lamp circuit to the LH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

| Engine                                   |           | With engine stopped |    |   |     |    |   |     |    |   | With engine running |    |   |     |    |   |     |    |   |
|--|-----------|---------------------|----|---|-----|----|---|-----|----|---|---------------------|----|---|-----|----|---|-----|----|---|
| Lighting switch                          |           | OFF                 |    |   | 1ST |    |   | 2ND |    |   | OFF                 |    |   | 1ST |    |   | 2ND |    |   |
|  |           | Hi                  | Lo | P | Hi  | Lo | P | Hi  | Lo | P | Hi                  | Lo | P | Hi  | Lo | P | Hi  | Lo | P |
| Headlamp                                 | High beam | -                   | -  | - | -   | -  | × | ×   | -  | × | ●*                  | ●* | × | ●*  | ●* | × | ×   | -  | × |
|  | Low beam  | -                   | -  | - | -   | -  | × | ×   | ×  | × | -                   | -  | × | -   | -  | × | ×   | ×  | × |
| Tail lamp                                |           | -                   | -  | - | ×   | ×  | × | ×   | ×  | × | -                   | -  | - | ×   | ×  | × | ×   | ×  | × |
| License and instrument illumination lamp |           | -                   | -  | - | ×   | ×  | × | ×   | ×  | × | -                   | -  | - | ×   | ×  | × | ×   | ×  | × |

- Hi: "HIGH BEAM" position
- Lo: "LOW BEAM" position
- P: "FLASH TO PASS" position
- ×: Lamp "ON"
- -: Lamp "OFF"
- ●: Lamp dims. (Added functions)
- \*: When starting the engine with the parking brake released, the daytime lights will operate.  
When starting the engine with the parking brake depressed, the daytime lights will not operate.

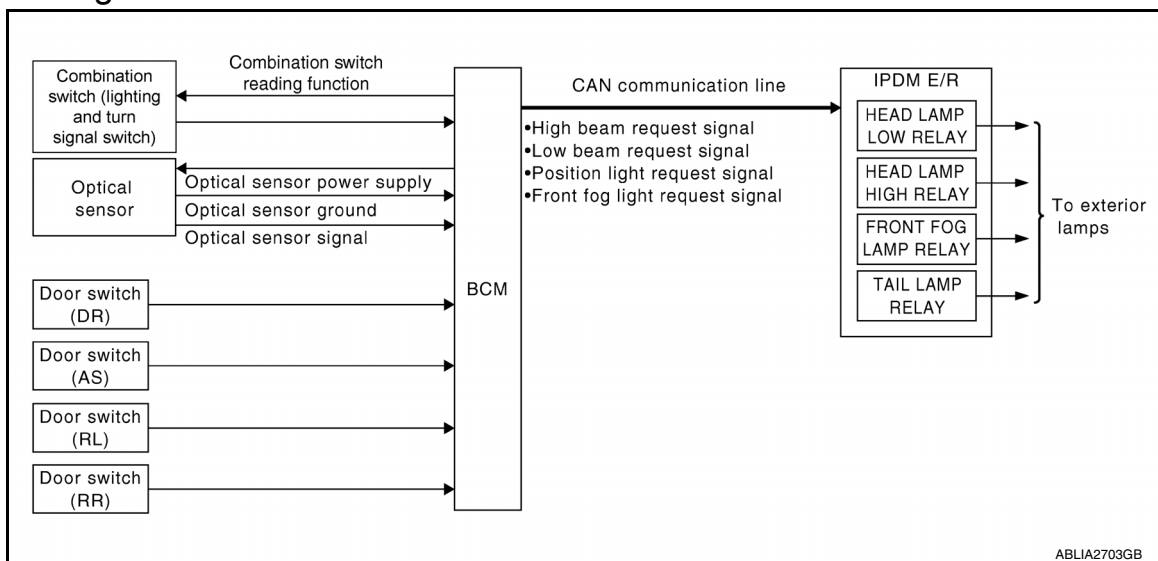
# AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

## AUTO LIGHT SYSTEM

### System Diagram



### System Description

INFOID:000000010050188

- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail, front fog lamps and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness of 800 to 2,500 lux, converts light (lux) to voltage, and then sends the optical sensor signal to BCM.

### OUTLINE

The auto light control system has an optical sensor that detects outside brightness. When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, refer to [EXL-26, "HEADLAMP : CONSULT Function \(BCM - HEAD LAMP\)"](#).

EXL

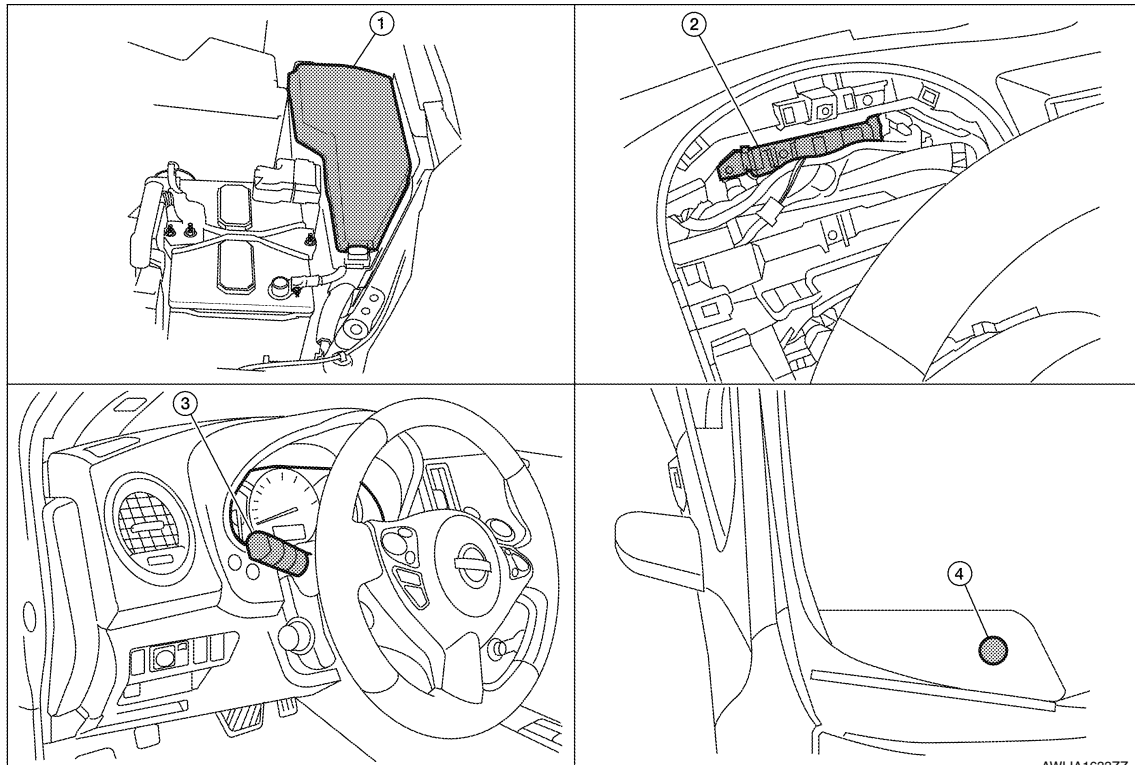
# AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Parts Location

INFOID:000000010050189



1. IPDM E/R E17, E18, E20
2. BCM M16, M17, M18, M19, M21 (view with combination meter removed)
3. Combination switch (lighting and turn signal switch) M28
4. Optical sensor M66

## Component Description

INFOID:000000010050190

### AUTO LIGHT OPERATION

#### Applicable lamps

- Low beam headlamp
- Parking, license plate and tail lamps
- High beam headlamp (with the lighting switch in HIGH BEAM position)
- Front fog lamp (with the lighting switch in front fog lamp ON position)

When the lighting switch is in AUTO position with the ignition switch in ON position, BCM detects the AUTO LIGHT (ON) by BCM combination switch (lighting and turn signal switch) reading function. BCM automatically turns ON/OFF the applicable lamps according to ambient brightness.

#### NOTE:

Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT. Refer to [EXL-26](#), "[HEADLAMP : CONSULT Function \(BCM - HEAD LAMP\)](#)".

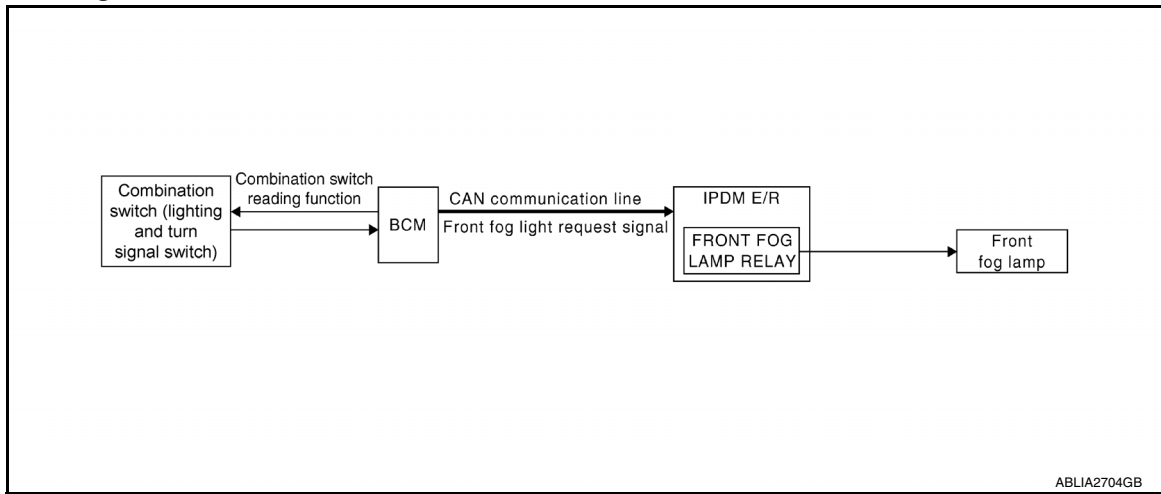
# FRONT FOG LAMP

< SYSTEM DESCRIPTION >

[XENON TYPE]

## FRONT FOG LAMP

### System Diagram



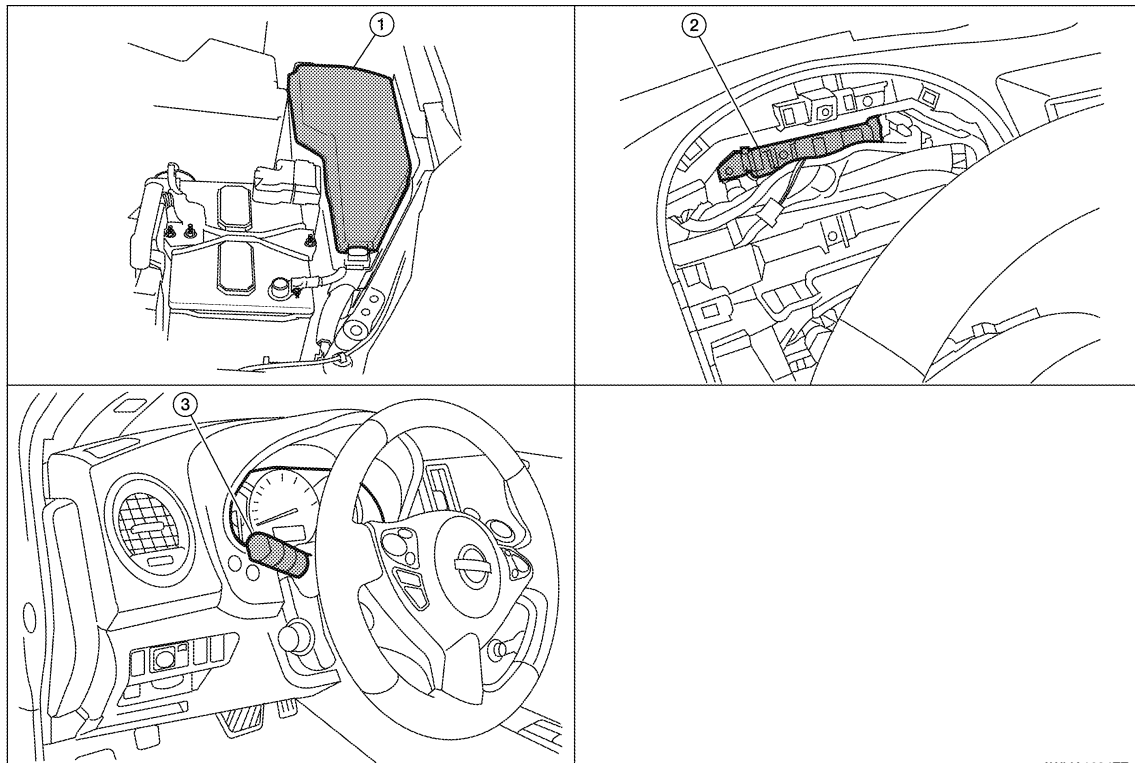
### System Description

INFOID:0000000010050192

- BCM (Body Control Module) controls front fog lamp operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates front fog lamp according to CAN communication signals from BCM.
- Combination meter operates front fog lamp indicator according to inputs via the CAN communication lines.

### Component Parts Location

INFOID:0000000010050193



1. IPDM E/R E17, E18, E20

2. BCM M16, M17, M18, M19 (view with combination meter removed)

3. Combination switch (lighting and turn signal switch) M28

# FRONT FOG LAMP

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

INFOID:0000000010050194

### FRONT FOG LAMP OPERATION

When the lighting switch is in front fog lamp ON position and also in 1ST or 2ND position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal through the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.

The combination meter also receives a front fog lamp request ON signal through the CAN communication lines at which time it turns the front fog indicator ON.



# TURN SIGNAL AND HAZARD WARNING LAMPS

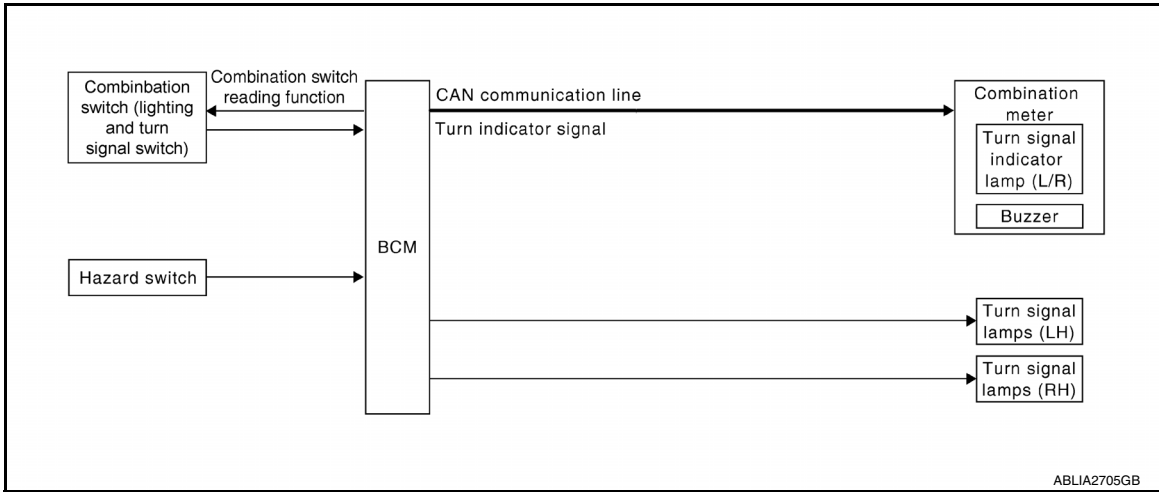
< SYSTEM DESCRIPTION >

[XENON TYPE]

## TURN SIGNAL AND HAZARD WARNING LAMPS

### System Diagram

INFOID:0000000010050195



ABLIA2705GB

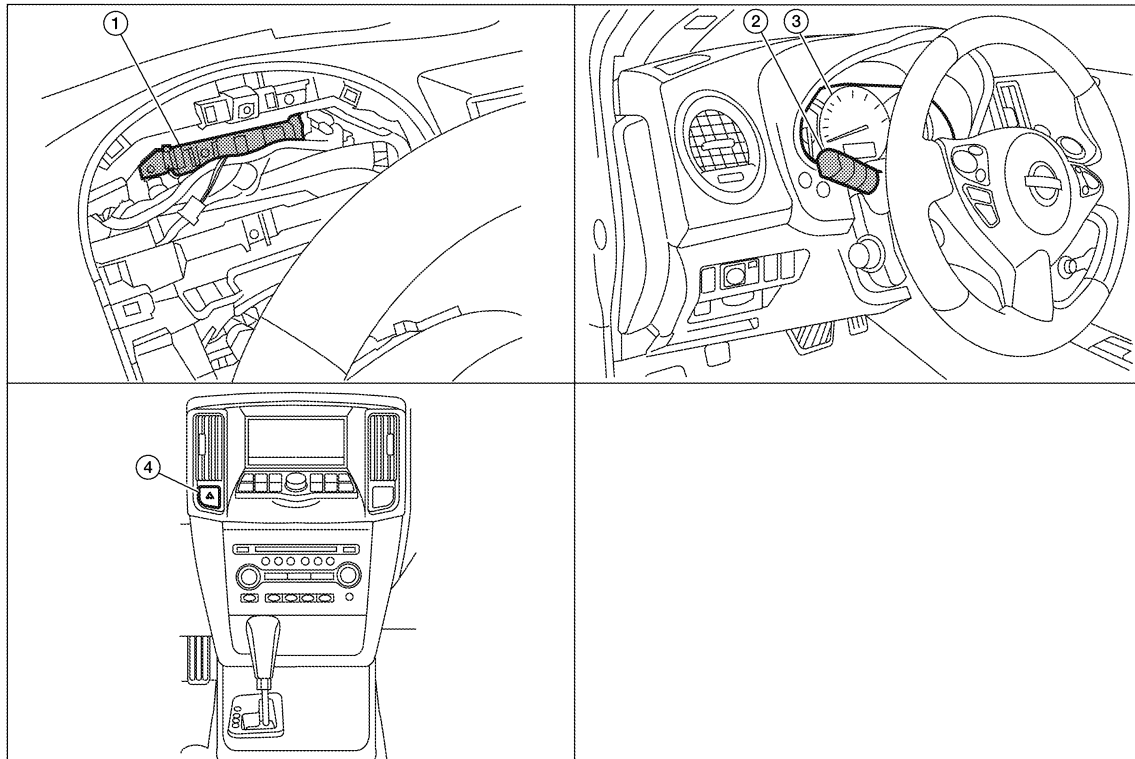
### System Description

INFOID:0000000010050196

- BCM (Body Control Module) controls turn signal lamp (RH and LH) and hazard warning lamp operation.
- Combination meter operates turn signal indicator (RH and LH) according to CAN communication signals from BCM.

### Component Parts Location

INFOID:0000000010050197



AWLIA1635ZZ

1. BCM M16, M17, M18, M19 (view with combination meter removed)
2. Combination switch (lighting and turn signal switch) M28
3. Combination meter M24
4. Hazard switch M54

# TURN SIGNAL AND HAZARD WARNING LAMPS

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

INFOID:000000010050198

### TURN SIGNAL OPERATION

When the turn signal switch is in LH or RH position with the ignition switch in ON position, the BCM detects the TURN RH or TURN LH ON request. The BCM outputs the flasher output signal to the respective turn signal lamp. The BCM sends a turn signal indicator ON request through the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

### HAZARD LAMP OPERATION

When the hazard switch is in ON position, the BCM detects the hazard switch signal ON. The BCM outputs the flasher output signal (right and left). The BCM sends a hazard indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

### REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits Intelligent Key signal to BCM, then BCM controls hazard lamps. Refer to [SEC-19, "System Description"](#).

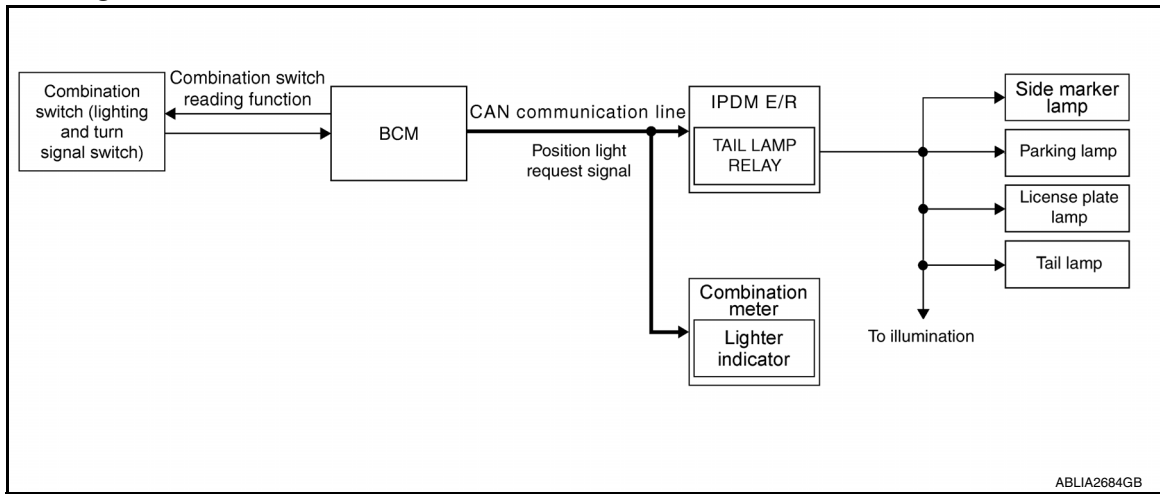
# PARKING, LICENSE PLATE AND TAIL LAMPS

< SYSTEM DESCRIPTION >

[XENON TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS

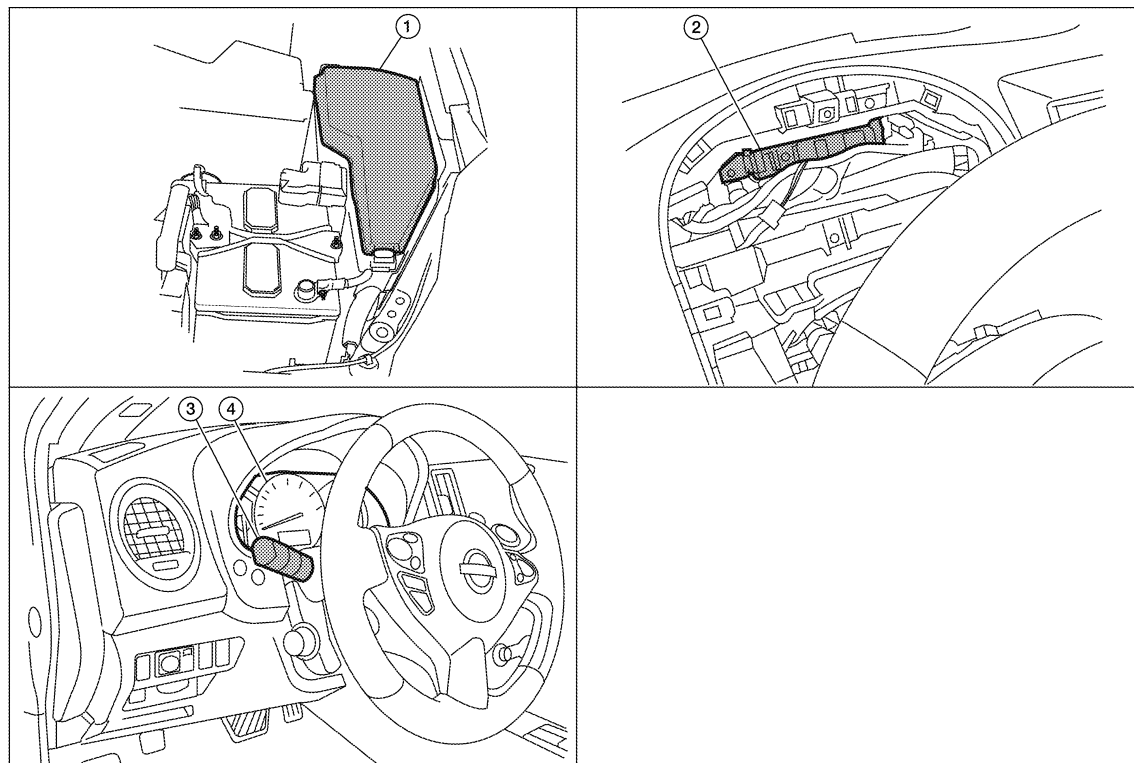
### System Diagram



### System Description

- BCM (Body Control Module) controls parking, license plate and tail lamps operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate and tail lamps according to CAN communication signals from BCM.

### Component Parts Location



1. IPDM E/R E17, E18, E201
2. BCM M16, M17, M18, M19 (view with combination meter removed)
3. Combination switch (lighting and turn signal switch) M28
4. Combination Meter M24

# PARKING, LICENSE PLATE AND TAIL LAMPS

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

INFOID:000000010050202

### PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1ST position, BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request through the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to [EXL-28. "BATTERY SAVER : CONSULT Function \(BCM - BATTERY SAVER\)"](#).

# COMBINATION SWITCH READING SYSTEM

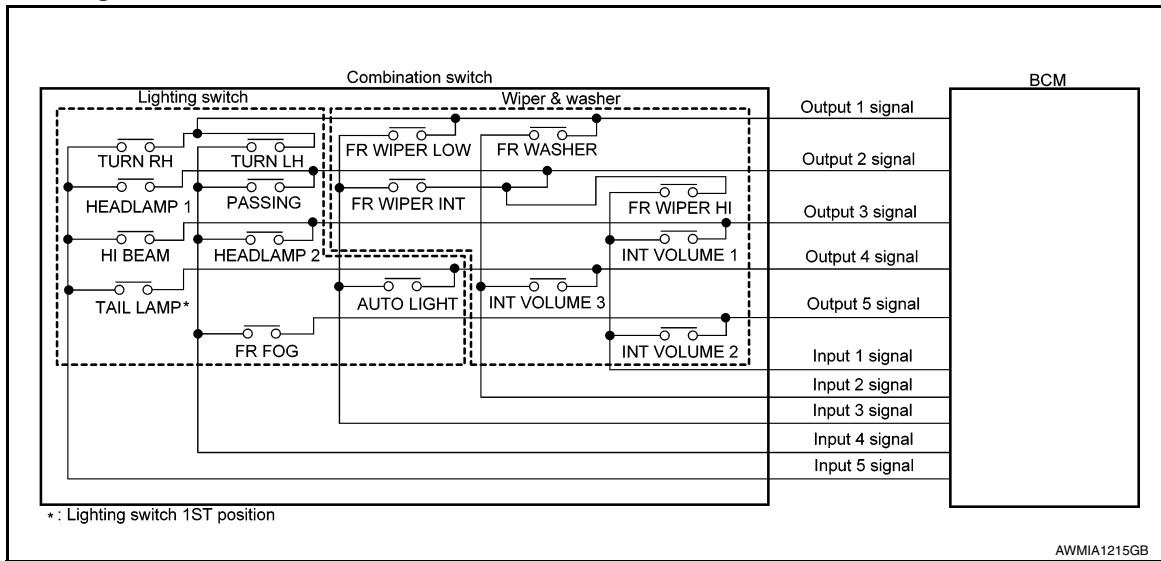
< SYSTEM DESCRIPTION >

[XENON TYPE]

## COMBINATION SWITCH READING SYSTEM

### System Diagram

INFOID:000000010069556



### System Description

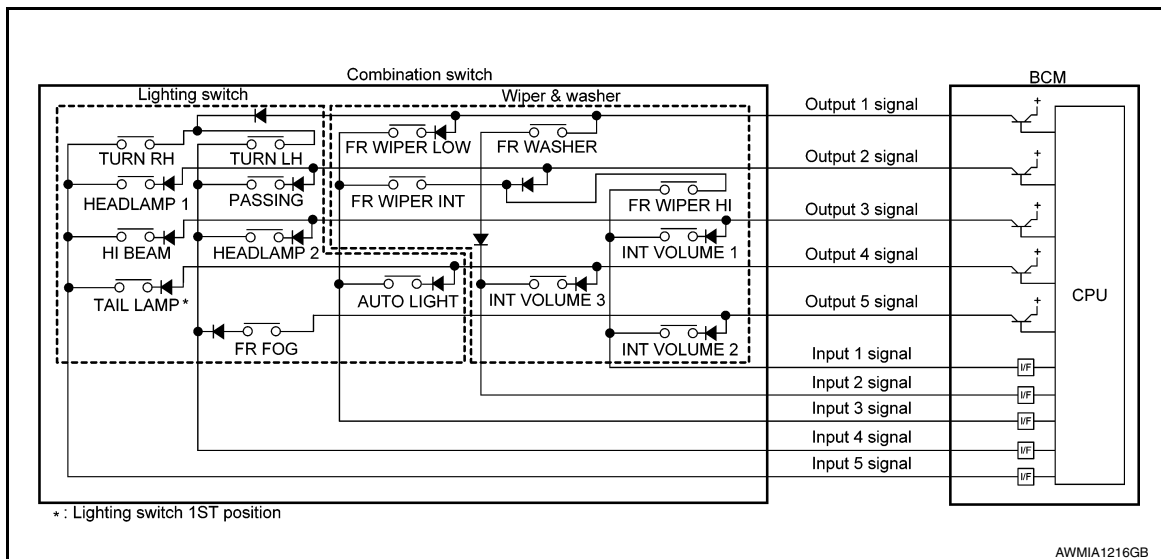
INFOID:000000010069557

#### OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 - 5) and 5 input terminals (INPUT 1 - 5) and reads a maximum of 20 switch states.

#### COMBINATION SWITCH MATRIX

##### Combination switch circuit



#### Combination switch INPUT-OUTPUT system list

| System   | INPUT 1      | INPUT 2   | INPUT 3      | INPUT 4    | INPUT 5    |
|----------|--------------|-----------|--------------|------------|------------|
| OUTPUT 1 | —            | FR WASHER | FR WIPER LOW | TURN LH    | TURN RH    |
| OUTPUT 2 | FR WIPER HI  | —         | FR WIPER INT | PASSING    | HEADLAMP 1 |
| OUTPUT 3 | INT VOLUME 1 | —         | —            | HEADLAMP 2 | HI BEAM    |

# COMBINATION SWITCH READING SYSTEM

< SYSTEM DESCRIPTION >

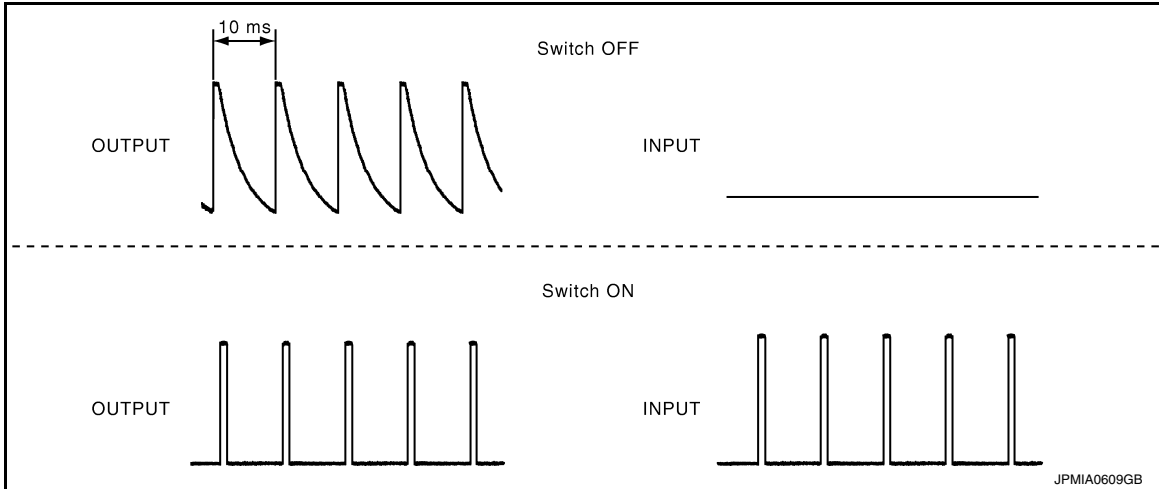
[XENON TYPE]

| System   | INPUT 1      | INPUT 2      | INPUT 3    | INPUT 4 | INPUT 5   |
|----------|--------------|--------------|------------|---------|-----------|
| OUTPUT 4 | —            | INT VOLUME 3 | AUTO LIGHT | —       | TAIL LAMP |
| OUTPUT 5 | INT VOLUME 2 | —            | —          | FR FOG  | —         |

## COMBINATION SWITCH READING FUNCTION

Description

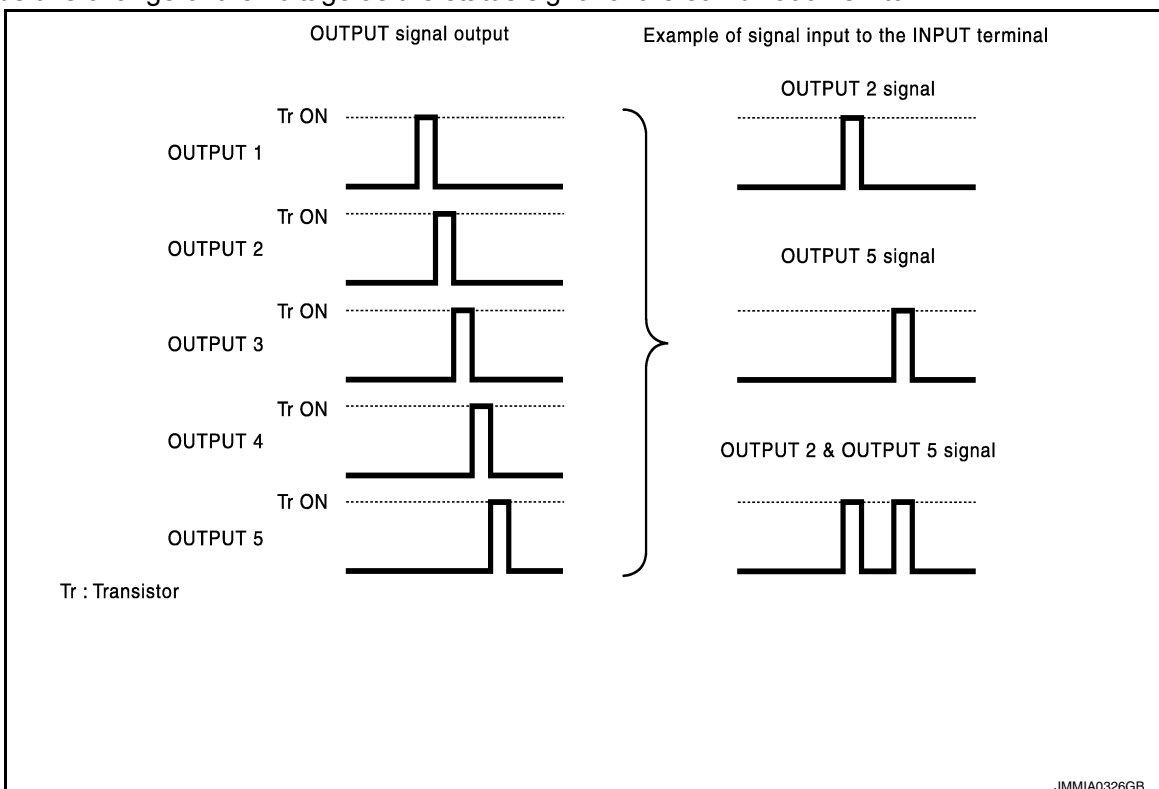
- BCM reads the status of the combination switch at 10ms intervals normally.



### NOTE:

BCM reads the status of the combination switch at 60ms intervals when BCM is controlled at low power consumption mode.

- BCM operates as follows and judges the status of the combination switch.
  - It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 2 → 3 → 4 → 5 and outputs voltage waveform.
  - The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
  - It reads this change of the voltage as the status signal of the combination switch.



Operation Example

Revision: August 2013

EXL-22

2014 Maxima NAM

# COMBINATION SWITCH READING SYSTEM

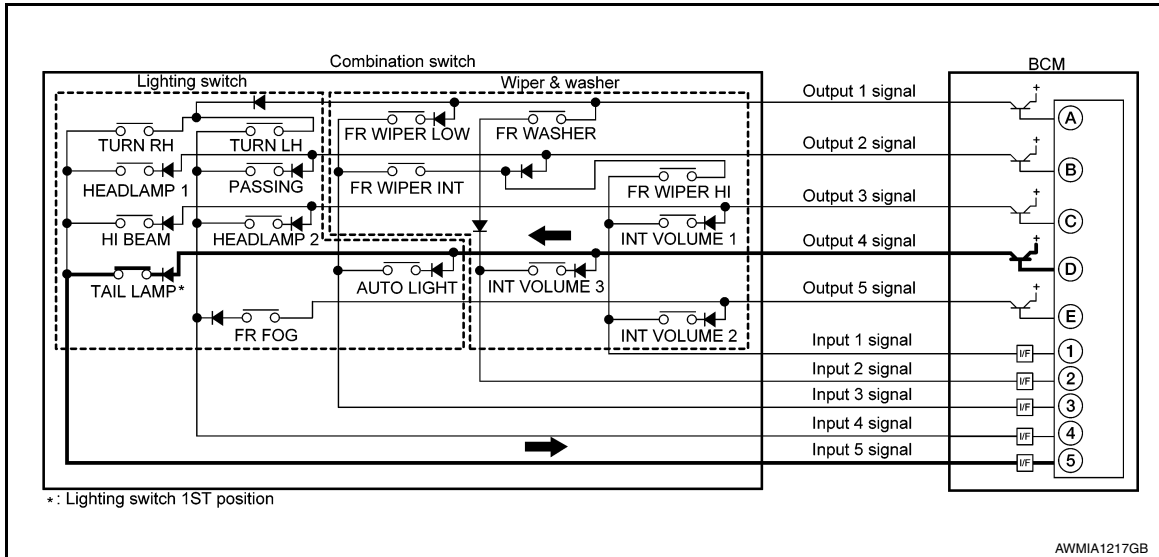
[XENON TYPE]

## < SYSTEM DESCRIPTION >

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

Example 1: When a switch (TAIL LAMP) is turned ON

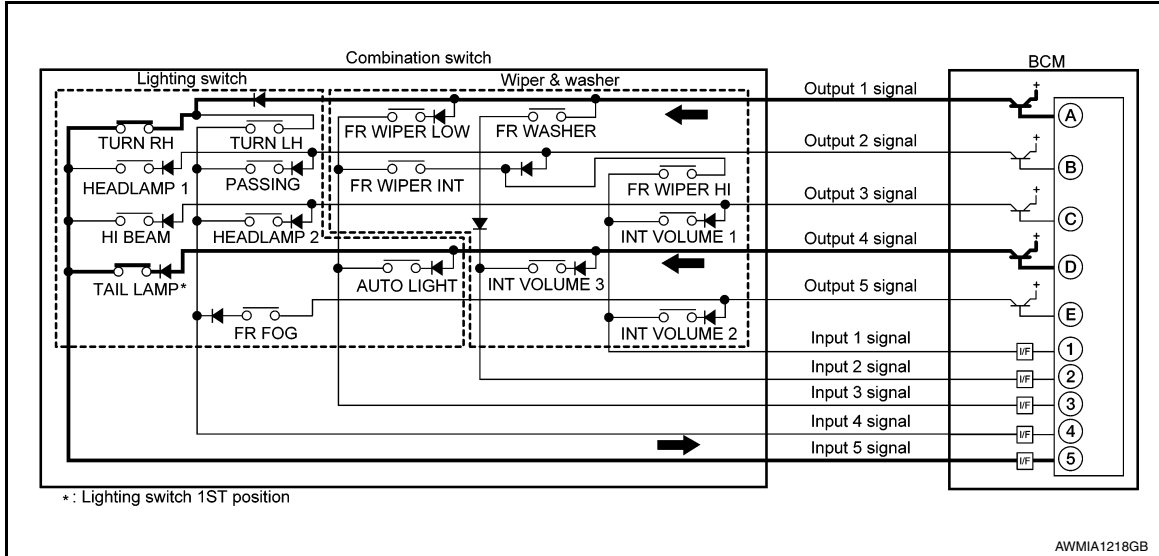
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP is turned ON.



- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TRUN RH, TAIL LAMP) are turned ON

- The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION)

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

# COMBINATION SWITCH READING SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

| Wiper intermittent dial position | Intermittent operation delay interval | INT VOLUME switch ON/OFF status |                     |                     |
|----------------------------------|---------------------------------------|---------------------------------|---------------------|---------------------|
|                                  |                                       | INT VOLUME 1 switch             | INT VOLUME 2 switch | INT VOLUME 3 switch |
| 1                                | Short<br>↑                            | ON                              | ON                  | ON                  |
| 2                                |                                       | ON                              | ON                  | OFF                 |
| 3                                |                                       | ON                              | OFF                 | OFF                 |
| 4                                |                                       | OFF                             | OFF                 | OFF                 |
| 5                                | ↓<br>Long                             | OFF                             | OFF                 | ON                  |
| 6                                |                                       | OFF                             | ON                  | ON                  |
| 7                                |                                       | OFF                             | ON                  | OFF                 |



# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010069548

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

### SYSTEM APPLICATION

BCM can perform the following functions.

| System                               | Sub System           | Direct Diagnostic Mode |                        |              |             |              |               |                       |
|--------------------------------------|----------------------|------------------------|------------------------|--------------|-------------|--------------|---------------|-----------------------|
|                                      |                      | Ecu Identification     | Self Diagnostic Result | Data Monitor | Active Test | Work support | Configuration | CAN Diag Support Mntr |
| Door lock                            | DOOR LOCK            |                        | ×                      | ×            | ×           | ×            |               |                       |
| Rear window defogger                 | REAR DEFOGGER        |                        |                        | ×            | ×           |              |               |                       |
| Warning chime                        | BUZZER               |                        |                        | ×            | ×           |              |               |                       |
| Interior room lamp timer             | INT LAMP             |                        |                        | ×            | ×           | ×            |               |                       |
| Exterior lamp                        | HEADLAMP             |                        |                        | ×            | ×           | ×            |               |                       |
| Wiper and washer                     | WIPER                |                        |                        | ×            | ×           | ×            |               |                       |
| Turn signal and hazard warning lamps | FLASHER              |                        |                        | ×            | ×           | ×            |               |                       |
| Intelligent Key system               | INTELLIGENT KEY      |                        |                        | ×            | ×           | ×            |               |                       |
| Combination switch                   | COMB SW              |                        |                        | ×            |             |              |               |                       |
| BCM                                  | BCM                  | ×                      | ×                      |              |             | ×            | ×             | ×                     |
| Immobilizer                          | IMMU                 |                        | ×                      | ×            | ×           |              |               |                       |
| Interior room lamp battery saver     | BATTERY SAVER        |                        |                        | ×            | ×           | ×            |               |                       |
| Trunk open                           | TRUNK                |                        |                        | ×            | ×           |              |               |                       |
| Vehicle security system              | THEFT ALM            |                        |                        | ×            | ×           | ×            |               |                       |
| RAP system                           | RETAINED PWR         |                        |                        | ×            |             |              |               |                       |
| Signal buffer system                 | SIGNAL BUFFER        |                        |                        | ×            | ×           |              |               |                       |
| TPMS                                 | AIR PRESSURE MONITOR |                        | ×                      | ×            | ×           | ×            |               |                       |

### HEADLAMP

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

## HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:000000010069549

### DATA MONITOR

| Monitor Item [Unit]                 | Description  |
|-------------------------------------|--|
| PUSH SW [On/Off]                    | Indicates condition of push button ignition switch                         |
| ENGINE STATE [Stop/Stall/Crank/Run] | Indicates engine status received from ECM on CAN communication line        |
| VEH SPEED 1 [km/h]                  | Indicates vehicle speed signal received from ABS on CAN communication line |
| KEY SW -SLOT [On/Off]               | Indicates condition of key slot  |
| TURN SIGNAL R [On/Off]              | Indicates condition of combination switch                                  |
| TURN SIGNAL L [On/Off]              |  |
| TAIL LAMP SW [On/Off]               |  |
| HI BEAM SW [On/Off]                 |  |
| HEAD LAMP SW 1 [On/Off]             |  |
| HEAD LAMP SW 2 [On/Off]             |  |
| PASSING SW [On/Off]                 |  |
| AUTO LIGHT SW [On/Off]              |  |
| FR FOG SW [On/Off]                  |  |
| DOOR SW-DR [On/Off]                 |  |
| DOOR SW-AS [On/Off]                 | Indicates condition of front door switch RH                                |
| DOOR SW-RR [On/Off]                 | Indicates condition of rear door switch RH                                 |
| DOOR SW-RL [On/Off]                 | Indicates condition of rear door switch LH                                 |
| DOOR SW-BK [On/Off]                 | Indicates condition of trunk switch  |
| OPTICAL SENSOR [V]                  | Indicates voltage signal from optical sensor                               |

### ACTIVE TEST

| Test Item             | Description   |
|-----------------------|---|
| TAIL LAMP             | This test is able to check tail lamp operation [On/Off].                      |
| HEAD LAMP             | This test is able to check head lamp operation [Hi/Low/Off].                  |
| FR FOG LAMP           | This test is able to check front fog lamp operation [On/Off].                 |
| DAYTIME RUNNING LIGHT | This test is able to check daytime running light operation [LH/RH/Off].       |
| ILL DIM SIGNAL        | This test is able to check head lamp illumination dimming operation [On/Off]. |

### WORK SUPPORT

| Support Item           | Setting | Description  |
|------------------------|---------|--|
| CUSTOM A/LIGHT SETTING | MODE 4  | Less sensitive setting than normal setting (Turns ON later than normal operation.)   |
|                        | MODE 3  | More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)                   |
|                        | MODE 2  | More sensitive setting than normal setting (Turns ON earlier than normal operation.) |
|                        | MODE 1* | Normal   |
| BATTERY SAVER SET      | On*     | Exterior lamp battery saver function ON  |
|                        | Off     | Exterior lamp battery saver function OFF   |

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

| Support Item  | Setting | Description  |
|---------------|---------|--|
| ILL DELAY SET | MODE 8  | 180 sec.   |
|               | MODE 7  | 150 sec.   |
|               | MODE 6  | 120 sec.   |
|               | MODE 4  | 60 sec.  |
|               | MODE 5  | 90 sec.  |
|               | MODE 3  | 30 sec.  |
|               | MODE 2  | OFF  |
|               | MODE 1* | 45 sec.  |
|               |         | Sets delay timer function operation time<br>(All doors closed) |

\* : Initial setting

## FLASHER

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

INFOID:0000000110069550

#### DATA MONITOR

| Monitor Item [Unit]    | Description   |
|------------------------|---|
| REQ SW -DR [On/Off]    | Indicates condition of door request switch LH                     |
| REQ SW -AS [On/Off]    | Indicates condition of door request switch RH                     |
| PUSH SW [On/Off]       | Indicates condition of push button ignition switch                |
| TURN SIGNAL R [On/Off] | Indicates condition of turn signal function of combination switch |
| TURN SIGNAL L [On/Off] |   |
| HAZARD SW [On/Off]     | Indicates condition of hazard switch                              |
| RKE-LOCK [On/Off]      | Indicates condition of lock signal from Intelligent Key           |
| RKE-UNLOCK [On/Off]    | Indicates condition of unlock signal from Intelligent Key         |
| RKE-PANIC [On/Off]     | Indicates condition of panic alarm signal from Intelligent Key    |

#### ACTIVE TEST

| Test Item | Description  |
|-----------|--|
| FLASHER   | This test is able to check turn signal lamp operation [Off/LH/RH]. |

#### WORK SUPPORT

| Support Item       | Setting      | Description   |
|--------------------|--------------|---|
| HAZARD ANSWER BACK | Lock/Unlock* | Hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key.    |
|                    | Unlock Only  | Hazard warning lamp activation when doors are unlocked with the Intelligent Key.              |
|                    | Lock Only    | Hazard warning lamp activation when doors are locked with the Intelligent Key.                |
|                    | Off          | No hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key. |

\* : Initial setting

## COMB SW

### COMB SW : CONSULT Function (BCM-COMB SW)

INFOID:0000000110069551

#### DATA MONITOR

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

| Monitor Item [Unit]     | Description   |
|-------------------------|---|
| FR WIPER HI [On/Off]    | Indicates condition of wiper operation of combination switch                            |
| FR WIPER LOW [On/Off]   |   |
| FR WASHER SW [On/Off]   |   |
| FR WIPER INT [On/Off]   |   |
| FR WIPER STOP [On/Off]  | Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line |
| INT VOLUME [1 - 7]      | Indicates condition of intermittent wiper operation of combination switch               |
| TURN SIGNAL R [On/Off]  | Indicates condition of right turn signal operation of combination switch                |
| TURN SIGNAL L [On/Off]  | Indicates condition of left turn signal operation of combination switch                 |
| TAIL LAMP SW [On/Off]   | Indicates condition of tail lamp switch operation of combination switch                 |
| HI BEAM SW [On/Off]     | Indicates condition of Hi beam switch operation of combination switch                   |
| HEAD LAMP SW 1 [On/Off] | Indicates condition of head lamp switch 1 operation of combination switch               |
| HEAD LAMP SW 2 [On/Off] | Indicates condition of head lamp switch 2 operation of combination switch               |
| PASSING SW [On/Off]     | Indicates condition of passing switch operation of combination switch                   |
| AUTO LIGHT SW [On/Off]  | Indicates condition of auto light switch operation of combination switch                |
| FR FOG SW [On/Off]      | Indicates condition of front fog lamp switch operation of combination switch            |

## BATTERY SAVER

### BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:000000010069552

#### DATA MONITOR

| Monitor Item [Unit]    | Description   |
|------------------------|---|
| REQ SW -DR [On/Off]    | Indicates condition of door request switch LH                         |
| REQ SW -AS [On/Off]    | Indicates condition of door request switch RH                         |
| PUSH SW [On/Off]       | Indicates condition push button ignition switch                       |
| ACC RLY -F/B [On/Off]  | Indicates condition of accessory relay                                |
| UNLK SEN -DR [On/Off]  | Indicates condition of door unlock sensor                             |
| KEY SW -SLOT [On/Off]  | Indicates condition of key slot                                       |
| DOOR SW-DR [On/Off]    | Indicates condition of front door switch LH                           |
| DOOR SW-AS [On/Off]    | Indicates condition of front door switch RH                           |
| DOOR SW-RR [On/Off]    | Indicates condition of rear door switch RH                            |
| DOOR SW-RL [On/Off]    | Indicates condition of rear door switch LH                            |
| DOOR SW-BK [On/Off]    | Indicates condition of trunk switch                                   |
| CDL LOCK SW [On/Off]   | Indicates condition of lock signal from door lock and unlock switch   |
| CDL UNLOCK SW [On/Off] | Indicates condition of unlock signal from door lock and unlock switch |
| KEY CYL LK-SW [On/Off] | Indicates condition of lock signal from door key cylinder switch      |
| KEY CYL UN-SW [On/Off] | Indicates condition of unlock signal from door key cylinder switch    |
| TRNK/HAT MNTR [On/Off] | Indicates condition of trunk room lamp switch                         |
| RKE-LOCK [On/Off]      | Indicates condition of lock signal from Intelligent Key               |
| RKE-UNLOCK [On/Off]    | Indicates condition of unlock signal from Intelligent Key             |

#### ACTIVE TEST

| Test item     | Description  |
|---------------|--|
| BATTERY SAVER | This test is able to check battery saver operation [On/Off]. |

#### WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

| Support Item          | Setting           | Description  |
|-----------------------|-------------------|--|
| ROOM LAMP BAT SAV SET | ON*               | Interior room lamp battery saver function ON               |
|                       | OFF               | Interior room lamp battery saver function OFF              |
| ROOM LAMP TIMER SET   | MODE 3*   10 min. | Sets interior room lamp battery saver timer operating time |
|                       | MODE 2   60 min.  |  |
|                       | MODE 1   15 min.  |  |
| BATTERY SAVER SET     | ON*               | Exterior lamp battery saver function ON                    |
|                       | OFF               | Exterior lamp battery saver function OFF                   |

\* : Initial setting

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

## DIAGNOSIS SYSTEM (IPDM E/R)

### Diagnosis Description

INFOID:000000010069553

#### AUTO ACTIVE TEST

##### Description

In auto active test mode, the IPDM E/R sends a drive signal to the following systems to check their operation.

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- Side marker lamps
- License plate lamps
- Tail lamps
- Front fog lamps (if equipped)
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fans

##### Operation Procedure

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)  
**NOTE:**  
 When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn ignition switch OFF.
3. Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.  
**CAUTION:**  
**Close front door RH.**
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
5. The oil pressure warning lamp starts blinking when the auto active test starts.
6. After a series of the following operations is repeated 3 times, auto active test is completed.

##### **NOTE:**

When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

##### **CAUTION:**

- If auto active test mode cannot be actuated, check door switch system. Refer to [DLK-67, "Component Function Check"](#).
- Do not start the engine.

##### Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 6 steps are repeated 3 times.

| Operation sequence | Inspection Location  | Operation  |
|--------------------|--|--|
| 1                  | Oil pressure warning lamp  | Blinks continuously during operation of auto active test |
| 2                  | Front wiper  | LO for 5 seconds → HI for 5 seconds                      |
| 3                  | <ul style="list-style-type: none"> <li>• Parking lamps</li> <li>• Side marker lamps</li> <li>• License plate lamps</li> <li>• Tail lamps</li> <li>• Front fog lamps (if equipped)</li> </ul> | 10 seconds   |
| 4                  | Headlamps  | LO ↔ HI 5 times  |
| 5                  | A/C compressor (magnet clutch)   | ON ↔ OFF 5 times   |
| 6*                 | Cooling fans   | MID for 5 seconds → HI for 5 seconds                     |

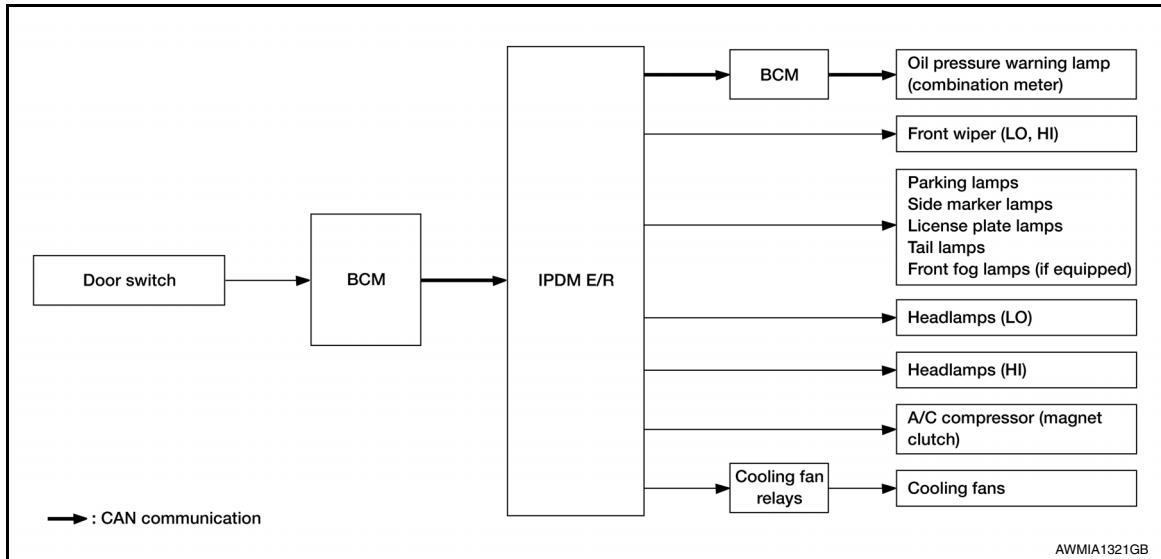
\*: Outputs duty ratio of 50% for 5 seconds → duty ratio of 100% for 5 seconds on the cooling fan control module.

# DIAGNOSIS SYSTEM (IPDM E/R)

[XENON TYPE]

## < SYSTEM DESCRIPTION >

### Concept of auto active test



- IPDM E/R starts the auto active test with the door switch signals transmitted by BCM via CAN communication. Therefore, the CAN communication line between IPDM E/R and BCM is considered normal if the auto active test starts successfully.
- The auto active test facilitates troubleshooting if any systems controlled by IPDM E/R cannot be operated.

### Diagnosis chart in auto active test mode

| Symptom   | Inspection contents  | Possible cause |   |
|---|--|----------------|---|
| Any of the following components do not operate <ul style="list-style-type: none"> <li>• Parking lamps</li> <li>• Side marker lamps</li> <li>• License plate lamps</li> <li>• Tail lamps</li> <li>• Front fog lamps (if equipped)</li> <li>• Headlamp (HI, LO)</li> <li>• Front wiper</li> </ul> | Perform auto active test.<br>Does the applicable system operate? | YES            | BCM signal input circuit  |
|   |  | NO             | <ul style="list-style-type: none"> <li>• Lamp or motor</li> <li>• Lamp or motor ground circuit</li> <li>• Harness or connector between IPDM E/R and applicable system</li> <li>• IPDM E/R</li> </ul>                          |
| A/C compressor does not operate   | Perform auto active test.<br>Does the magnet clutch operate?     | YES            | <ul style="list-style-type: none"> <li>• Combination meter signal input circuit</li> <li>• CAN communication signal between combination meter and ECM</li> <li>• CAN communication signal between ECM and IPDM E/R</li> </ul> |
|   |  | NO             | <ul style="list-style-type: none"> <li>• Magnet clutch</li> <li>• Harness or connector between IPDM E/R and magnet clutch</li> <li>• IPDM E/R</li> </ul>  |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[XENON TYPE]

| Symptom                                    | Inspection contents  |     | Possible cause   |
|--|--|-----|--|
| Oil pressure warning lamp does not operate | Perform auto active test.<br>Does the oil pressure warning lamp blink? | YES | <ul style="list-style-type: none"> <li>• Harness or connector between IPDM E/R and oil pressure switch</li> <li>• Oil pressure switch</li> <li>• IPDM E/R</li> </ul>   |
|  |  | NO  | <ul style="list-style-type: none"> <li>• CAN communication signal between IPDM E/R and BCM</li> <li>• CAN communication signal between BCM and combination meter</li> <li>• Combination meter</li> </ul>   |
| Cooling fan does not operate               | Perform auto active test.<br>Does the cooling fan operate?             | YES | <ul style="list-style-type: none"> <li>• ECM signal input circuit</li> <li>• CAN communication signal between ECM and IPDM E/R</li> </ul>  |
|  |  | NO  | <ul style="list-style-type: none"> <li>• Cooling fan</li> <li>• Harness or connector between cooling fan and cooling fan relays</li> <li>• Cooling fan relays</li> <li>• Harness or connector between IPDM E/R and cooling fan relays</li> <li>• IPDM E/R</li> </ul> |

## CONSULT Function (IPDM E/R)

INFOID:000000010069554

### APPLICATION ITEM

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

| Direct Diagnostic Mode | Description   |
|------------------------|---|
| ECU Identification     | The IPDM E/R part number is displayed.                                      |
| Self Diagnostic Result | The IPDM E/R self diagnostic results are displayed.                         |
| Data Monitor           | The IPDM E/R input/output data is displayed in real time.                   |
| Active Test            | The IPDM E/R activates outputs to test components.                          |
| CAN Diag Support Mntr  | The result of transmit/receive diagnosis of CAN communication is displayed. |

### ECU IDENTIFICATION

The IPDM E/R part number is displayed.

### SELF DIAGNOSTIC RESULT

Refer to [PCS-27. "DTC Index"](#).

### DATA MONITOR

| Monitor Item [Unit]     | Main Signals | Description   |
|-------------------------|--------------|---|
| MOTOR FAN REQ [1/2/3/4] | ×            | Indicates cooling fan speed signal received from ECM on CAN communication line      |
| AC COMP REQ [On/Off]    | ×            | Indicates A/C compressor request signal received from ECM on CAN communication line |
| TAIL&CLR REQ [On/Off]   | ×            | Indicates position light request signal received from BCM on CAN communication line |
| HL LO REQ [On/Off]      | ×            | Indicates low beam request signal received from BCM on CAN communication line       |



# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[XENON TYPE]

| Monitor Item [Unit]           | Main Signals | Description   |
|-------------------------------|--------------|---|
| HL HI REQ [On/Off]            | ×            | Indicates high beam request signal received from BCM on CAN communication line          |
| FR FOG REQ [On/Off]           | ×            | Indicates front fog light request signal received from BCM on CAN communication line    |
| FR WIP REQ [Stop/1LOW/Low/Hi] | ×            | Indicates front wiper request signal received from BCM on CAN communication line        |
| WIP AUTO STOP [STOP P/ACT P]  | ×            | Indicates condition of front wiper auto stop signal                                     |
| WIP PROT [Off/BLOCK]          | ×            | Indicates condition of front wiper fail-safe operation                                  |
| IGN RLY1 -REQ [On/Off]        |              | Indicates ignition switch ON signal received from BCM on CAN communication line         |
| IGN RLY [On/Off]              | ×            | Indicates condition of ignition relay-1   |
| PUSH SW [On/Off]              |              | Indicates condition of push-button ignition switch                                      |
| INTER/NP SW [On/Off]          |              | Indicates condition of CVT shift position   |
| ST RLY CONT [On/Off]          |              | Indicates starter relay status signal received from BCM on CAN communication line       |
| IHBT RLY -REQ [On/Off]        |              | Indicates starter control relay signal received from BCM on CAN communication line      |
| ST/INHI RLY [Off/ ST /INHI]   |              | Indicates condition of starter relay and starter control relay                          |
| DETENT SW [On/Off]            |              | Indicates condition of CVT shift selector (park position switch)                        |
| DTRL REQ [Off]                |              | Indicates daytime light request signal received from BCM on CAN communication line      |
| OIL P SW [Open/Close]         |              | Indicates condition of oil pressure switch  |
| THFT HRN REQ [On/Off]         |              | Indicates theft warning horn request signal received from BCM on CAN communication line |
| HORN CHIRP [On/Off]           |              | Indicates horn reminder signal received from BCM on CAN communication line              |

## ACTIVE TEST

| Test item      | Description  |
|----------------|--|
| HORN           | This test is able to check horn operation [On].                          |
| FRONT WIPER    | This test is able to check wiper motor operation [Hi/Lo/Off].            |
| MOTOR FAN      | This test is able to check cooling fan operation [4/3/2/1].              |
| EXTERNAL LAMPS | This test is able to check external lamp operation [Fog/Hi/Lo/Tail/Off]. |

## CAN DIAG SUPPORT MNTR

Refer to [LAN-12, "CAN Diagnostic Support Monitor"](#).

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT

#### BCM (BODY CONTROL MODULE)

#### BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000010070067

Regarding Wiring Diagram information, refer to [BCS-67, "Wiring Diagram"](#).

### 1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

| Terminal No. | Signal name          | Fuse and fusible link No. |
|--------------|----------------------|---------------------------|
| 1            | Battery power supply | H                         |
| 11           |                      | 10                        |
| 24           |                      | 7                         |

Is the fuse or fusible link blown?

- YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
- NO >> GO TO 2

### 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check voltage between BCM harness connector and ground.

| Terminals |          | Voltage<br>(Approx.) |
|-----------|----------|----------------------|
| (+)       | (-)      |                      |
| BCM       |          | Battery voltage      |
| Connector | Terminal |                      |
| M16       | 1        |                      |
| M17       | 11       |                      |
| M18       | 24       |                      |
|           |          | Ground               |

Is the measurement normal?

- YES >> GO TO 3
- NO >> Repair or replace harness.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

| BCM       |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| M17       | 13       |        | Yes        |

Does continuity exist?

- YES >> Inspection End.
- NO >> Repair or replace harness.

#### BCM (BODY CONTROL MODULE) : Special Repair Requirement

INFOID:0000000010070068

### 1. REQUIRED WORK WHEN REPLACING BCM

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Initialize control unit. Refer to [BCS-5. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT \(BCM\) : Work Procedure"](#).

>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:000000010070069

Regarding Wiring Diagram information, refer to [PCS-28. "Wiring Diagram"](#).

## 1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

| Terminal No. | Signal name          | Fuses and fusible link No. |
|--------------|----------------------|----------------------------|
| 1            | Battery power supply | B                          |
| 2            |                      | A, D                       |
| 36           |                      | A, E, L                    |

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

## 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect IPDM E/R connectors.
- Check voltage between IPDM E/R harness connector and ground.

| Terminals |          | Voltage (V)<br>(Approx.) |
|-----------|----------|--------------------------|
| (+)       | (-)      |                          |
| IPDM E/R  |          | Battery voltage          |
| Connector | Terminal |                          |
| E16       | 1        |                          |
|           | 2        |                          |
| E18       | 36       |                          |

Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

## 3. CHECK GROUND CIRCUIT

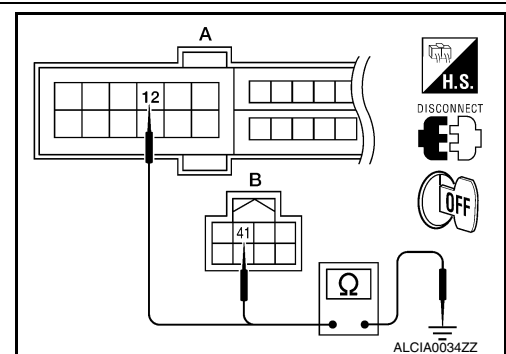
Check continuity between IPDM E/R harness connectors and ground.

| IPDM E/R  |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| A: E18    | 12       | Ground | Yes        |
| B: E17    | 41       |        |            |

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## HEADLAMP (HI) CIRCUIT

### Description

INFOID:0000000010050215

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 48 and 49, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

### Component Function Check

INFOID:0000000010050216

#### 1. CHECK HEADLAMP (HI) OPERATION

##### ⊗ WITHOUT CONSULT

1. Start IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the headlamp switches to the high beam.

**NOTE:**

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

##### Ⓟ CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the headlamp switches to the high beam.

**HI** : Headlamp switches to the high beam.

**OFF** : Headlamp OFF

Does the headlamp switch to the high beam?

- YES >> Headlamp (HI) circuit is normal.  
NO >> Refer to [EXL-36, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010050217

Regarding Wiring Diagram information, refer to [EXL-93, "Wiring Diagram"](#) (Without DTRL), [EXL-99, "Wiring Diagram"](#) (With DTRL).

#### 1. CHECK HEADLAMP (HI) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

| Unit             | Location | Fuse No. | Capacity |
|------------------|----------|----------|----------|
| Headlamp HI (LH) | IPDM E/R | 48       | 10A      |
| Headlamp HI (RH) | IPDM E/R | 49       | 10A      |

Is the fuse open?

- YES >> Repair the harness and replace the fuse.  
NO >> GO TO 2.

#### 2. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

##### Ⓟ CONSULT ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

# HEADLAMP (HI) CIRCUIT

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

- With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.

| (+)       |                     | Terminal | (-)    | Voltage         |
|-----------|---------------------|----------|--------|-----------------|
| Connector |                     |          |        |                 |
| RH        | E222 (without DTRL) | 3        | Ground | Battery voltage |
|           | E233 (with DTRL)    |          |        |                 |
| LH        | E213                |          |        |                 |

Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.

### 3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

| A         |          |                  | B                   |   | Continuity |
|-----------|----------|------------------|---------------------|---|------------|
| Connector | Terminal | Connector        | Terminal            |   |            |
| RH        | E200     | 89               | E222 (without DTRL) | 3 | Yes        |
|           |          | E233 (with DTRL) |                     |   |            |
| LH        |          | 90               | E213                |   |            |

Does continuity exist?

- YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).  
NO >> Repair the harnesses or connectors.

### 4.CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal and ground.

| Connector | Terminal            | — | Continuity |
|-----------|---------------------|---|------------|
| RH        | E222 (without DTRL) | 4 | Ground     |
|           | E233 (with DTRL)    |   |            |
| LH        | E213                |   |            |

Does continuity exist?

- YES >> Inspect the headlamp bulb.  
NO (Except RH with DTRL)>>Repair the harness.  
NO (RH with DTRL)>>GO TO 5.

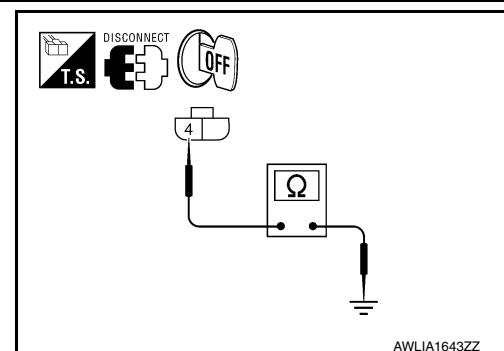
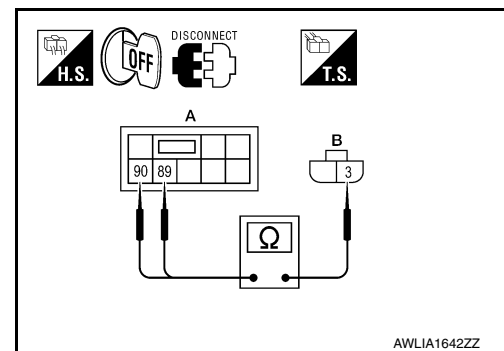
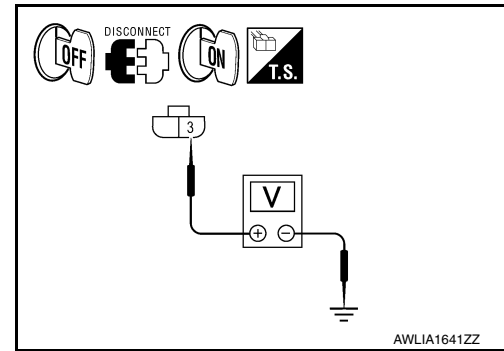
### 5.CHECK CONTINUITY BETWEEN FRONT COMBINATION LAMP RH (HI) AND DAYTIME LIGHT RELAY

- Disconnect daytime light relay connector.
- Check continuity between front combination lamp RH harness connector and daytime light relay harness connector.

| Front combination lamp RH |          | Daytime light relay |          | Continuity |
|---------------------------|----------|---------------------|----------|------------|
| Connector                 | Terminal | Connector           | Terminal |            |
| E233                      | 4        | E228                | 3        | Yes        |

Does continuity exist?

- YES >> GO TO 6.  
NO >> Repair the harness or connector.



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# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## 6. CHECK DAYTIME LIGHT RELAY GROUND CIRCUIT

Check continuity between daytime light relay harness connector and ground.

| Daytime light relay |          | Ground | Continuity |
|---------------------|----------|--------|------------|
| Connector           | Terminal |        |            |
| E228                | 4        |        | Yes        |

Does continuity exist?

- YES >> GO TO 7.
- NO >> Repair the harness or connector.

## 7. CHECK DAYTIME LIGHT RELAY FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuse is not open.

| Unit                | Location | Fuse No. | Capacity |
|---------------------|----------|----------|----------|
| Daytime light relay | IPDM E/R | 54       | 10A      |

Is the fuse open?

- YES >> Replace the fuse after repairing the affected circuit.
- NO >> GO TO 8.

## 8. CHECK DAYTIME LIGHT RELAY CIRCUIT FOR OPEN

1. Disconnect IPDM E/R connector E18 and E201.
2. Check continuity between the IPDM E/R harness connector and the daytime light relay harness connector.

| IPDM E/R  |          | Daytime light relay |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| E18       | 6        | E228                | 1        | Yes        |
|           |          |                     | 5        |            |
| E201      | 105      |                     | 2        |            |

Does continuity exist?

- YES >> GO TO 9
- NO >> Repair the harnesses or connectors.

## 9. CHECK DAYTIME LIGHT RELAY

Check daytime light relay. Refer to [EXL-38, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).
- NO >> Replace daytime light relay.

## Component Inspection

INFOID:0000000010050218

### 1. CHECK DAYTIME LIGHT RELAY

1. Turn ignition switch OFF.
2. Remove daytime light relay.
3. Check the continuity between daytime light relay terminals under the following conditions.

| Terminals | Condition   | Continuity |
|-----------|---|------------|
| 3 and 5   | 12V direct current supply between terminals 1 and 2 | Yes        |
|           | No current supply                                   | No         |

# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

| Terminals | Condition   | Continuity |
|-----------|---|------------|
| 3 and 4   | 12V direct current supply between terminals 1 and 2 | No         |
|           | No current supply                                   | Yes        |

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace daytime light relay

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EXL

# HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## HEADLAMP (LO) CIRCUIT

### Description

INFOID:0000000010050219

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 51 and 52, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

### Component Function Check

INFOID:0000000010050220

#### 1. CHECK HEADLAMP (LO) OPERATION

##### ⊗ WITHOUT CONSULT

1. Start IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the headlamp is turned ON.

##### NOTE:

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

##### Ⓟ CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the headlamp is turned ON.

**LO : Headlamp ON**

**OFF : Headlamp OFF**

##### Is the headlamp turned ON?

- YES >> Headlamp (LO) is normal.  
NO >> Refer to [EXL-40, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010050221

Regarding Wiring Diagram information, refer to [EXL-93, "Wiring Diagram"](#).

#### 1. CHECK HEADLAMP (LO) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

| Unit             | Location | Fuse No. | Capacity |
|------------------|----------|----------|----------|
| Headlamp LO (LH) | IPDM E/R | 51       | 15A      |
| Headlamp LO (RH) | IPDM E/R | 52       | 15A      |

##### Is the fuse open?

- YES >> Repair the harness and replace the fuse.  
NO >> GO TO 2.

#### 2. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

##### Ⓟ CONSULT

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.



# HEADLAMP (LO) CIRCUIT

[XENON TYPE]

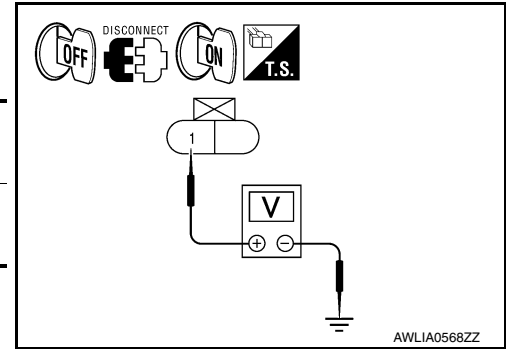
## < DTC/CIRCUIT DIAGNOSIS >

5. With EXTERNAL LAMPS ON, check the voltage between the combination lamp connector and ground.

| (+)       |      | Terminal | (-)    | Voltage         |
|-----------|------|----------|--------|-----------------|
| Connector |      |          |        |                 |
| RH        | E232 | 1        | Ground | Battery voltage |
| LH        | E231 | 1        |        |                 |

Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.



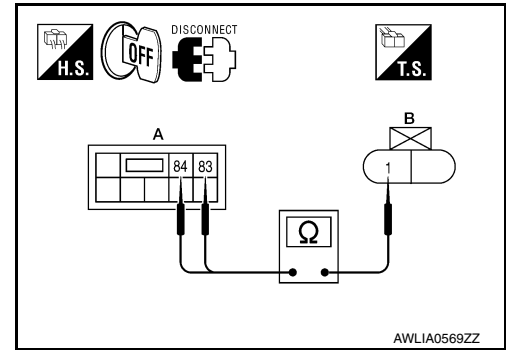
## 3. CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

| A         |      | Terminal | B         |          | Continuity |
|-----------|------|----------|-----------|----------|------------|
| Connector |      |          | Connector | Terminal |            |
| RH        | E200 | 83       | E232      | 1        | Yes        |
| LH        |      | 84       | E231      | 1        |            |

Does continuity exist?

- YES >> Replace the IPDM E/R. Refer to [PCS-35. "Removal and Installation"](#).  
NO >> Repair the harnesses or connectors.



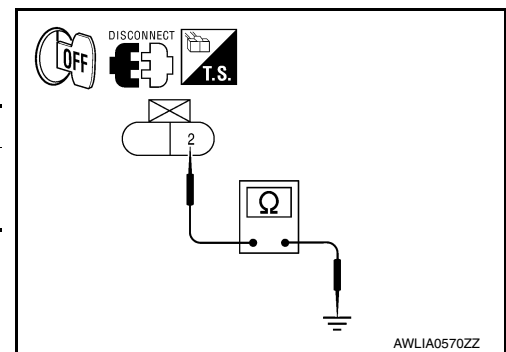
## 4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| RH        | E232     | Ground | Yes        |
| LH        | E231     |        |            |

Does continuity exist?

- YES >> Perform xenon headlamp diagnosis. Refer to [EXL-42. "Description"](#).  
NO >> Repair the harness.



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**XENON HEADLAMP****Description**

INFOID:000000010050222

**OPERATION**

Refer to [EXL-10. "Component Description"](#).

**PRECAUTIONS FOR TROUBLE DIAGNOSIS**

- Installation or removal of the connector must be done with the lighting switch OFF.
- When the lamp is illuminated (when the lighting switch is ON), do not touch the harness, HID control unit, inside of the lamp, or the lamp metal parts.
- To check illumination, temporarily install lamp in the vehicle. Be sure to connect power at the vehicle-side connector.
- If the malfunction can be traced directly to the electrical system, first check for items such as blown fuses and fusible links, broken wires or loose connectors, pulled-out terminals, and improper connections.
- Do not work with wet hands.
- Using a tester for HID control unit circuit trouble diagnosis is prohibited.
- Disassembling the HID control unit or harnesses (bulb socket harness, ballast harness) is prohibited.
- Immediately after illumination, the light intensity and color will fluctuate, this is normal.
- When the bulb has reached the end of its lifetime, the brightness may drop significantly, it may flash repeatedly, or the light may turn a reddish color.

**Diagnosis Procedure**

INFOID:000000010050223

**1.CHECK XENON BULB**

---

Install a known good bulb to the applicable headlamp. Check that the headlamp operates.

**Is the inspection result normal?**

- YES >> Replace the xenon bulb.  
NO >> GO TO 2.

**2.CHECK HID CONTROL UNIT**

---

Install a known good HID control unit to the applicable headlamp. Check that the headlamp operates.

**Is the inspection result normal?**

- YES >> Replace HID control unit.  
NO >> Inspection End.

# FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## FRONT FOG LAMP CIRCUIT

### Description

INFOID:0000000010050224

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM over the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay in the IPDM E/R to the front fog lamps.

### Component Function Check

INFOID:0000000010050225

#### 1. CHECK FRONT FOG LAMP OPERATION

##### WITHOUT CONSULT

1. Activate IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the front fog lamp is turned ON.

##### CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the front fog lamp is turned ON.

**FOG** : Front fog lamp ON

**OFF** : Front fog lamp OFF

##### Is the front fog lamp turned ON?

- YES >> Front fog lamp circuit is normal.  
NO >> Refer to [EXL-43, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010050226

Regarding Wiring Diagram information, refer to [EXL-112, "Wiring Diagram"](#).

#### 1. CHECK FRONT FOG LAMP FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuse is not open.

| Unit           | Location | Fuse No. | Capacity |
|----------------|----------|----------|----------|
| Front fog lamp | IPDM E/R | 53       | 15A      |

##### Is the fuse open?

- YES >> Repair the harness and replace the fuse.  
NO >> GO TO 2.

#### 2. CHECK FRONT FOG LAMP OUTPUT VOLTAGE

##### CONSULT

1. Turn the ignition switch OFF.
2. Disconnect the front fog lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

# FRONT FOG LAMP CIRCUIT

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

- With EXTERNAL LAMPS ON, check the voltage between the fog lamp connector and ground.

| (+) Connector |      | Terminal | (-)    | Voltage         |
|---------------|------|----------|--------|-----------------|
| LH            | E214 | 1        | Ground | Battery voltage |
| RH            | E227 | 1        |        |                 |

Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.

### 3. CHECK FRONT FOG LAMP OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front fog lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| RH        | E200     | 86        | E227 1   | Yes        |
| LH        |          | 87        | E214 1   |            |

Does continuity exist?

- YES >> Replace the IPDM E/R. Refer to [PCS-35. "Removal and Installation"](#).  
NO >> Repair the harnesses or connectors.

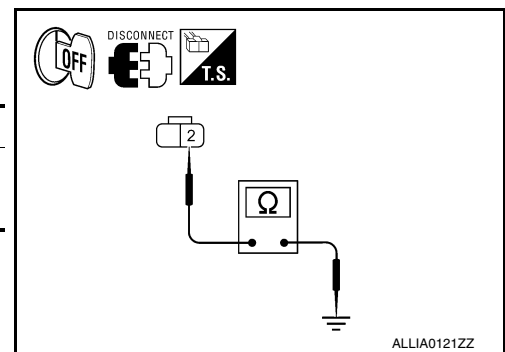
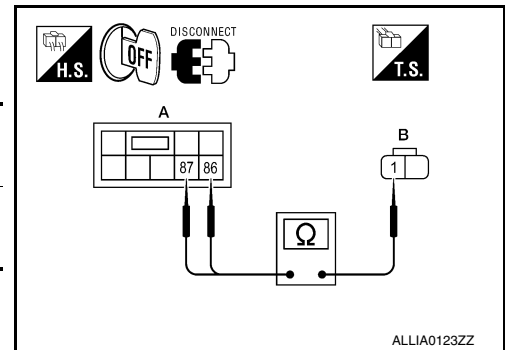
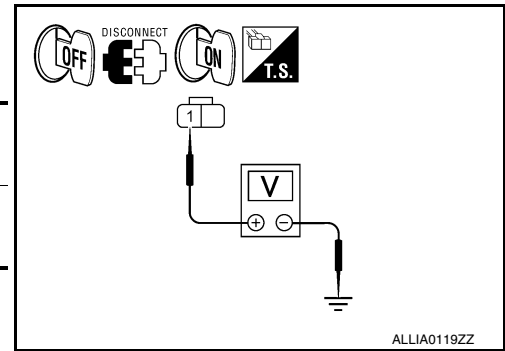
### 4. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between the front fog lamp harness connector terminal and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| RH        | E227     | Ground | Yes        |
| LH        | E214     |        |            |

Does continuity exist?

- YES >> Inspect the fog lamp bulb.  
NO >> Repair the harness.



# PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## PARKING LAMP CIRCUIT

### Description

INFOID:0000000010050227

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM over the CAN communication lines. When the tail lamp relay is energized, power flows through fuses 46 and 47, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamps.

### Component Function Check

INFOID:0000000010050228

#### 1. CHECK PARKING LAMP OPERATION

##### WITHOUT CONSULT

1. Activate IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the parking lamp is turned ON.

##### CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the parking lamp is turned ON.

**TAIL : Parking lamp ON**  
**OFF : Parking lamp OFF**

##### Is the parking lamp turned ON?

- YES >> Parking lamp circuit is normal.  
NO >> Refer to [EXL-45, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010050229

Regarding Wiring Diagram information, refer to [EXL-124, "Wiring Diagram"](#).

#### 1. CHECK PARKING LAMP FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

| Unit                  | Location | Fuse No. | Capacity |
|-----------------------|----------|----------|----------|
| Parking lamps (front) | IPDM E/R | 46       | 10A      |
| Parking lamps (rear)  | IPDM E/R | 47       | 10A      |

##### Is the fuse open?

- YES >> Repair the harness and replace the fuse.  
NO >> GO TO 2.

#### 2. CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

##### CONSULT

1. Turn the ignition switch OFF.
2. Disconnect the front and rear combination lamp connectors.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

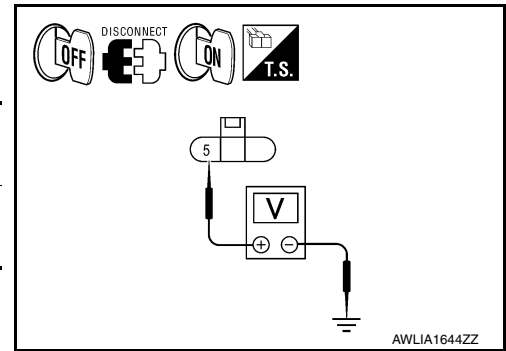
# PARKING LAMP CIRCUIT

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

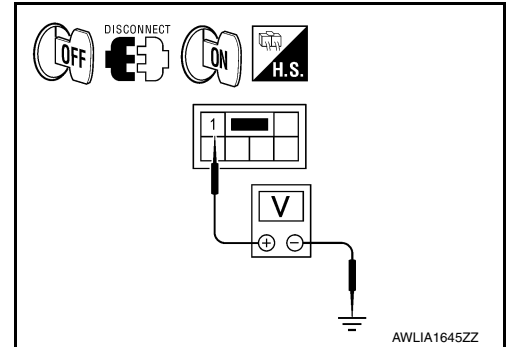
5. With EXTERNAL LAMPS ON, check the voltage between the front combination lamp connector and ground.

| (+)       |      | Terminal | (-)    | Voltage         |
|-----------|------|----------|--------|-----------------|
| Connector |      |          |        |                 |
| LH        | E217 | 5        | Ground | Battery voltage |
| RH        | E224 |          |        |                 |



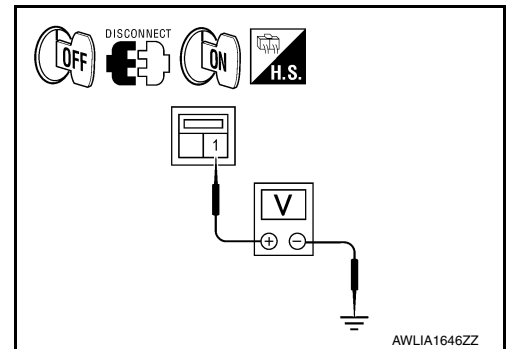
6. With EXTERNAL LAMPS ON, check the voltage between the rear combination lamp connector and ground.

| (+)       |     | Terminal | (-)    | Voltage         |
|-----------|-----|----------|--------|-----------------|
| Connector |     |          |        |                 |
| LH        | B30 | 1        | Ground | Battery voltage |
| RH        | B45 |          |        |                 |



7. With EXTERNAL LAMPS ON, check the voltage between the license plate lamp connector and ground.

| (+)       |    | Terminal | (-)    | Voltage         |
|-----------|----|----------|--------|-----------------|
| Connector |    |          |        |                 |
| LH        | T6 | 1        | Ground | Battery voltage |
| RH        | T8 |          |        |                 |



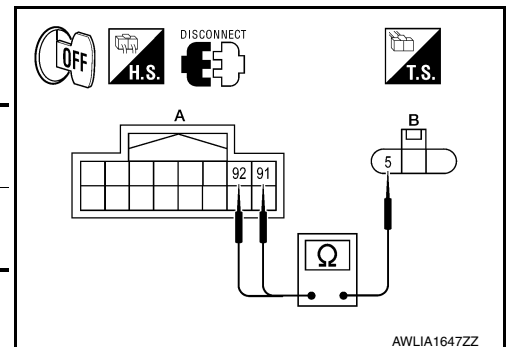
Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.

### 3. CHECK PARKING LAMP CIRCUIT (OPEN)

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E201.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | E201     | E217      | 5        | Yes        |
| RH        |          | E224      |          |            |



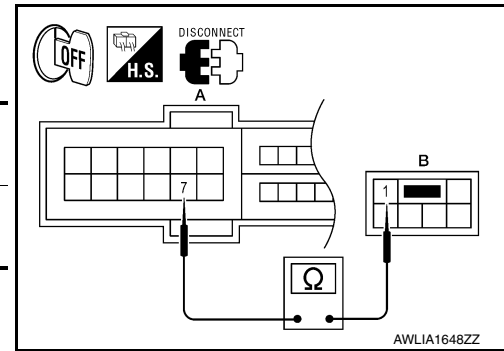
# PARKING LAMP CIRCUIT

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

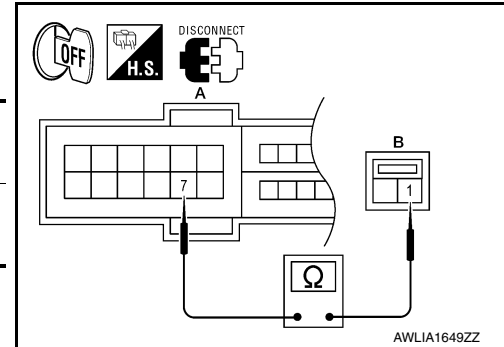
4. Check continuity between the IPDM E/R harness connector (A) and the rear combination lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | E18      | 7         | B30      | Yes        |
| RH        |          |           | B45      |            |



5. Check continuity between the IPDM E/R harness connector (A) and the license plate lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | E18      | 7         | T6       | Yes        |
| RH        |          |           | T8       |            |



### Does continuity exist?

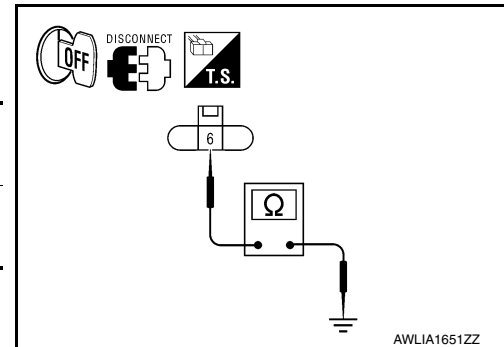
YES >> Replace the IPDM E/R. Refer to [PCS-35. "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.

## 4. CHECK PARKING LAMP GROUND CIRCUIT

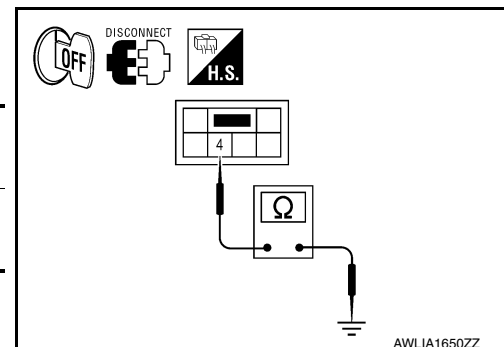
1. Check continuity between the front combination lamp harness connector terminal and ground.

| (+)       |          | (-)    | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| LH        | E217     | Ground | Yes        |
| RH        | E224     |        |            |



2. Check continuity between the rear combination lamp harness connector terminal and ground.

| (+)       |          | (-)    | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| LH        | B30      | Ground | Yes        |
| RH        | B45      |        |            |



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# PARKING LAMP CIRCUIT

[XENON TYPE]

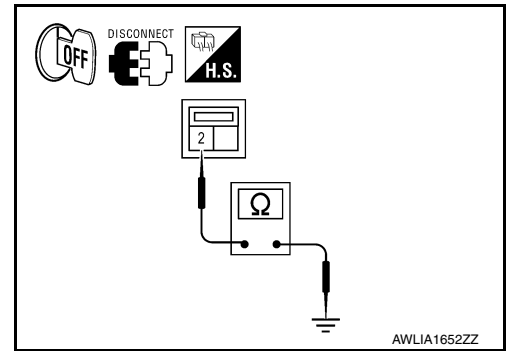
## < DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between the license plate lamp harness connector terminal and ground.

| (+)       |    | Terminal | (-)    | Continuity |
|-----------|----|----------|--------|------------|
| Connector |    |          |        |            |
| LH        | T6 | 2        | Ground | Yes        |
| RH        | T8 |          |        |            |

### Does continuity exist?

- YES >> Inspect the parking lamp bulb.  
NO >> Repair the harness.





# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## TURN SIGNAL LAMP CIRCUIT

### Description

INFOID:0000000010050230

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.

The BCM performs the fast flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.

#### NOTE:

Turn signal lamp blinks at normal speed when using the hazard warning lamp.

### Component Function Check

INFOID:0000000010050231

#### 1. CHECK TURN SIGNAL LAMP

##### CONSULT

1. Select "FLASHER" of BCM (FLASHER) active test item.
2. While operating the test item, check that the turn signal lamp blinks.

**LH** : Turn signal lamp LH blinking

**RH** : Turn signal lamp RH blinking

**OFF** : The turn signal lamp OFF

##### Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to [EXL-49, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010050232

Regarding Wiring Diagram information, refer to [EXL-116, "Wiring Diagram"](#).

#### 1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

##### Is the bulb OK?

YES >> GO TO 2.

NO >> Replace the bulb.

#### 2. CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

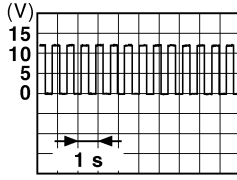
1. Turn the ignition switch OFF.
2. Disconnect front combination lamp connector, door mirror connector (if equipped with turn signal in mirror) and rear combination lamp connector.
3. Turn the ignition switch ON.
4. With turn signal switch operating, check the voltage between the front combination lamp harness connector and ground.

| (+)       |          | (-) | Voltage |
|-----------|----------|-----|---------|
| Connector | Terminal |     |         |
|           |          |     |         |

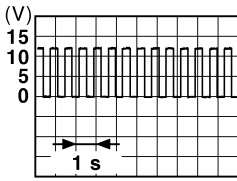
# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

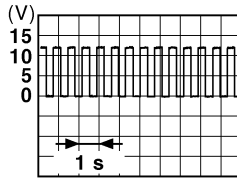
[XENON TYPE]

|      |    |   |        |   |
|------|----|---|--------|---|
| E217 | LH | 7 | Ground |  <p style="text-align: right; font-size: small;">PKID0926E</p> |
| E224 | RH |   |        |   |

5. With turn signal switch operating, check the voltage between the rear combination lamp harness connector and ground.

| (+)       |    | Terminal | (-)    | Voltage   |
|-----------|----|----------|--------|---|
| Connector |    |          |        |   |
| B30       | LH | 6        | Ground |  <p style="text-align: right; font-size: small;">PKID0926E</p> |
| B45       | RH |          |        |   |

6. With turn signal switch operating, check the voltage between the door mirror (if equipped with turn signals in the mirrors) harness connector and ground.

| (+)       |    | Terminal | (-)    | Voltage   |
|-----------|----|----------|--------|---|
| Connector |    |          |        |   |
| D4        | LH | 8        | Ground |  <p style="text-align: right; font-size: small;">PKID0926E</p> |
| D107      | RH |          |        |   |

Is the measurement value normal?

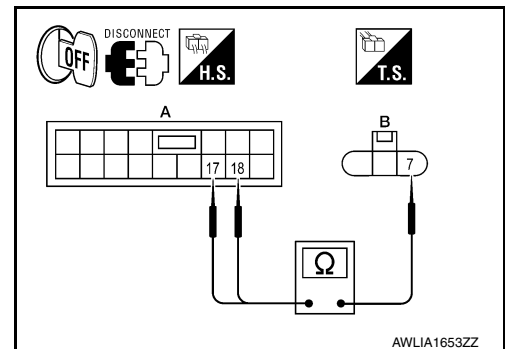
YES >> GO TO 5.

NO >> GO TO 3.

### 3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BCM connector M17.
3. Check continuity between the BCM harness connector (A) and the front combination lamp connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | M17      | E217      | 7        | Yes        |
| RH        |          | E224      |          |            |



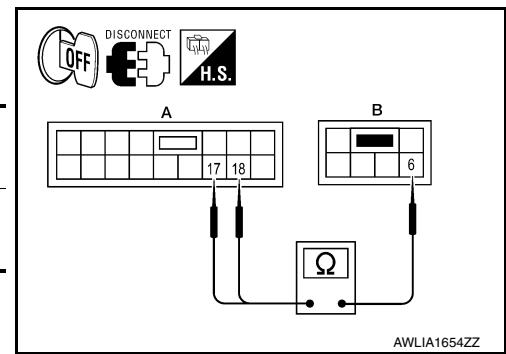
# TURN SIGNAL LAMP CIRCUIT

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

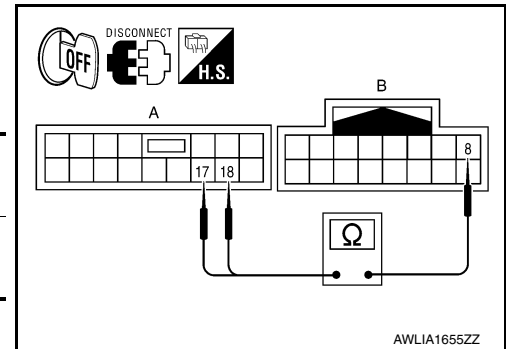
4. Check continuity between the BCM harness connector (A) and the rear combination lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | M17      | 18        | B30      | Yes        |
| RH        |          | 17        | B45      |            |



5. Check continuity between the BCM harness connector (A) and the door mirror connector (B) (if equipped with turn signal in mirror).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | M17      | 18        | D4       | Yes        |
| RH        |          | 17        | D107     |            |



### Does continuity exist?

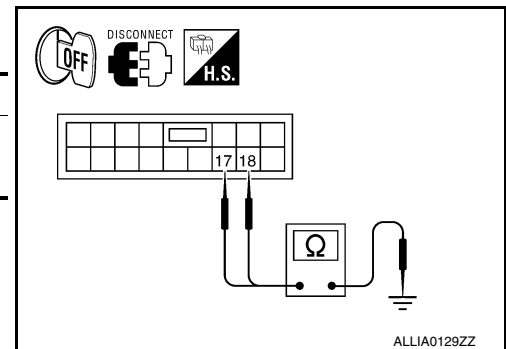
YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

## 4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and ground.

| Connector | Terminal | —  | Continuity |
|-----------|----------|----|------------|
| LH        | M17      | 18 | No         |
| RH        |          | 17 |            |



### Does continuity exist?

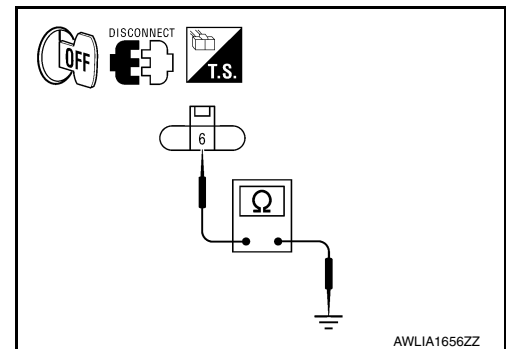
YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to [PCS-35. "Removal and Installation"](#).

## 5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- Turn ignition switch OFF.
- Check continuity between the front combination lamp and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| LH        | E217     | Ground | Yes        |
| RH        | E224     |        |            |



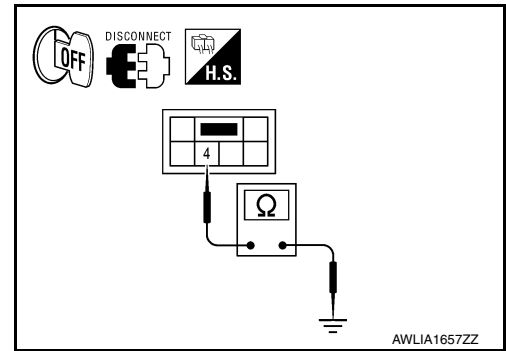
# TURN SIGNAL LAMP CIRCUIT

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between the rear combination lamp and ground.

| Connector |     | Terminal | —      | Continuity |
|-----------|-----|----------|--------|------------|
| LH        | B30 | 4        | Ground | Yes        |
| RH        | B45 |          |        |            |



4. Check continuity between the door mirror and ground (if equipped with turn signal in mirror).

| Connector |      | Terminal | —      | Continuity |
|-----------|------|----------|--------|------------|
| LH        | D4   | 7        | Ground | Yes        |
| RH        | D107 |          |        |            |

### Does continuity exist?

- YES >> Replace the front combination lamp. Refer to [EXL-154. "Removal and Installation"](#), the rear combination lamp. Refer to [EXL-162. "Removal and Installation"](#) or door mirror (if equipped with turn signal in mirror) . Refer to [EXL-159. "Removal and Installation"](#).
- NO >> Repair the harnesses or connectors.

# OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## OPTICAL SENSOR

### Description

INFOID:000000010050233

The optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to the BCM.

### Component Function Check

INFOID:000000010050234

#### 1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

##### CONSULT

1. Turn the ignition switch ON.
2. Select "OPTICAL SENSOR" of BCM (HEAD LAMP) DATA MONITOR item.
3. Turn the lighting switch to AUTO.
4. While the auto light system is operating, check the monitor status.

| Monitor item   | Condition               | Voltage        |
|----------------|-------------------------|----------------|
| OPTICAL SENSOR | When illuminating       | 3.1V or more * |
|                | When shutting off light | 0.6V or less   |

\*: Illuminates the optical sensor. The value may be less than the standard value if brightness is weak.

##### Is the item status normal?

- YES >> Optical sensor is normal.  
 NO >> Refer to [EXL-53, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010050235

Regarding Wiring Diagram information, refer to [EXL-106, "Wiring Diagram"](#).

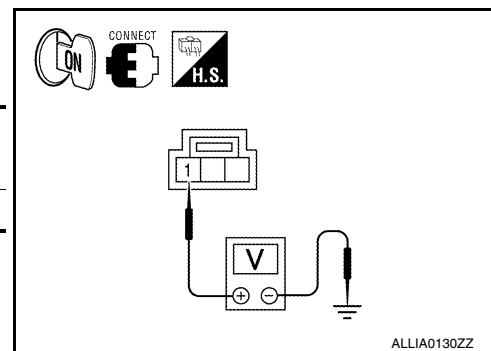
#### 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn the ignition switch ON.
2. Turn the lighting switch to AUTO.
3. Check the voltage between the optical sensor harness connector and ground.

| (+)       |          | (-)    | Voltage |
|-----------|----------|--------|---------|
| Connector | Terminal |        |         |
| M66       | 1        | Ground | 5V      |

##### Is the voltage reading as specified?

- YES >> GO TO 2.  
 NO >> GO TO 4.



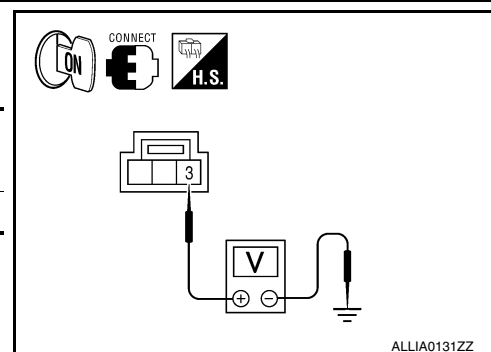
#### 2. CHECK OPTICAL SENSOR GROUND INPUT

Check the voltage between the optical sensor harness connector and ground.

| (+)       |          | (-)    | Voltage        |
|-----------|----------|--------|----------------|
| Connector | Terminal |        |                |
| M66       | 3        | Ground | Less than 0.2V |

##### Is the voltage reading as specified?

- YES >> GO TO 3.  
 NO >> GO TO 6.



# OPTICAL SENSOR

[XENON TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

### 3. CHECK OPTICAL SENSOR SIGNAL OUTPUT

With the auto light system operating, check voltage between the optical sensor harness connector and ground.

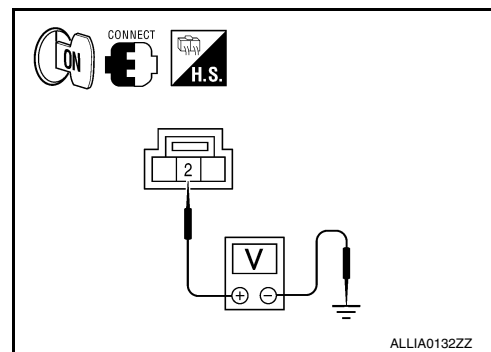
| (+)       |          | (-)    | Condition               | Voltage        |
|-----------|----------|--------|-------------------------|----------------|
| Connector | Terminal |        |                         |                |
| M66       | 2        | Ground | When illuminating       | 3.1V or more * |
|           |          |        | When shutting off light | 0.6V or less   |

\*: Illuminate the optical sensor. The value may be less than the standard if brightness is weak.

Is the voltage reading as specified?

YES >> GO TO 7.

NO >> Replace the optical sensor. Refer to [EXL-158, "Removal and Installation"](#).



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### 4. CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

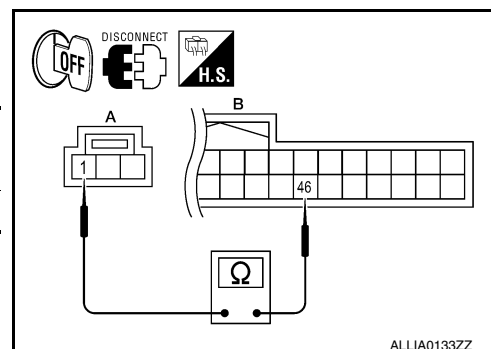
1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector M18.
3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| M66       | 1        | M18       | 46       | Yes        |

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.



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### 5. CHECK OPTICAL SENSOR POWER SUPPLY FOR SHORT CIRCUIT

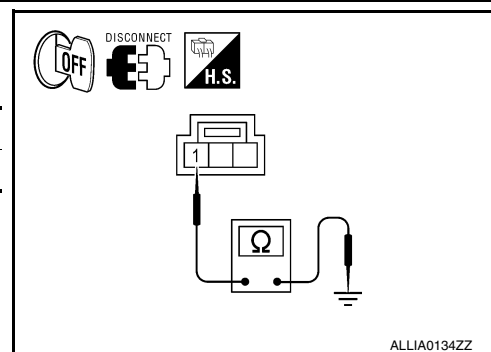
Check the continuity between the optical sensor harness connector and the ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| M66       | 1        | Ground | No         |

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).



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### 6. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

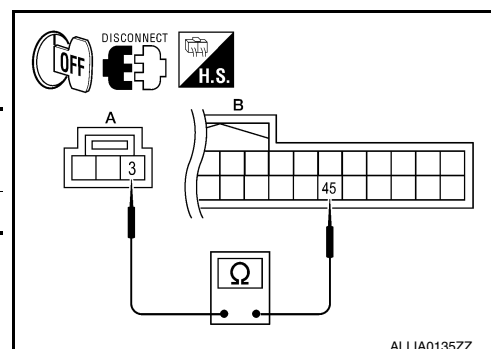
1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector M18.
3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| M66       | 3        | M18       | 45       | Yes        |

Does continuity exist?

YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.



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# OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## 7. CHECK OPTICAL SENSOR SIGNAL FOR OPEN CIRCUIT

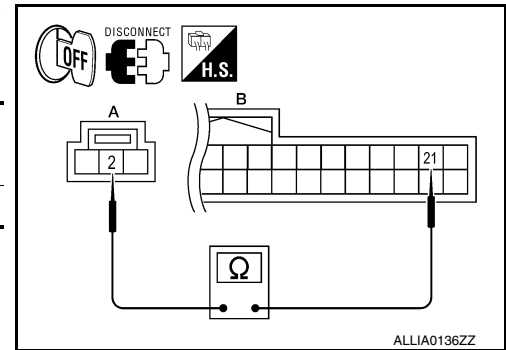
1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector M18.
3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| M66       | 2        | M18       | 21       | Yes        |

**Does continuity exist?**

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.



## 8. CHECK OPTICAL SENSOR SIGNAL FOR SHORT CIRCUIT

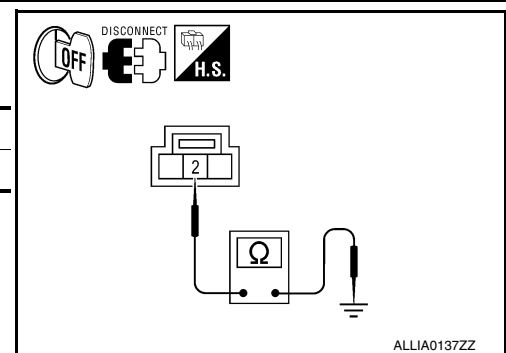
Check the continuity between the optical sensor harness connector and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| M66       | 2        | Ground | No         |

**Does continuity exist?**

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to [BCS-79. "Removal and Installation"](#).



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EXL

M  
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P

# HAZARD SWITCH

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

## HAZARD SWITCH

### Component Function Check

INFOID:0000000010050236

#### 1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

##### CONSULT DATA MONITOR

1. Turn ignition switch ON.
2. Select "HAZARD SW" of BCM (FLASHER) DATA MONITOR item.
3. With operating the hazard switch, check the monitor status.

| Monitor item | Condition     |     | Monitor status |
|--------------|---------------|-----|----------------|
| HAZARD SW    | Hazard switch | ON  | On             |
|              |               | OFF | Off            |

Is the measurement normal?

- YES >> Hazard switch circuit is normal.  
 NO >> Refer to [EXL-56, "Diagnosis Procedure"](#).

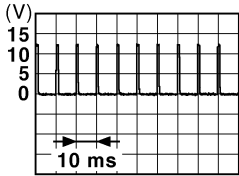
### Diagnosis Procedure

INFOID:0000000010050237

Regarding Wiring Diagram information, refer to [EXL-116, "Wiring Diagram"](#).

#### 1. CHECK HAZARD SWITCH SIGNAL INPUT

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Turn ignition switch ON.
4. Check voltage between hazard switch harness connector and ground.

| (+)           |          | (-)    | Voltage (Approx.)   |
|---------------|----------|--------|---|
| Hazard switch |          |        |   |
| Connector     | Terminal |        |   |
| M54           | 2        | Ground |  <p style="text-align: right; font-size: small;">JPMIA0012GB</p> |

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> GO TO 2.

#### 2. CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19.
3. Check continuity between hazard harness connector and BCM harness connector.

| Hazard switch |          | BCM       |          | Continuity |
|---------------|----------|-----------|----------|------------|
| Connector     | Terminal | Connector | Terminal |            |
| M54           | 2        | M19       | 98       | Yes        |

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Repair or replace harness.



# HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## 3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

| Hazard switch |          | Ground | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| M54           | 2        |        | No         |

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).
- NO >> Repair or replace harness.

## 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

| Hazard switch |          | Ground | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| M54           | 1        |        | Yes        |

Is the inspection result normal?

- YES >> Replace hazard switch. Refer to [EXL-161, "Removal and Installation"](#).
- NO >> Repair or replace harness.

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EXL

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

## ECU DIAGNOSIS INFORMATION

### BCM (BODY CONTROL MODULE)

#### Reference Value

INFOID:000000010069900

#### NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

#### VALUES ON THE DIAGNOSIS TOOL

| Monitor Item   | Condition   | Value/Status                     |
|----------------|---|----------------------------------|
| FR WIPER HI    | Other than front wiper switch HI                    | OFF                              |
|                | Front wiper switch HI                               | ON                               |
| FR WIPER LOW   | Other than front wiper switch LO                    | OFF                              |
|                | Front wiper switch LO                               | ON                               |
| FR WASHER SW   | Front washer switch OFF                             | OFF                              |
|                | Front washer switch ON                              | ON                               |
| FR WIPER INT   | Other than front wiper switch INT                   | OFF                              |
|                | Front wiper switch INT                              | ON                               |
| FR WIPER STOP  | Front wiper is not in STOP position                 | OFF                              |
|                | Front wiper is in STOP position                     | ON                               |
| INT VOLUME     | Wiper intermittent dial is in a dial position 1 - 7 | Wiper intermittent dial position |
| TURN SIGNAL R  | Other than turn signal switch RH                    | OFF                              |
|                | Turn signal switch RH                               | ON                               |
| TURN SIGNAL L  | Other than turn signal switch LH                    | OFF                              |
|                | Turn signal switch LH                               | ON                               |
| TAIL LAMP SW   | Other than lighting switch 1ST and 2ND              | OFF                              |
|                | Lighting switch 1ST or 2ND                          | ON                               |
| HI BEAM SW     | Other than lighting switch HI                       | OFF                              |
|                | Lighting switch HI                                  | ON                               |
| HEAD LAMP SW 1 | Other than lighting switch 2ND                      | OFF                              |
|                | Lighting switch 2ND                                 | ON                               |
| HEAD LAMP SW 2 | Other than lighting switch 2ND                      | OFF                              |
|                | Lighting switch 2ND                                 | ON                               |
| PASSING SW     | Other than lighting switch PASS                     | OFF                              |
|                | Lighting switch PASS                                | ON                               |
| AUTO LIGHT SW  | Other than lighting switch AUTO                     | OFF                              |
|                | Lighting switch AUTO                                | ON                               |
| FR FOG SW      | Front fog lamp switch OFF                           | OFF                              |
|                | Front fog lamp switch ON                            | ON                               |
| DOOR SW-DR     | Driver door closed                                  | OFF                              |
|                | Driver door opened                                  | ON                               |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Monitor Item   | Condition   | Value/Status |     |
|----------------|---|--------------|-----|
| DOOR SW-AS     | Passenger door closed   | OFF          | A   |
|                | Passenger door opened   | ON           |     |
| DOOR SW-RR     | Rear door RH closed   | OFF          | B   |
|                | Rear door RH opened   | ON           |     |
| DOOR SW-RL     | Rear door LH closed   | OFF          | C   |
|                | Rear door LH opened   | ON           |     |
| DOOR SW-BK     | Trunk door closed   | OFF          | D   |
|                | Trunk door opened   | ON           |     |
| CDL LOCK SW    | Other than power door lock switch LOCK  | OFF          | E   |
|                | Power door lock switch LOCK   | ON           |     |
| CDL UNLOCK SW  | Other than power door lock switch UNLOCK  | OFF          | F   |
|                | Power door lock switch UNLOCK   | ON           |     |
| KEY CYL LK-SW  | Other than driver door key cylinder LOCK position                                 | OFF          | G   |
|                | Driver door key cylinder LOCK position  | ON           |     |
| KEY CYL UN-SW  | Other than driver door key cylinder UNLOCK position                               | OFF          | H   |
|                | Driver door key cylinder UNLOCK position  | ON           |     |
| HAZARD SW      | When hazard switch is not pressed   | OFF          | I   |
|                | When hazard switch is pressed   | ON           |     |
| REAR DEF SW    | When rear window defogger switch is pressed                                       | ON           | J   |
| TR CANCEL SW   | Trunk lid opener cancel switch OFF  | OFF          | K   |
|                | Trunk lid opener cancel switch ON   | ON           |     |
| TR/BD OPEN SW  | Trunk lid opener switch OFF   | OFF          | L   |
|                | While the trunk lid opener switch is turned ON                                    | ON           |     |
| TRNK/HAT MNTR  | Trunk lid closed  | OFF          | M   |
|                | Trunk lid opened  | ON           |     |
| RKE-LOCK       | When LOCK button of Intelligent Key is not pressed                                | OFF          | N   |
|                | When LOCK button of Intelligent Key is pressed                                    | ON           |     |
| RKE-UNLOCK     | When UNLOCK button of Intelligent Key is not pressed                              | OFF          | O   |
|                | When UNLOCK button of Intelligent Key is pressed                                  | ON           |     |
| RKE-TR/BD      | When TRUNK OPEN button of Intelligent Key is not pressed                          | OFF          | P   |
|                | When TRUNK OPEN button of Intelligent Key is pressed                              | ON           |     |
| RKE-PANIC      | When PANIC button of Intelligent Key is not pressed                               | OFF          | EXL |
|                | When PANIC button of Intelligent Key is pressed                                   | ON           |     |
| RKE-P/W OPEN   | When UNLOCK button of Intelligent Key is not pressed and held                     | OFF          | M   |
|                | When UNLOCK button of Intelligent Key is pressed and held                         | ON           |     |
| RKE-MODE CHG   | When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously | OFF          | N   |
|                | When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously     | ON           |     |
| OPTICAL SENSOR | When outside of the vehicle is bright   | Close to 5 V | O   |
|                | When outside of the vehicle is dark   | Close to 0 V |     |
| REQ SW -DR     | When front door request switch is not pressed (driver side)                       | OFF          | P   |
|                | When front door request switch is pressed (driver side)                           | ON           |     |
| REQ SW -AS     | When front door request switch is not pressed (passenger side)                    | OFF          |     |
|                | When front door request switch is pressed (passenger side)                        | ON           |     |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Monitor Item  | Condition   | Value/Status                      |
|---------------|---|-----------------------------------|
| REQ SW -RL    | When rear door request switch is not pressed (driver side)    | OFF                               |
|               | When rear door request switch is pressed (driver side)        | ON                                |
| REQ SW -RR    | When rear door request switch is not pressed (passenger side) | OFF                               |
|               | When rear door request switch is pressed (passenger side)     | ON                                |
| REQ SW -BD/TR | When trunk opener request switch is not pressed               | OFF                               |
|               | When trunk opener request switch is pressed                   | ON                                |
| PUSH SW       | When engine switch (push switch) is not pressed               | OFF                               |
|               | When engine switch (push switch) is pressed                   | ON                                |
| IGN RLY2 -F/B | Ignition switch OFF or ACC                                    | OFF                               |
|               | Ignition switch ON  | ON                                |
| ACC RLY -F/B  | Ignition switch OFF   | OFF                               |
|               | Ignition switch ACC or ON                                     | ON                                |
| BRAKE SW 1    | When the brake pedal is not depressed                         | ON                                |
|               | When the brake pedal is depressed                             | OFF                               |
| DETE/CANCL SW | When selector lever is in P position                          | OFF                               |
|               | When selector lever is in any position other than P           | ON                                |
| SFT PN/N SW   | When selector lever is in any position other than P or N      | OFF                               |
|               | When selector lever is in P or N position                     | ON                                |
| UNLK SEN -DR  | Driver door UNLOCK status                                     | OFF                               |
|               | Driver door LOCK status                                       | ON                                |
| PUSH SW -IPDM | When engine switch (push switch) is not pressed               | OFF                               |
|               | When engine switch (push switch) is pressed                   | ON                                |
| IGN RLY1 -F/B | Ignition switch OFF or ACC                                    | OFF                               |
|               | Ignition switch ON  | ON                                |
| DETE SW -IPDM | When selector lever is in P position                          | OFF                               |
|               | When selector lever is in any position other than P           | ON                                |
| SFT PN -IPDM  | When selector lever is in any position other than P or N      | OFF                               |
|               | When selector lever is in P or N position                     | ON                                |
| SFT P -MET    | When selector lever is in any position other than P           | OFF                               |
|               | When selector lever is in P position                          | ON                                |
| SFT N -MET    | When selector lever is in any position other than N           | OFF                               |
|               | When selector lever is in N position                          | ON                                |
| ENGINE STATE  | Engine stopped  | STOP                              |
|               | While the engine stalls                                       | STALL                             |
|               | At engine cranking  | CRANK                             |
|               | Engine running  | RUN                               |
| VEH SPEED 1   | While driving   | Equivalent to speedometer reading |
| VEH SPEED 2   | While driving   | Equivalent to speedometer reading |
| DOOR STAT-DR  | Driver door LOCK status                                       | LOCK                              |
|               | Wait with selective UNLOCK operation (5 seconds)              | READY                             |
|               | Driver door UNLOCK status                                     | UNLK                              |
| DOOR STAT-AS  | Passenger door LOCK status                                    | LOCK                              |
|               | Wait with selective UNLOCK operation (5 seconds)              | READY                             |
|               | Passenger door UNLOCK status                                  | UNLK                              |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Monitor Item   | Condition   | Value/Status                           |     |
|----------------|---|--|-----|
| ID OK FLAG     | Ignition switch ACC or ON   | RESET                                  | A   |
|                | Ignition switch OFF   | SET                                    |     |
| PRMT ENG STRT  | When the engine start is prohibited   | RESET                                  | B   |
|                | When the engine start is permitted  | SET                                    |     |
| KEY SW -SLOT   | When Intelligent Key is not inserted into key slot  | OFF                                    | C   |
|                | When Intelligent Key is inserted into key slot  | ON                                     |     |
| RKE OPE COUN1  | During the operation of Intelligent Key   | Operation frequency of Intelligent Key |     |
| CONFIRM ID ALL | The key ID that the key slot receives does not accord with any key ID registered to BCM.        | YET                                    | D   |
|                | The key ID that the key slot receives accords with any key ID registered to BCM.                | DONE                                   |     |
| CONFIRM ID4    | The key ID that the key slot receives does not accord with the fourth key ID registered to BCM. | YET                                    | E   |
|                | The key ID that the key slot receives accords with the fourth key ID registered to BCM.         | DONE                                   | F   |
| CONFIRM ID3    | The key ID that the key slot receives does not accord with the third key ID registered to BCM.  | YET                                    | G   |
|                | The key ID that the key slot receives accords with the third key ID registered to BCM.          | DONE                                   |     |
| CONFIRM ID2    | The key ID that the key slot receives does not accord with the second key ID registered to BCM. | YET                                    | H   |
|                | The key ID that the key slot receives accords with the second key ID registered to BCM.         | DONE                                   |     |
| CONFIRM ID1    | The key ID that the key slot receives does not accord with the first key ID registered to BCM.  | YET                                    | I   |
|                | The key ID that the key slot receives accords with the first key ID registered to BCM.          | DONE                                   | J   |
| TP 4           | The ID of fourth key is not registered to BCM   | YET                                    |     |
|                | The ID of fourth key is registered to BCM   | DONE                                   | K   |
| TP 3           | The ID of third key is not registered to BCM  | YET                                    |     |
|                | The ID of third key is registered to BCM  | DONE                                   |     |
| TP 2           | The ID of second key is not registered to BCM   | YET                                    | EXL |
|                | The ID of second key is registered to BCM   | DONE                                   |     |
| TP 1           | The ID of first key is not registered to BCM  | YET                                    |     |
|                | The ID of first key is registered to BCM  | DONE                                   | M   |
| AIR PRESS FL   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of front LH tire          |     |
| AIR PRESS FR   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of front RH tire          | N   |
| AIR PRESS RR   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of rear RH tire           | O   |
| AIR PRESS RL   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of rear LH tire           |     |
| ID REGST FL1   | When ID of front LH tire transmitter is registered  | DONE                                   | P   |
|                | When ID of front LH tire transmitter is not registered  | YET                                    |     |
| ID REGST FR1   | When ID of front RH tire transmitter is registered  | DONE                                   |     |
|                | When ID of front RH tire transmitter is not registered  | YET                                    |     |
| ID REGST RR1   | When ID of rear RH tire transmitter is registered   | DONE                                   |     |
|                | When ID of rear RH tire transmitter is not registered   | YET                                    |     |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Monitor Item | Condition   | Value/Status |
|--------------|---|--------------|
| ID REGST RL1 | When ID of rear LH tire transmitter is registered     | DONE         |
|              | When ID of rear LH tire transmitter is not registered | YET          |
| WARNING LAMP | Tire pressure indicator OFF                           | OFF          |
|              | Tire pressure indicator ON                            | ON           |
| BUZZER       | Tire pressure warning alarm is not sounding           | OFF          |
|              | Tire pressure warning alarm is sounding               | ON           |

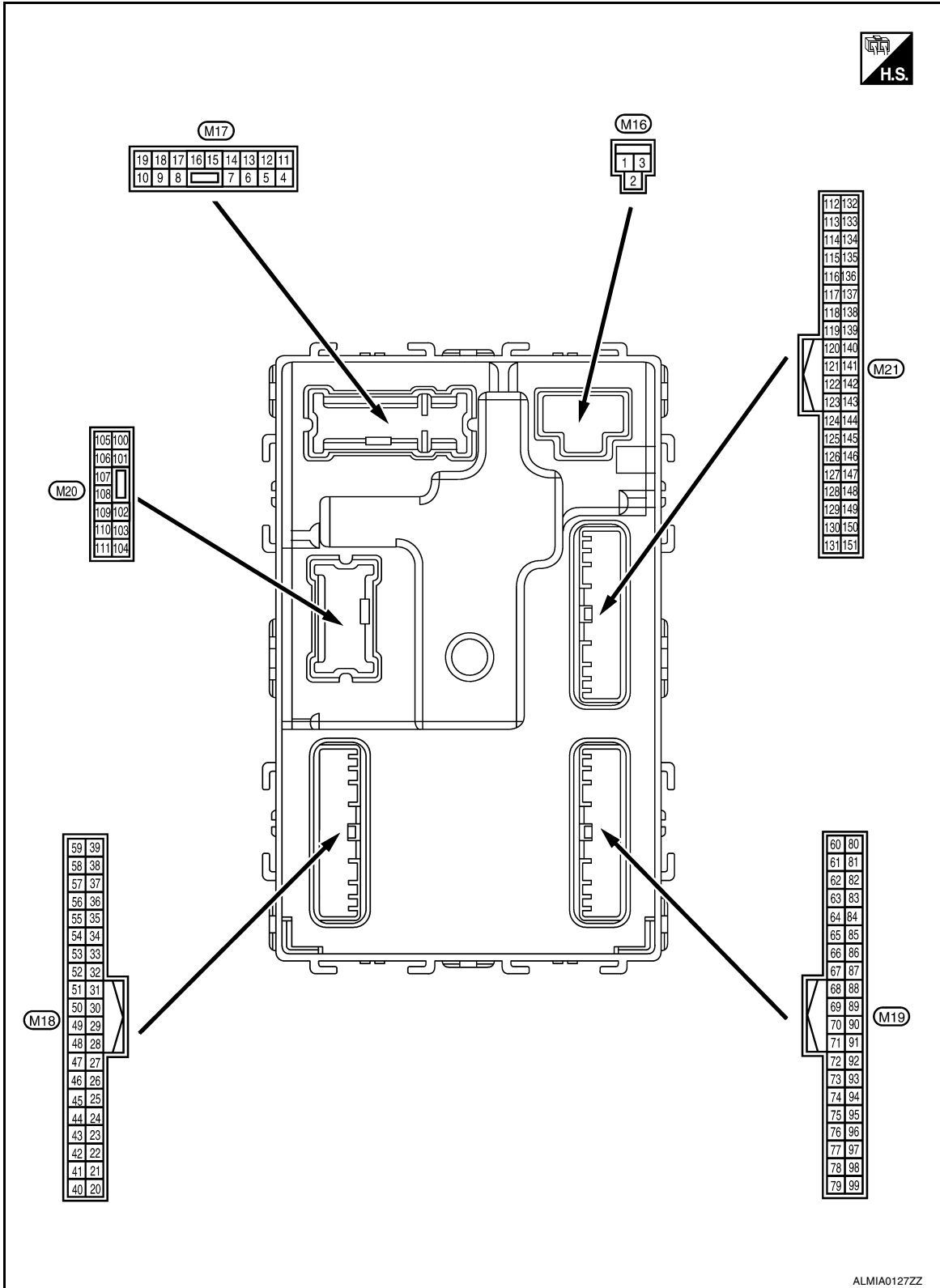
# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

## Terminal Layout

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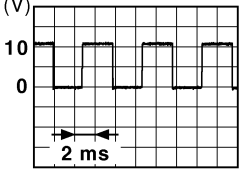
## Physical Values

INFOID:0000000110069902

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

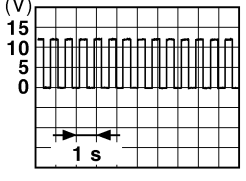
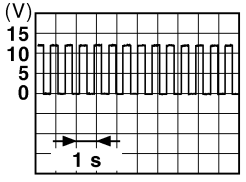
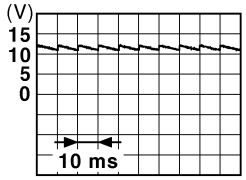
| Terminal No.<br>(Wire color) |        | Description                                     |                  | Condition  |   | Value<br>(Approx.)   |
|------------------------------|--------|---|------------------|--|---|--|
|                              |        | Signal name                                     | Input/<br>Output |  |   |  |
| (+)                          | (-)    |   |                  |  |   |  |
| 1<br>(W/B)                   | Ground | Battery power supply                            | Input            | Ignition switch OFF  |   | Battery voltage  |
| 2<br>(R/Y)                   | Ground | Battery power supply output                     | Output           | Ignition switch OFF  |   | Battery voltage  |
| 3<br>(L/W)                   | Ground | Ignition power supply output                    | Output           | Ignition switch ON   |   | Battery voltage  |
| 4<br>(P/W)                   | Ground | Interior room lamp power supply                 | Output           | After passing the interior room lamp battery saver operation time                |   | 0V   |
|                              |        |   |                  | Any other time after passing the interior room lamp battery saver operation time |   | Battery voltage  |
| 5<br>(G)                     | Ground | Front door RH UNLOCK                            | Output           | Front door RH  | UNLOCK (actuator is activated)                | Battery voltage  |
|                              |        |   |                  |  | Other than UNLOCK (actuator is not activated) | 0V   |
| 7<br>(R/W)                   | Ground | Step lamp                                       | Output           | Step lamp  | ON  | 0V   |
|                              |        |   |                  |  | OFF   | Battery voltage  |
| 8<br>(V)                     | Ground | All doors LOCK                                  | Output           | All doors  | LOCK (actuator is activated)                  | Battery voltage  |
|                              |        |   |                  |  | Other than LOCK (actuator is not activated)   | 0V   |
| 9<br>(L)                     | Ground | Front door LH UNLOCK                            | Output           | Front door LH  | UNLOCK (actuator is activated)                | Battery voltage  |
|                              |        |   |                  |  | Other than UNLOCK (actuator is not activated) | 0V   |
| 10<br>(G)                    | Ground | Rear door RH and rear door LH UNLOCK            | Output           | Rear door RH and rear door LH  | UNLOCK (actuator is activated)                | Battery voltage  |
|                              |        |   |                  |  | Other than UNLOCK (actuator is not activated) | 0V   |
| 11<br>(Y/R)                  | Ground | Battery power supply                            | Input            | Ignition switch OFF  |   | Battery voltage  |
| 13<br>(B)                    | Ground | Ground  | —                | Ignition switch ON   |   | 0V   |
| 14<br>(GR/W)                 | Ground | Engine switch (push switch) illumination ground | Input            | Tail lamp  | OFF   | 0V   |
|                              |        |   |                  |  | ON  | <p><b>NOTE:</b><br/>When the illumination brightening/dimming level is in the neutral position</p>  <p style="text-align: right; font-size: small;">JSNIA0010GB</p> |
| 15<br>(Y/L)                  | Ground | ACC indicator lamp                              | Output           | Ignition switch  | OFF   | Battery voltage  |
|                              |        |   |                  |  | ACC or ON                                     | 0V   |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

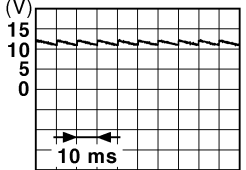
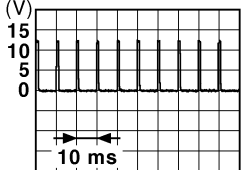

| Terminal No.<br>(Wire color) |        | Description   |                  | Condition  |  | Value<br>(Approx.)   |
|------------------------------|--------|---|------------------|--|--|--|
| (+)                          | (-)    | Signal name   | Input/<br>Output |  |  |  |
| 17<br>(G/B)                  | Ground | Turn signal (RH)                                    | Output           | Ignition switch<br>ON                              | Turn signal switch OFF                     | 0V   |
|                              |        |   |                  |  | Turn signal switch RH                      |  <p style="text-align: center;">6.5 V</p>   |
| 18<br>(G/Y)                  | Ground | Turn signal (LH)                                    | Output           | Ignition switch<br>ON                              | Turn signal switch OFF                     | 0V   |
|                              |        |   |                  |  | Turn signal switch LH                      |  <p style="text-align: center;">6.5 V</p>   |
| 19<br>(Y)                    | Ground | Room lamp timer<br>control                          | Output           | Interior room<br>lamp                              | OFF  | Battery voltage  |
|                              |        |   |                  |  | ON   | 0V   |
| 21<br>(P/B)                  | Ground | Optical sensor signal                               | Input            | Ignition switch<br>ON                              | When outside of the vehi-<br>cle is bright | Close to 5V  |
|                              |        |   |                  |  | When outside of the vehi-<br>cle is dark   | Close to 0V  |
| 24<br>(R/W)                  | Ground | Stop lamp switch 1                                  | Input            | —  | Battery voltage                            |  |
| 26<br>(O/L)                  | Ground | Stop lamp switch 2                                  | Input            | Stop lamp switch                                   | OFF (brake pedal is re-<br>leased)         | 0V   |
|                              |        |   |                  |  | ON (brake pedal is de-<br>pressed)         | Battery voltage  |
| 27<br>(O)                    | Ground | Front door lock as-<br>sembly LH (unlock<br>sensor) | Input            | Front door LH                                      | LOCK status                                |  <p style="text-align: center;">11.8V</p> |
|                              |        |   |                  |  | UNLOCK status                              | 0V   |
| 29<br>(Y)                    | Ground | Key slot switch                                     | Input            | When Intelligent Key is inserted into key slot     | Battery voltage                            |  |
|                              |        |   |                  | When Intelligent Key is not inserted into key slot | 0V   |  |
| 31<br>(G)                    | Ground | Rear window defog-<br>ger feedback signal           | Input            | Rear window de-<br>fogger switch                   | OFF  | 0V   |
|                              |        |   |                  | ON   | Battery voltage                            |  |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

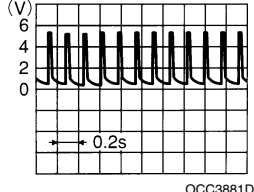
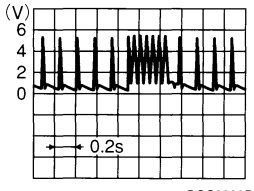
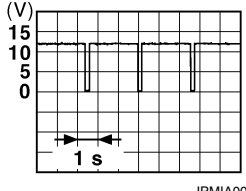
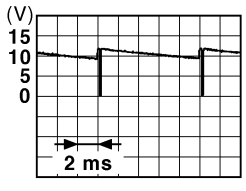
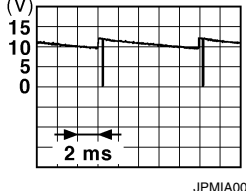
[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                              |                  | Condition                                |                                 | Value<br>(Approx.)   |
|------------------------------|--------|--|------------------|--|---------------------------------|--|
| (+)                          | (-)    | Signal name                              | Input/<br>Output |  |                                 |  |
| 32<br>(R/B)                  | Ground | Front door RH switch                     | Input            | Front door RH switch                     | OFF (when front door RH closes) | <br><small>JPMIA0011GB</small><br>11.8 V  |
|                              |        |  |                  |  | ON (when front door RH opens)   | 0V   |
| 37<br>(O)                    | Ground | Trunk lid opener cancel switch           | Input            | Trunk lid opener cancel switch           | CANCEL                          | <br><small>JPMIA0012GB</small><br>1.1V    |
|                              |        |  |                  |  | ON                              | 0V   |
| 38<br>(GR/W)                 | Ground | Rear window defogger ON signal           | Input            | Rear window defogger switch              | OFF                             | 5V   |
|                              |        |  |                  |  | ON                              | 0V   |
| 40<br>(Y/G)                  | Ground | Power window serial link                 | Input/<br>Output | Ignition switch ON                       | Ignition switch ON              | <br><small>JPMIA0013GB</small><br>10.2V |
|                              |        |  |                  |  | Ignition switch OFF or ACC      | 0V   |
| 41<br>(W)                    | Ground | Engine switch (push switch) illumination | Output           | Engine switch (push switch) illumination | ON                              | 5.5V   |
|                              |        |  |                  |  | OFF                             | 0V   |
| 42<br>(R)                    | Ground | LOCK indicator lamp                      | Output           | LOCK indicator lamp                      | ON                              | 0V   |
|                              |        |  |                  |  | OFF                             | Battery voltage  |
| 45<br>(P)                    | Ground | Receiver & sensor ground                 | Input            | Ignition switch ON                       |                                 | 0V   |
| 46<br>(V/W)                  | Ground | Receiver & sensor power supply output    | Output           | Ignition switch                          | OFF                             | 0V   |
|                              |        |  |                  |  | ACC or ON                       | 5.0V   |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

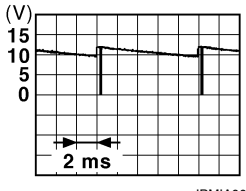
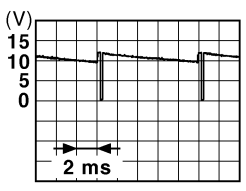
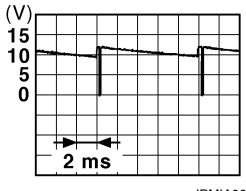
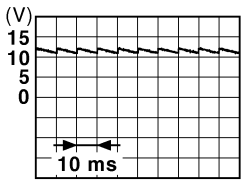
| Terminal No.<br>(Wire color) |        | Description                                     |                  | Condition  | Value<br>(Approx.)  |
|------------------------------|--------|---|------------------|--|---|
| (+)                          | (-)    | Signal name                                     | Input/<br>Output |  |   |
| 47<br>(G/O)                  | Ground | Tire pressure receiver signal                   | Input/<br>Output | Ignition switch ON   | Standby state<br><br>OCC3881D                      |
|                              |        |   |                  | When receiving the signal from the transmitter<br><br>OCC3880D  |   |
| 48<br>(R/G)                  | Ground | Selector lever transmission range switch signal | Input            | Selector lever   | P or N position<br>12.0V  |
|                              |        |   |                  | Except P and N positions   | 0V  |
| 49<br>(L/O)                  | Ground | Security indicator signal                       | Output           | Security indicator   | ON<br>0V  |
|                              |        |   |                  | Blinking<br><br>JPMA0014GB<br>11.3V  |   |
| 50<br>(LG/B)                 | Ground | Combination switch OUTPUT 5                     | Input            | Combination switch (Wiper intermittent dial 4)   | All switch OFF<br>0V  |
|                              |        |   |                  | Lighting switch 1ST  | Turn signal switch RH<br><br>JPMA0031GB<br>10.7V |
|                              |        |   |                  | Lighting switch high-beam  |   |
|                              |        |   |                  | Lighting switch 2ND  |   |
| 51<br>(L/W)                  | Ground | Combination switch OUTPUT 1                     | Input            | Combination switch   | All switch OFF (Wiper intermittent dial 4)<br>0V  |
|                              |        |   |                  | Any of the conditions below with all switch OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 3<br>• Wiper intermittent dial 6<br>• Wiper intermittent dial 7<br><br>JPMA0032GB<br>10.7V |   |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

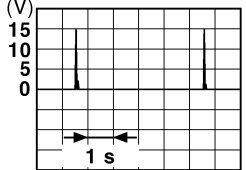
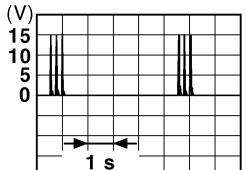
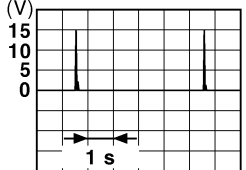
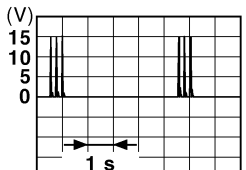
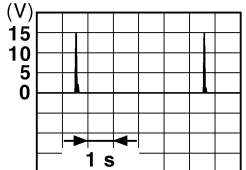
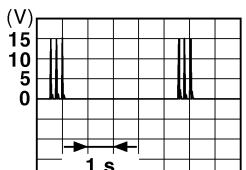
[XENON TYPE]

| Terminal No.<br>(Wire color)   |        | Description                             |                  | Condition   |   | Value<br>(Approx.)   |
|--|--------|---|------------------|---|---|--|
| (+)  | (-)    | Signal name                             | Input/<br>Output |   |   |  |
| 52<br>(G/B)  | Ground | Combination switch<br>OUTPUT 2          | Input            | Combination<br>switch                                     | All switch OFF<br>(Wiper intermittent dial 4)         | 0V   |
|  |        |   |                  |   | Front washer switch ON<br>(Wiper intermittent dial 4) |  <p style="text-align: center;">10.7V</p>   |
| Any of the conditions below<br>with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul> |        |   |                  |   |   |  |
| 53<br>(LG/<br>R)   | Ground | Combination switch<br>OUTPUT 3          | Input            | Combination<br>switch<br>(Wiper intermit-<br>tent dial 4) | All switch OFF  | 0V   |
|  |        |   |                  |   | Front wiper switch INT                                |  <p style="text-align: center;">10.7V</p>   |
| Front wiper switch LO<br><br>Lighting switch AUTO  |        |   |                  |   |   |  |
| 54<br>(G/Y)  | Ground | Combination switch<br>OUTPUT 4          | Input            | Combination<br>switch<br>(Wiper intermit-<br>tent dial 4) | All switch OFF  | 0V   |
|  |        |   |                  |   | Front fog lamp switch ON                              |  <p style="text-align: center;">10.7V</p> |
| Lighting switch 2ND<br><br>Lighting switch flash-to-<br>pass<br><br>Turn signal switch LH  |        |   |                  |   |   |  |
| 57<br>(W)  | Ground | Tire pressure warn-<br>ing check switch | Input            | —   | —   | 5V   |
| 58<br>(SB)   | Ground | Front door LH switch                    | Input            | Front door LH<br>switch                                   | OFF (front door LH<br>CLOSE)                          |  <p style="text-align: center;">11.8V</p> |
|  |        |   |                  |   | ON (front door LH OPEN)                               |  |
| 59<br>(G/R)  | Ground | Rear window defog-<br>ger relay         | Output           | Rear window de-<br>fogger                                 | Active  | Battery voltage  |
|  |        |   |                  |   | Not activated   | 0V   |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                         |                  | Condition  | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------------|------------------|--|---|
| (+)                          | (-)    | Signal name                         | Input/<br>Output |  |   |
| 60<br>(B/R)                  | Ground | Front console antenna 2 (-)         | Output           | Ignition switch OFF  |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p>   |
|                              |        |                                     |                  | When Intelligent Key is not in the passenger compartment                   |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p>   |
| 61<br>(W/R)                  | Ground | Center console antenna 2 (+)        | Output           | Ignition switch OFF  |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p>  |
|                              |        |                                     |                  | When Intelligent Key is not in the passenger compartment                   |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p> |
| 62<br>(V)                    | Ground | Front outside handle RH antenna (-) | Output           | When the front door RH request switch is operated with ignition switch OFF |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p> |
|                              |        |                                     |                  | When Intelligent Key is not in the antenna detection area                  |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p> |

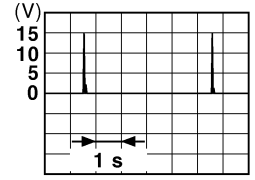
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# BCM (BODY CONTROL MODULE)

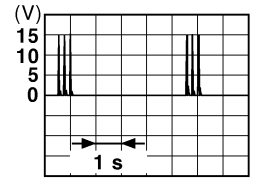
< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

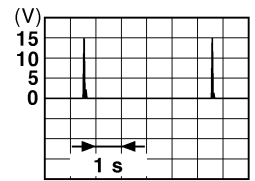
| Terminal No.<br>(Wire color) |        | Description                            |                  | Condition  | Value<br>(Approx.)  |
|------------------------------|--------|--|------------------|--|---|
| (+)                          | (-)    | Signal name                            | Input/<br>Output |  |   |
| 63<br>(P)                    | Ground | Front outside handle<br>RH antenna (+) | Output           | When the front<br>door RH request<br>switch is operat-<br>ed with ignition<br>switch OFF | When Intelligent Key is in<br>the antenna detection area        |
|                              |        |  |                  | When Intelligent Key is not<br>in the antenna detection<br>area                          | When Intelligent Key is not<br>in the antenna detection<br>area |
| 64<br>(V)                    | Ground | Front outside handle<br>LH antenna (-) | Output           | When the front<br>door LH request<br>switch is operat-<br>ed with ignition<br>switch OFF | When Intelligent Key is in<br>the antenna detection area        |
|                              |        |  |                  | When Intelligent Key is not<br>in the antenna detection<br>area                          | When Intelligent Key is not<br>in the antenna detection<br>area |
| 65<br>(P)                    | Ground | Front outside handle<br>LH antenna (+) | Output           | When the front<br>door LH request<br>switch is operat-<br>ed with ignition<br>switch OFF | When Intelligent Key is in<br>the antenna detection area        |
|                              |        |  |                  | When Intelligent Key is not<br>in the antenna detection<br>area                          | When Intelligent Key is not<br>in the antenna detection<br>area |



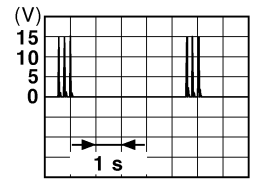
JMKIA0062GB



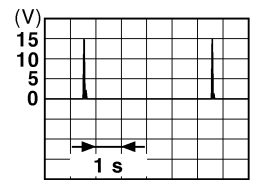
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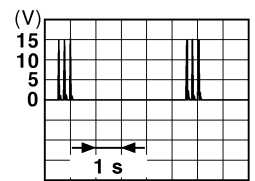
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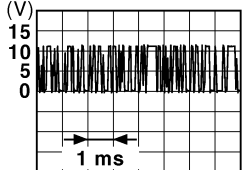
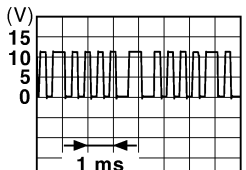
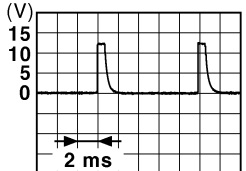

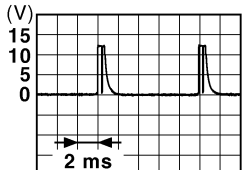


JMKIA0063GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                             |                  | Condition                                       |  | Value<br>(Approx.)  |
|------------------------------|--------|---|------------------|---|--|---|
|                              |        | Signal name                             | Input/<br>Output |   |  |   |
| (+)                          | (-)    |   |                  |   |  |   |
| 68<br>(G/O)                  | Ground | NATS antenna amp<br>(built in key slot) | Input/<br>Output | During waiting                                  | Ignition switch is pressed<br>while inserting the Intelli-<br>gent Key into the key slot.  | Just after pressing ignition<br>switch. Pointer of tester should<br>move.   |
| 69<br>(O)                    | Ground | NATS antenna amp<br>(built in key slot) | Input/<br>Output | During waiting                                  | Ignition switch is pressed<br>while inserting the Intelli-<br>gent Key into the key slot.  | Just after pressing ignition<br>switch. Pointer of tester should<br>move.   |
| 70<br>(R/B)                  | Ground | Ignition relay-2 con-<br>trol           | Output           | Ignition switch                                 | OFF or ACC   | 0V  |
|                              |        |   |                  |   | ON   | Battery voltage   |
| 71<br>(L/O)                  | Ground | Remote keyless entry<br>receiver signal | Input/<br>Output | During waiting                                  |  |  <p style="text-align: right; font-size: small;">JMKIA0064GB</p>   |
|                              |        |   |                  | When operating either button on Intelligent Key |  |  <p style="text-align: right; font-size: small;">JMKIA0065GB</p>  |
| 75<br>(R/Y)                  | Ground | Combination switch<br>INPUT 5           | Output           | Combination<br>switch                           | All switch OFF<br>(Wiper intermittent dial 4)  |  <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4V</p> |
|                              |        |   |                  |   | Front fog lamp switch ON<br>(Wiper intermittent dial 4)  |  <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3V</p> |
|                              |        |   |                  |   | Any of the conditions below<br>with all switch OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 6<br>• Wiper intermittent dial 7 |  <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3V</p> |

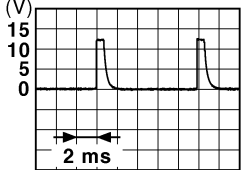
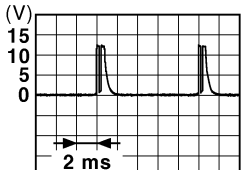

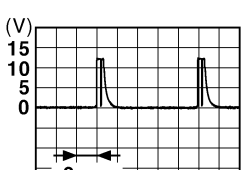
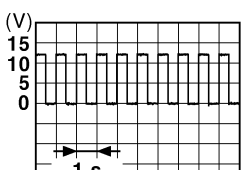
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

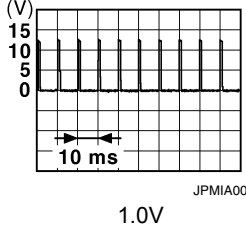
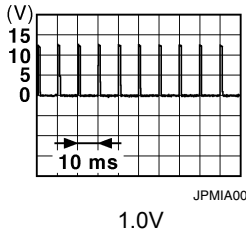
| Terminal No.<br>(Wire color) |        | Description                   |                  | Condition             | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------|------------------|-----------------------|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output |                       |   |
| 76<br>(R/G)                  | Ground | Combination switch<br>INPUT 3 | Output           | Combination switch    | All switch OFF<br>(Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: right;">1.4V</p> </div>  |
|                              |        |                               |                  |                       | Lighting switch high-beam<br>(Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0036GB</p> <p style="text-align: right;">1.3V</p> </div>   |
|                              |        |                               |                  |                       | Lighting switch 2ND<br>(Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: right;">1.3V</p> </div>  |
|                              |        |                               |                  |                       | Any of the conditions below<br>with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 3</li> </ul> <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: right;">1.3V</p> </div> |
| 78<br>(P)                    | Ground | CAN-L                         | Input/<br>Output | —                     | —   |
| 79<br>(L)                    | Ground | CAN-H                         | Input/<br>Output | —                     | —   |
| 80<br>(R/L)                  | Ground | Key slot illumination         | Output           | Key slot illumination | OFF <div style="text-align: right;"> <p style="text-align: right;">Battery voltage</p>  <p style="text-align: right; font-size: small;">JPMIA0015GB</p> <p style="text-align: right;">6.5V</p> </div>  |
|                              |        |                               |                  |                       | Blinking <div style="text-align: right;"> <p style="text-align: right;">0V</p> </div>   |
| 81<br>(LG)                   | Ground | ON indicator lamp             | Output           | Ignition switch       | OFF or ACC <div style="text-align: right;"> <p style="text-align: right;">0V</p> </div>   |
|                              |        |                               |                  |                       | ON <div style="text-align: right;"> <p style="text-align: right;">Battery voltage</p> </div>  |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                                |                  | Condition                    |                           | Value<br>(Approx.)   |
|------------------------------|--------|--|------------------|------------------------------|---------------------------|--|
|                              |        | Signal name                                | Input/<br>Output |                              |                           |  |
| (+)                          | (-)    |  |                  |                              |                           |  |
| 83<br>(L)                    | Ground | ACC relay control                          | Output           | Ignition switch              | OFF                       | 0V   |
|                              |        |  |                  |                              | ACC or ON                 | Battery voltage  |
| 84<br>(Y/R)                  | Ground | CVT shift selector                         | Output           | —                            |                           | Battery voltage  |
| 87<br>(G/B)                  | Ground | Selector lever P position switch           | Input            | Selector lever               | P position                | 0V   |
|                              |        |  |                  |                              | Any position other than P | Battery voltage  |
| 88<br>(R)                    | Ground | Front door RH request switch               | Input            | Front door RH request switch | ON (pressed)              | 0V   |
|                              |        |  |                  |                              | OFF (not pressed)         |   |
| 89<br>(R)                    | Ground | Front door LH request switch               | Input            | Front door LH request switch | ON (pressed)              | 0V   |
|                              |        |  |                  |                              | OFF (not pressed)         |  |
| 90<br>(Y)                    | Ground | Blower fan motor relay control             | Output           | Ignition switch              | OFF or ACC                | 0V   |
|                              |        |  |                  |                              | ON                        | Battery voltage  |
| 91<br>(L/R)                  | Ground | Remote keyless entry receiver power supply | Output           | Ignition switch OFF          |                           | Battery voltage  |

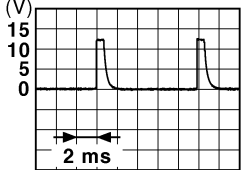

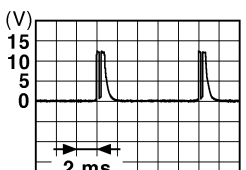
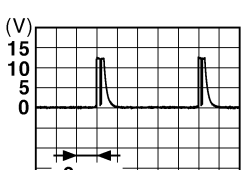
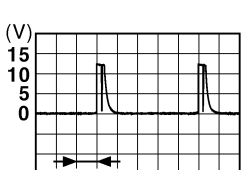
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

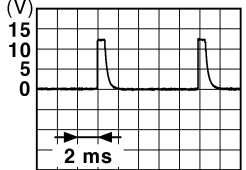
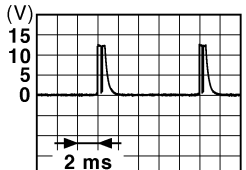
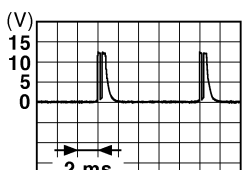
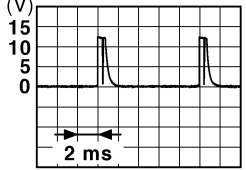
[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                   |                  | Condition              | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------|------------------|------------------------|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output |                        |   |
| 95<br>(R/W)                  | Ground | Combination switch<br>INPUT 1 | Output           | All switch OFF         | <br>1.4V   |
|                              |        |                               |                  | Turn signal switch LH  | <br>1.3V   |
|                              |        |                               |                  | Turn signal switch RH  | <br>1.3V  |
|                              |        |                               |                  | Front wiper switch LO  | <br>1.3V |
|                              |        |                               |                  | Front washer switch ON | <br>1.3V |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                   |                                 | Condition   | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------|---------------------------------|---|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output                |   |   |
| 96<br>(P/B)                  | Ground | Combination switch<br>INPUT 4 | Output<br>Combination<br>switch | All switch OFF<br>(Wiper intermittent dial 4)       |  <p>1.4V</p>   |
|                              |        |                               |                                 | Lighting switch AUTO<br>(Wiper intermittent dial 4) |  <p>1.3V</p>   |
|                              |        |                               |                                 | Lighting switch 1ST<br>(Wiper intermittent dial 4)  |  <p>1.3V</p>  |
|                              |        |                               |                                 | Any of the conditions below<br>with all switch OFF  | <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>  <p>1.3V</p> |

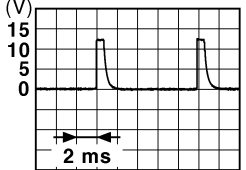

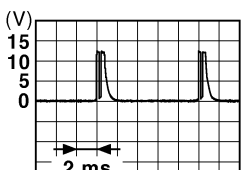
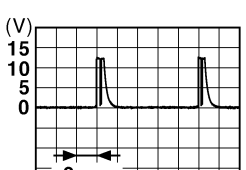
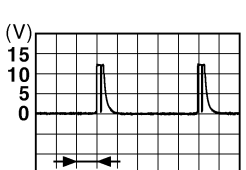
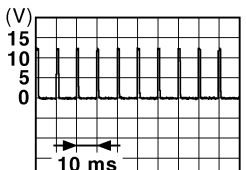
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**EXL**

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

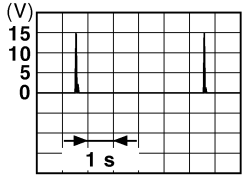
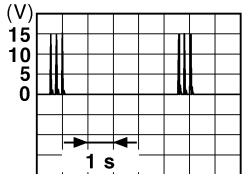
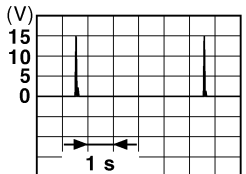
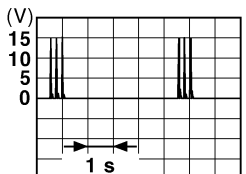
[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                   |                  | Condition  | Value<br>(Approx.)            |   |
|------------------------------|--------|-------------------------------|------------------|--|-------------------------------|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output |  |                               |   |
| 97<br>(R/B)                  | Ground | Combination switch<br>INPUT 2 | Output           | Combination<br>switch<br>(Wiper intermittent dial 4) | All switch OFF                | <br><small>JPMIA0041GB</small><br>1.4V   |
|                              |        |                               |                  |  | Lighting switch flash-to-pass | <br><small>JPMIA0037GB</small><br>1.3V   |
|                              |        |                               |                  |  | Lighting switch 2ND           | <br><small>JPMIA0036GB</small><br>1.3V  |
|                              |        |                               |                  |  | Front wiper switch INT        | <br><small>JPMIA0038GB</small><br>1.3V |
|                              |        |                               |                  |  | Front wiper switch HI         | <br><small>JPMIA0040GB</small><br>1.3V |
|                              |        |                               |                  |  | Pressed                       | 0 V   |
| 98<br>(G/O)                  | Ground | Hazard switch                 | Input            | Hazard switch  | Not pressed                   | <br><small>JPMIA0012GB</small><br>1.1V |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description              |                  | Condition           | Value<br>(Approx.)                                       |   |
|------------------------------|--------|--------------------------|------------------|---------------------|--|---|
|                              |        | Signal name              | Input/<br>Output |                     |  |   |
| (+)                          | (-)    |                          |                  |                     |  |   |
| 103<br>(V)                   | Ground | Trunk lid opening.       | Output           | Trunk lid           | Open (trunk lid opener actuator is activated)            | Battery voltage   |
|                              |        |                          |                  |                     | Close (trunk lid opener actuator is not activated)       | 0V  |
| 110<br>(V/W)                 | Ground | Trunk room lamp          | Output           | Trunk room lamp     | ON   | 0V  |
|                              |        |                          |                  |                     | OFF  | Battery voltage   |
| 114<br>(B)                   | Ground | Trunk room antenna 1 (-) | Output           | Ignition switch OFF | When Intelligent Key is in the passenger compartment     |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p>   |
|                              |        |                          |                  |                     | When Intelligent Key is not in the passenger compartment |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p>   |
| 115<br>(W)                   | Ground | Trunk room antenna 1 (+) | Output           | Ignition switch OFF | When Intelligent Key is in the passenger compartment     |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p> |
|                              |        |                          |                  |                     | When Intelligent Key is not in the passenger compartment |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p> |

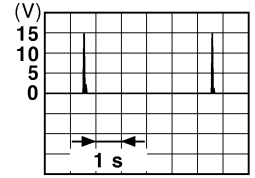
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# BCM (BODY CONTROL MODULE)

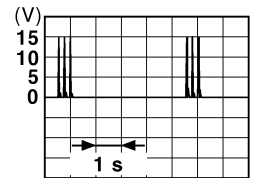
< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

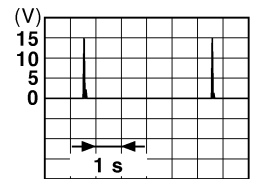
| Terminal No.<br>(Wire color) |        | Description                       |                  | Condition  | Value<br>(Approx.)   |
|------------------------------|--------|-----------------------------------|------------------|--|--|
| (+)                          | (-)    | Signal name                       | Input/<br>Output |  |  |
| 118<br>(L/O)                 | Ground | Rear bumper antenna (-)           | Output           | When the trunk lid request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area                    |
|                              |        |                                   |                  | When Intelligent Key is not in the antenna detection area              | When Intelligent Key is not in the antenna detection area                |
| 119<br>(BR/W)                | Ground | Rear bumper antenna (+)           | Output           | When the trunk lid request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area                    |
|                              |        |                                   |                  | When Intelligent Key is not in the antenna detection area              | When Intelligent Key is not in the antenna detection area                |
| 127<br>(BR/W)                | Ground | Ignition relay (IPDM E/R) control | Output           | Ignition switch  | OFF or ACC   |
|                              |        |                                   |                  |  | ON   |
| 130<br>(W)                   | Ground | Trunk room lamp switch            | Input            | Trunk room lamp switch   | OFF (trunk is closed)  |
|                              |        |                                   |                  |  | ON (trunk is open)   |
| 132<br>(R)                   | Ground | Starter motor relay control       | Output           | Ignition switch ON   | When selector lever is in P or N position and the brake is depressed     |
|                              |        |                                   |                  |  | When selector lever is in P or N position and the brake is not depressed |



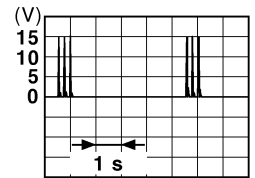
JMKIA0062GB



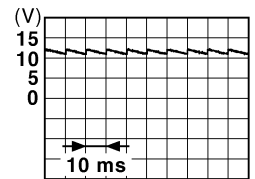
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JMKIA0062GB



JMKIA0063GB



JPMIA0011GB

11.8V

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                 |                  | Condition                   | Value<br>(Approx.)     |                             |
|------------------------------|--------|-----------------------------|------------------|-----------------------------|------------------------|-----------------------------|
|                              |        | Signal name                 | Input/<br>Output |                             |                        |                             |
| (+)                          | (-)    |                             |                  |                             |                        |                             |
| 140<br>(BR)                  | Ground | Engine switch (push switch) | Input            | Engine switch (push switch) | Pressed<br>Not pressed | 0V<br>Battery voltage       |
|                              |        |                             |                  | 141<br>(BR)                 | Ground                 | Trunk opener request switch |
| 144<br>(GR)                  | Ground | Request switch buzzer       | Output           |                             |                        |                             |
|                              |        |                             |                  | 147<br>(L/R)                | Ground                 | Trunk lid opener switch     |
| 148<br>(R/W)                 | Ground | Rear door RH switch         | Input            |                             |                        |                             |
|                              |        |                             |                  | 149<br>(R/B)                | Ground                 | Rear door LH switch         |

## Fail Safe

INFOID:000000010069903

| Display contents of CONSULT | Fail-safe               | Cancellation   |
|-----------------------------|-------------------------|--|
| B2190: NATS ANTENNA AMP     | Inhibit engine cranking | Erase DTC  |
| B2191: DIFFERENCE OF KEY    | Inhibit engine cranking | Erase DTC  |
| B2192: ID DISCORD BCM-ECM   | Inhibit engine cranking | Erase DTC  |
| B2193: CHAIN OF BCM-ECM     | Inhibit engine cranking | Erase DTC  |
| B2195: ANTI-SCANNING        | Inhibit engine cranking | Erase DTC  |
| B2560: STARTER CONT RELAY   | Inhibit engine cranking | 500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Starter control relay signal</li> <li>• Starter relay status signal</li> </ul> |

# BCM (BODY CONTROL MODULE)

[XENON TYPE]

< ECU DIAGNOSIS INFORMATION >

| Display contents of CONSULT | Fail-safe   | Cancellation  |
|-----------------------------|---|---|
| B2562: LO VOLTAGE           | Inhibit engine cranking   | 100 ms after the power supply voltage increases to more than 8.8 V  |
| B2608: STARTER RELAY        | Inhibit engine cranking   | 500 ms after the following signal communication status becomes consistent<br><ul style="list-style-type: none"> <li>• Starter motor relay control signal</li> <li>• Starter relay status signal (CAN)</li> </ul>  |
| B260A: IGNITION RELAY       | Inhibit engine cranking   | 500 ms after the following conditions are fulfilled<br><ul style="list-style-type: none"> <li>• IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>• Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>• Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul> |
| B260F: ENG STATE SIG LOST   | Maintains the power supply position attained at the time of DTC detection | When any of the following conditions is fulfilled<br><ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives engine status signal (CAN)</li> </ul>   |
| B2617: STARTER RELAY CIRC   | Inhibit engine cranking   | 1 second after the starter motor relay control inside BCM becomes normal  |
| B2618: BCM                  | Inhibit engine cranking   | 1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal  |
| B26E1: ENG STATE NO RECIV   | Inhibit engine cranking   | When any of the following conditions are fulfilled<br><ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives engine status signal (CAN)</li> </ul>  |

## DTC Inspection Priority Chart

INFOID:0000000010069904

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

| Priority | DTC   |
|----------|---|
| 1        | <ul style="list-style-type: none"> <li>• B2562: LO VOLTAGE</li> </ul>   |
| 2        | <ul style="list-style-type: none"> <li>• U1000: CAN COMM CIRCUIT</li> <li>• U1010: CONTROL UNIT (CAN)</li> </ul>  |
| 3        | <ul style="list-style-type: none"> <li>• B2190: NATS ANTENNA AMP</li> <li>• B2191: DIFFERENCE OF KEY</li> <li>• B2192: ID DISCORD BCM-ECM</li> <li>• B2193: CHAIN OF BCM-ECM</li> </ul>   |
| 4        | <ul style="list-style-type: none"> <li>• B2553: IGNITION RELAY</li> <li>• B2555: STOP LAMP</li> <li>• B2556: PUSH-BTN IGN SW</li> <li>• B2557: VEHICLE SPEED</li> <li>• B2560: STARTER CONT RELAY</li> <li>• B2601: SHIFT POSITION</li> <li>• B2602: SHIFT POSITION</li> <li>• B2603: SHIFT POSI STATUS</li> <li>• B2604: PNP SWITCH</li> <li>• B2605: PNP SWITCH</li> <li>• B2608: STARTER RELAY</li> <li>• B260A: IGNITION RELAY</li> <li>• B260F: ENG STATE SIG LOST</li> <li>• B2614: ACC RELAY CIRC</li> <li>• B2615: BLOWER RELAY CIRC</li> <li>• B2616: IGN RELAY CIRC</li> <li>• B2617: STARTER RELAY CIRC</li> <li>• B2618: BCM</li> <li>• B261A: PUSH-BTN IGN SW</li> <li>• B26E1: ENG STATE NO RECIV</li> <li>• C1729: VHCL SPEED SIG ERR</li> <li>• U0415: VEHICLE SPEED SIG</li> </ul> |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Priority | DTC   |                                 |
|----------|---|---------------------------------|
| 5        | <ul style="list-style-type: none"> <li>• C1704: LOW PRESSURE FL</li> <li>• C1705: LOW PRESSURE FR</li> <li>• C1706: LOW PRESSURE RR</li> <li>• C1707: LOW PRESSURE RL</li> <li>• C1708: [NO DATA] FL</li> <li>• C1709: [NO DATA] FR</li> <li>• C1710: [NO DATA] RR</li> <li>• C1711: [NO DATA] RL</li> <li>• C1712: [CHECKSUM ERR] FL</li> <li>• C1713: [CHECKSUM ERR] FR</li> <li>• C1714: [CHECKSUM ERR] RR</li> <li>• C1715: [CHECKSUM ERR] RL</li> <li>• C1716: [PRESSDATA ERR] FL</li> <li>• C1717: [PRESSDATA ERR] FR</li> <li>• C1718: [PRESSDATA ERR] RR</li> <li>• C1719: [PRESSDATA ERR] RL</li> <li>• C1720: [CODE ERR] FL</li> <li>• C1721: [CODE ERR] FR</li> <li>• C1722: [CODE ERR] RR</li> <li>• C1723: [CODE ERR] RL</li> <li>• C1724: [BATT VOLT LOW] FL</li> <li>• C1725: [BATT VOLT LOW] FR</li> <li>• C1726: [BATT VOLT LOW] RR</li> <li>• C1727: [BATT VOLT LOW] RL</li> <li>• C1734: CONTROL UNIT</li> </ul> | A<br>B<br>C<br>D<br>E<br>F<br>G |
| 6        | <ul style="list-style-type: none"> <li>• B2622: INSIDE ANTENNA</li> <li>• B2623: INSIDE ANTENNA</li> </ul>  | H                               |

## DTC Index

INFOID:0000000010069905

### NOTE:

- Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

| CONSULT display                                      | Fail-safe | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page         |   |
|--|-----------|---------------------------------|---------------------------------------|------------------------|---|
| No DTC is detected. further testing may be required. | —         | —                               | —                                     | —                      | M |
| U1000: CAN COMM CIRCUIT                              | —         | —                               | —                                     | <a href="#">BCS-32</a> | N |
| U1010: CONTROL UNIT (CAN)                            | —         | —                               | —                                     | <a href="#">BCS-33</a> |   |
| U0415: VEHICLE SPEED SIG                             | —         | —                               | —                                     | <a href="#">BCS-34</a> |   |
| B2190: NATS ANTENNA AMP                              | ×         | —                               | —                                     | <a href="#">SEC-37</a> | O |
| B2191: DIFFERENCE OF KEY                             | ×         | —                               | —                                     | <a href="#">SEC-40</a> |   |
| B2192: ID DISCORD BCM-ECM                            | ×         | —                               | —                                     | <a href="#">SEC-41</a> |   |
| B2193: CHAIN OF BCM-ECM                              | ×         | —                               | —                                     | <a href="#">SEC-42</a> | P |
| B2553: IGNITION RELAY                                | —         | —                               | —                                     | <a href="#">PCS-46</a> |   |
| B2555: STOP LAMP                                     | —         | —                               | —                                     | <a href="#">SEC-43</a> |   |
| B2556: PUSH-BTN IGN SW                               | —         | ×                               | —                                     | <a href="#">SEC-46</a> |   |
| B2557: VEHICLE SPEED                                 | ×         | ×                               | —                                     | <a href="#">SEC-48</a> |   |
| B2560: STARTER CONT RELAY                            | ×         | ×                               | —                                     | <a href="#">SEC-49</a> |   |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| CONSULT display           | Fail-safe | Intelligent Key<br>warning lamp ON | Tire pressure<br>monitor warning<br>lamp ON | Reference page         |
|---------------------------|-----------|------------------------------------|---|------------------------|
| B2562: LOW VOLTAGE        | —         | —                                  | —   | <a href="#">BCS-35</a> |
| B2601: SHIFT POSITION     | ×         | ×                                  | —   | <a href="#">SEC-50</a> |
| B2602: SHIFT POSITION     | ×         | ×                                  | —   | <a href="#">SEC-53</a> |
| B2603: SHIFT POSI STATUS  | ×         | ×                                  | —   | <a href="#">SEC-56</a> |
| B2604: PNP SWITCH         | ×         | ×                                  | —   | <a href="#">SEC-59</a> |
| B2605: PNP SWITCH         | ×         | ×                                  | —   | <a href="#">SEC-61</a> |
| B2608: STARTER RELAY      | ×         | ×                                  | —   | <a href="#">SEC-63</a> |
| B260A: IGNITION RELAY     | ×         | ×                                  | —   | <a href="#">PCS-48</a> |
| B260F: ENG STATE SIG LOST | ×         | ×                                  | —   | <a href="#">SEC-65</a> |
| B2614: ACC RELAY CIRC     | —         | ×                                  | —   | <a href="#">PCS-50</a> |
| B2615: BLOWER RELAY CIRC  | —         | ×                                  | —   | <a href="#">PCS-53</a> |
| B2616: IGN RELAY CIRC     | —         | ×                                  | —   | <a href="#">PCS-56</a> |
| B2617: STARTER RELAY CIRC | ×         | ×                                  | —   | <a href="#">SEC-67</a> |
| B2618: BCM                | ×         | ×                                  | —   | <a href="#">PCS-59</a> |
| B261A: PUSH-BTN IGN SW    | —         | ×                                  | —   | <a href="#">PCS-60</a> |
| B2622: INSIDE ANTENNA     | —         | —                                  | —   | <a href="#">DLK-60</a> |
| B2623: INSIDE ANTENNA     | —         | —                                  | —   | <a href="#">DLK-63</a> |
| B26E1: ENG STATE NO RES   | ×         | ×                                  | —   | <a href="#">SEC-66</a> |
| C1704: LOW PRESSURE FL    | —         | —                                  | ×   | <a href="#">WT-43</a>  |
| C1705: LOW PRESSURE FR    | —         | —                                  | ×   | <a href="#">WT-43</a>  |
| C1706: LOW PRESSURE RR    | —         | —                                  | ×   | <a href="#">WT-43</a>  |
| C1707: LOW PRESSURE RL    | —         | —                                  | ×   | <a href="#">WT-43</a>  |
| C1708: [NO DATA] FL       | —         | —                                  | ×   | <a href="#">WT-13</a>  |
| C1709: [NO DATA] FR       | —         | —                                  | ×   | <a href="#">WT-13</a>  |
| C1710: [NO DATA] RR       | —         | —                                  | ×   | <a href="#">WT-13</a>  |
| C1711: [NO DATA] RL       | —         | —                                  | ×   | <a href="#">WT-13</a>  |
| C1712: [CHECKSUM ERR] FL  | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1713: [CHECKSUM ERR] FR  | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1714: [CHECKSUM ERR] RR  | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1715: [CHECKSUM ERR] RL  | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1716: [PRESSDATA ERR] FL | —         | —                                  | ×   | <a href="#">WT-17</a>  |
| C1717: [PRESSDATA ERR] FR | —         | —                                  | ×   | <a href="#">WT-17</a>  |
| C1718: [PRESSDATA ERR] RR | —         | —                                  | ×   | <a href="#">WT-17</a>  |
| C1719: [PRESSDATA ERR] RL | —         | —                                  | ×   | <a href="#">WT-17</a>  |
| C1720: [CODE ERR] FL      | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1721: [CODE ERR] FR      | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1722: [CODE ERR] RR      | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1723: [CODE ERR] RL      | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1724: [BATT VOLT LOW] FL | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1725: [BATT VOLT LOW] FR | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1726: [BATT VOLT LOW] RR | —         | —                                  | ×   | <a href="#">WT-15</a>  |
| C1727: [BATT VOLT LOW] RL | —         | —                                  | ×   | <a href="#">WT-15</a>  |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| CONSULT display           | Fail-safe | Intelligent Key<br>warning lamp ON | Tire pressure<br>monitor warning<br>lamp ON | Reference page        |
|---------------------------|-----------|------------------------------------|---|-----------------------|
| C1729: VHCL SPEED SIG ERR | —         | —                                  | ×   | <a href="#">WT-19</a> |
| C1734: CONTROL UNIT       | —         | —                                  | ×   | <a href="#">WT-20</a> |

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# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

## IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000010069906

### VALUES ON THE DIAGNOSIS TOOL

| Monitor Item  | Condition   |  | Value/Status |
|---------------|---|--|--------------|
| MOTOR FAN REQ | Engine idle speed   | Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.   | 1,2,3,4      |
| AC COMP REQ   | Engine running  | A/C switch OFF   | Off          |
|               |   | A/C switch ON (Compressor is operating)  | On           |
| TAIL&CLR REQ  | Lighting switch OFF   |  | Off          |
|               | Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated) |  | On           |
| HL LO REQ     | Lighting switch OFF   |  | Off          |
|               | Lighting switch 2ND HI or AUTO (Light is illuminated)       |  | On           |
| HL HI REQ     | Lighting switch OFF   |  | Off          |
|               | Lighting switch HI  |  | On           |
| FR FOG REQ    | Lighting switch 2ND or AUTO (Light is illuminated)          | Front fog lamp switch OFF  | Off          |
|               |   | <ul style="list-style-type: none"> <li>• Front fog lamp switch ON</li> <li>• Daytime running light activated (Only for Canada models)</li> </ul> | On           |
| FR WIP REQ    | Ignition switch ON  | Front wiper switch OFF   | STOP         |
|               |   | Front wiper switch INT   | 1LOW         |
|               |   | Front wiper switch LO  | Low          |
|               |   | Front wiper switch HI  | Hi           |
| WIP AUTO STOP | Ignition switch ON  | Front wiper stop position  | STOP P       |
|               |   | Any position other than front wiper stop position  | ACT P        |
| WIP PROT      | Ignition switch ON  | Front wiper operates normally  | Off          |
|               |   | Front wiper stops at fail-safe operation   | BLOCK        |
| IGN RLY1 -REQ | Ignition switch OFF or ACC                                  |  | Off          |
|               | Ignition switch ON  |  | On           |
| IGN RLY       | Ignition switch OFF or ACC                                  |  | Off          |
|               | Ignition switch ON  |  | On           |
| PUSH SW       | Release the push-button ignition switch                     |  | Off          |
|               | Press the push-button ignition switch                       |  | On           |
| INTER/NP SW   | Ignition switch ON  | CVT selector lever in any position other than P or N   | Off          |
|               | Ignition switch ON  | CVT selector lever in P or N position  | On           |
| ST RLY CONT   | Ignition switch ON  |  | Off          |
|               | At engine cranking  |  | On           |
| IHBT RLY -REQ | Ignition switch ON  |  | Off          |
|               | At engine cranking  |  | On           |

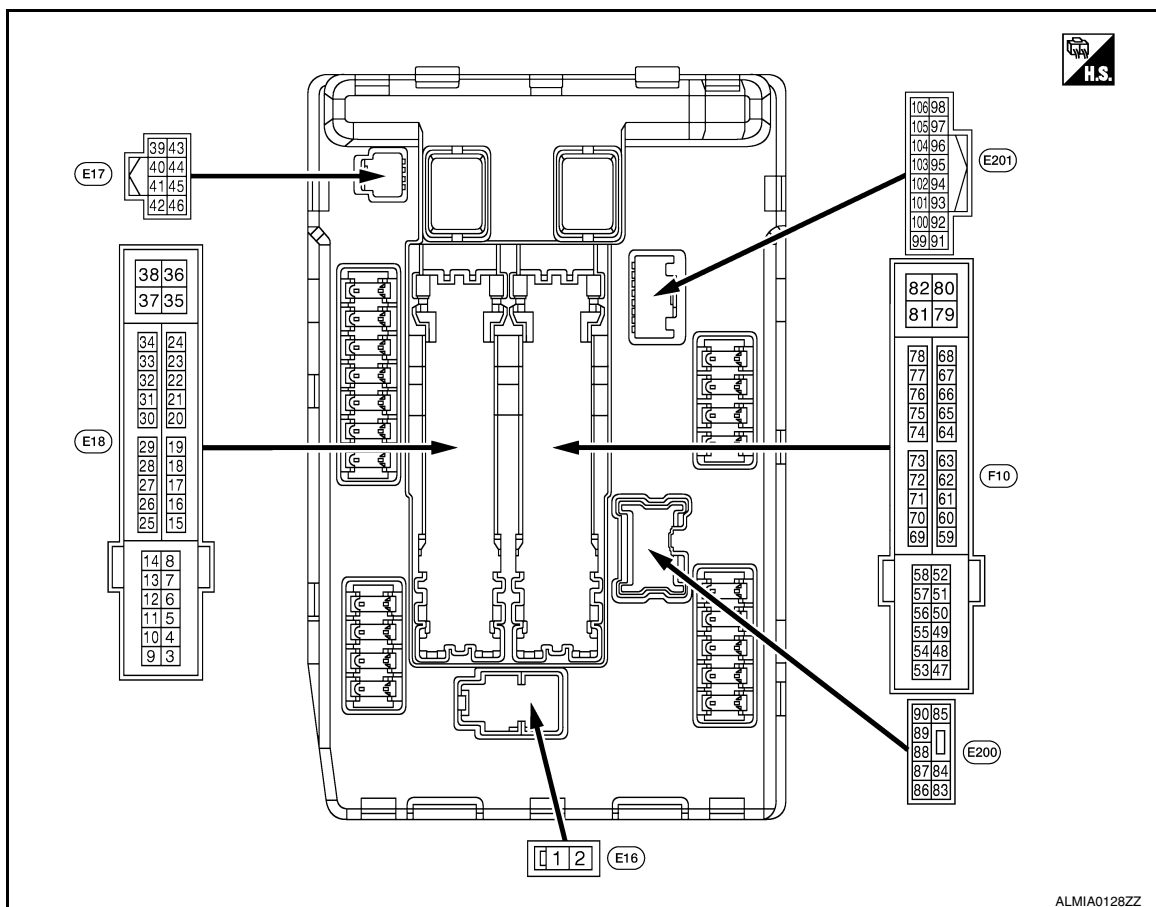
# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Monitor Item | Condition   | Value/Status |
|--------------|---|--------------|
| ST/INHI RLY  | Ignition switch ON  | Off          |
|              | At engine cranking  | ST → INHI    |
|              | The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF              | UNKWN        |
| DETENT SW    | Ignition switch ON <ul style="list-style-type: none"> <li>• Press the selector button with CVT selector lever in P position</li> <li>• CVT selector lever in any position other than P</li> </ul> | Off          |
|              | Release the CVT selector button with CVT selector lever in P position   | On           |
| DTRL -REQ    | DTRL ON   | On           |
|              | DTRL OFF  | Off          |
| OIL P SW     | Ignition switch OFF, ACC or engine running  | Open         |
|              | Ignition switch ON  | Close        |
| THFT HRN REQ | Not operated  | Off          |
|              | <ul style="list-style-type: none"> <li>• Panic alarm is activated</li> <li>• Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM</li> </ul>  | On           |
| HORN CHIRP   | Not operated  | Off          |
|              | Door locking with Intelligent Key (horn chirp mode)   | On           |

## TERMINAL LAYOUT



## PHYSICAL VALUES

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description   |                  | Condition   |                           | Value<br>(Approx.)                                |
|------------------------------|--------|---|------------------|---|---------------------------|---|
| +                            | -      | Signal name   | Input/<br>Output |   |                           |   |
| 1<br>(R)                     | Ground | Battery power supply                                  | Input            | Ignition switch OFF   |                           | Battery voltage                                   |
| 2<br>(L)                     | Ground | Battery power supply                                  | Input            | Ignition switch OFF   |                           | Battery voltage                                   |
| 4<br>(LG)                    | Ground | Front wiper LO  | Output           | Ignition switch ON  | Front wiper switch OFF    | 0 V   |
|                              |        |   |                  |   | Front wiper switch LO     | Battery voltage                                   |
| 5<br>(Y)                     | Ground | Front wiper HI  | Output           | Ignition switch ON  | Front wiper switch OFF    | 0 V   |
|                              |        |   |                  |   |                           | Front wiper switch HI                             |
| 6<br>(L)                     | Ground | Daytime light relay power supply (Canada models only) | Output           | Ignition switch OFF   |                           | Battery voltage                                   |
| 7<br>(GR)                    | Ground | Tail, license plate lamps & interior lamps            | Output           | Ignition switch ON  | Lighting switch OFF       | 0 V   |
|                              |        |   |                  |   |                           | Lighting switch 1ST                               |
| 10<br>(BR)                   | Ground | ECM relay power supply                                | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |                           | 0 V   |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |                           | Battery voltage                                   |
| 12<br>(B)                    | Ground | Ground  | —                | Ignition switch ON  |                           | 0 V   |
| 13<br>(SB)                   | Ground | Fuel pump power supply                                | Output           | Approximately 1 second or more after turning the ignition switch ON   |                           | 0 V   |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Approximately 1 second after turning the ignition switch ON</li> <li>• Engine running</li> </ul>                             |                           | Battery voltage                                   |
| 15<br>(W)                    | Ground | Ignition relay-1 power supply                         | Output           | Ignition switch OFF   |                           | 0 V   |
|                              |        |   |                  | Ignition switch ON  |                           | Battery voltage                                   |
| 16<br>(R)                    | Ground | Front wiper auto stop                                 | Input            | Ignition switch ON  | Front wiper stop position | 0 V   |
|                              |        |   |                  |   |                           | Any position other than front wiper stop position |
| 19<br>(Y)                    | Ground | Ignition relay-1 power supply                         | Output           | Ignition switch OFF   |                           | 0 V   |
|                              |        |   |                  | Ignition switch ON  |                           | Battery voltage                                   |
| 20<br>(L)                    | Ground | Ambient sensor ground                                 | —                | Ignition switch ON  |                           | 0V  |
| 21<br>(LG)                   | Ground | Ambient sensor  | —                | Ignition switch ON  |                           | 5V  |
| 22<br>(SB)                   | Ground | Refrigerant pressure sensor ground                    | —                | Ignition switch ON  |                           | 0V  |
| 23<br>(GR)                   | Ground | Refrigerant pressure sensor                           | —                | <ul style="list-style-type: none"> <li>• Ignition switch ON (READY)</li> <li>• Both A/C switch and blower motor switch ON (electric compressor operates)</li> </ul>   |                           | 1.0 - 4.0V  |
| 24<br>(G)                    | Ground | Refrigerant pressure sensor power supply              | —                | Ignition switch ON  |                           | 5V  |
| 25<br>(GR)                   | Ground | Ignition relay-1 power supply                         | Output           | Ignition switch OFF   |                           | 0 V   |
|                              |        |   |                  | Ignition switch ON  |                           | Battery voltage                                   |

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                           |                  | Condition   |   | Value<br>(Approx.) |
|------------------------------|--------|---------------------------------------|------------------|---|---|--------------------|
|                              |        |                                       |                  |   |   |                    |
| +                            | -      |                                       |                  |   |   |                    |
| 27<br>(W)                    | Ground | Ignition relay monitor                | Input            | Ignition switch OFF or ACC  |   | Battery voltage    |
|                              |        |                                       |                  | Ignition switch ON  |   | 0 V                |
| 28<br>(SB)                   | Ground | Push-button ignition switch           | Input            | Press the push-button ignition switch                                     |   | 0 V                |
|                              |        |                                       |                  | Release the push-button ignition switch                                   |   | Battery voltage    |
| 30<br>(BR)                   | Ground | Starter relay control                 | Input            | CVT selector lever in any position other than P or N (ignition switch ON) |   | 0 V                |
|                              |        |                                       |                  | CVT selector lever P or N (ignition switch ON)                            |   | Battery voltage    |
| 34<br>(O)                    | Ground | Cooling fan relay-3 control           | Input            | Ignition switch OFF or ACC  |   | 0 V                |
|                              |        |                                       |                  | Ignition switch ON  |   | 0.7 V              |
| 35<br>(P)                    | Ground | Cooling fan motor control             | Output           | Ignition switch OFF or ACC  |   | 0 V                |
|                              |        |                                       |                  | Ignition switch ON  |   | 0.7 V              |
| 36<br>(G)                    | Ground | Battery power supply                  | Input            | Ignition switch OFF   |   | Battery voltage    |
| 38<br>(GR)                   | Ground | Cooling fan motor control             | Output           | Ignition switch OFF or ACC  |   | 0 V                |
|                              |        |                                       |                  | Ignition switch ON  |   | 0.7 V              |
| 39<br>(P)                    | —      | CAN - L                               | Input/<br>Output | —   |   | —                  |
| 40<br>(L)                    | —      | CAN - H                               | Input/<br>Output | —   |   | —                  |
| 41<br>(B)                    | Ground | Ground                                | —                | Ignition switch ON  |   | 0 V                |
| 42<br>(SB)                   | Ground | Cooling fan relay-2 control           | Input            | Ignition switch OFF or ACC  |   | 0 V                |
|                              |        |                                       |                  | Ignition switch ON  |   | 0.7 V              |
| 43<br>(Y)                    | Ground | CVT shift selector (Detention switch) | Input            | Ignition switch ON  | Press the CVT selector button (CVT selector lever P)  | Battery voltage    |
|                              |        |                                       |                  |   | <ul style="list-style-type: none"> <li>• CVT selector lever in any position other than P</li> <li>• Release the CVT selector button (CVT selector lever P)</li> </ul> | 0 V                |
| 44<br>(W)                    | Ground | Horn relay control                    | Input            | The horn is deactivated   |   | Battery voltage    |
|                              |        |                                       |                  | The horn is activated   |   | 0 V                |
| 45<br>(GR)                   | Ground | Anti theft horn relay control         | Input            | The horn is deactivated   |   | Battery voltage    |
|                              |        |                                       |                  | The horn is activated   |   | 0 V                |
| 46<br>(BR)                   | Ground | Starter relay control                 | Input            | CVT selector lever in any position other than P or N (ignition switch ON) |   | 0 V                |
|                              |        |                                       |                  | CVT selector lever P or N (ignition switch ON)                            |   | Battery voltage    |
| 48<br>(W)                    | Ground | A/C relay power supply                | Output           | Engine running  | A/C switch OFF  | 0 V                |
|                              |        |                                       |                  |   | A/C switch ON (A/C compressor is operating)   | Battery voltage    |

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# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

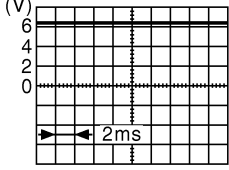
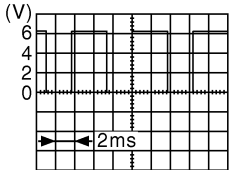
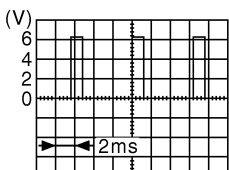
| Terminal No.<br>(Wire color) |        | Description                               |                  | Condition   |   | Value<br>(Approx.)                           |
|------------------------------|--------|---|------------------|---|---|--|
| +                            | -      | Signal name                               | Input/<br>Output |   |   |  |
| 49<br>(R/B)                  | Ground | ECM relay power supply                    | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | 0 V  |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | Battery voltage                              |
| 51<br>(LG)                   | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 52<br>(Y/G)                  | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 53<br>(R/W)                  | Ground | ECM relay power supply                    | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | 0 V  |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | Battery voltage                              |
| 54<br>(G/W)                  | Ground | Throttle control motor relay power supply | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | 0 V  |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | Battery voltage                              |
| 55<br>(W/L)                  | Ground | ECM power supply                          | Output           | Ignition switch OFF   |   | Battery voltage                              |
| 56<br>(R/Y)                  | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 57<br>(O)                    | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 58<br>(Y)                    | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 69<br>(W/B)                  | Ground | ECM relay control                         | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | Battery voltage                              |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | 0 - 1.5 V                                    |
| 70<br>(O)                    | Ground | Throttle control motor relay control      | Output           | Ignition switch ON → OFF  |   | 0 -1.0 V<br>↓<br>Battery voltage<br>↓<br>0 V |
|                              |        |   |                  | Ignition switch ON  |   | 0 - 1.0 V                                    |
| 72<br>(R/B)                  | Ground | Transmission range switch signal          | Input            | Ignition switch ON  | CVT selector lever in P or N position                         | Battery voltage                              |
|                              |        |   |                  |   | CVT selector lever in any position other than P or N position | 0 V  |



# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description                     |                  | Condition   |  | Value<br>(Approx.)  |
|------------------------------|--------|---------------------------------|------------------|---|--|---|
| +                            | -      | Signal name                     | Input/<br>Output |   |  |   |
| 75<br>(LG)                   | Ground | Oil pressure switch             | Input            | Ignition switch ON  | Engine stopped   | 0 V   |
|                              |        |                                 |                  |   | Engine running   | Battery voltage   |
| 76<br>(SB)                   | Ground | Power generation command signal | Output           | Ignition switch ON  |  |  <p style="text-align: right; font-size: small;">JPMIA0001GB</p> <p style="text-align: center;">6.3 V</p>  |
|                              |        |                                 |                  | 40% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"  |  |  <p style="text-align: right; font-size: small;">JPMIA0002GB</p> <p style="text-align: center;">3.8 V</p>  |
|                              |        |                                 |                  | 80% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"  |  |  <p style="text-align: right; font-size: small;">JPMIA0003GB</p> <p style="text-align: center;">1.4 V</p> |
| 77<br>(GR)                   | Ground | Fuel pump relay control         | Output           | <ul style="list-style-type: none"> <li>• Approximately 1 second after turning the ignition switch ON</li> <li>• Engine running</li> </ul> |  | 0 - 1.0 V   |
|                              |        |                                 |                  | Approximately 1 second or more after turning the ignition switch ON   |  | Battery voltage   |
| 80<br>(B)                    | Ground | Starter motor                   | Output           | At engine cranking  |  | Battery voltage   |
| 83<br>(R/Y)                  | Ground | Headlamp LO (RH)                | Output           | Ignition switch ON  | Lighting switch OFF  | 0 V   |
|                              |        |                                 |                  |   | Lighting switch 2ND  | Battery voltage   |
| 84<br>(L)                    | Ground | Headlamp LO (LH)                | Output           | Ignition switch ON  | Lighting switch OFF  | 0 V   |
|                              |        |                                 |                  |   | Lighting switch 2ND  | Battery voltage   |
| 86<br>(W/R)                  | Ground | Front fog lamp (RH)             | Output           | Lighting switch 2ND   | <ul style="list-style-type: none"> <li>• Front fog lamp switch ON</li> <li>• Daytime running light activated (Only for Canada models)</li> </ul> | Battery voltage   |
|                              |        |                                 |                  |   | Front fog lamp switch OFF  | 0 V   |
| 87<br>(L/Y)                  | Ground | Front fog lamp (LH)             | Output           | Lighting switch 2ND   | <ul style="list-style-type: none"> <li>• Front fog lamp switch ON</li> <li>• Daytime running light activated (Only for Canada models)</li> </ul> | Battery voltage   |
|                              |        |                                 |                  |   | Front fog lamp switch OFF  | 0 V   |

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EXL  
M  
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O  
P

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Terminal No.<br>(Wire color) |        | Description  |                  | Condition   |  | Value<br>(Approx.) |
|------------------------------|--------|--|------------------|---|--|--------------------|
| +                            | -      | Signal name  | Input/<br>Output |   |  |                    |
| 88<br>(R/W)                  | Ground | Washer pump power supply                             | Output           | Ignition switch ON  |  | Battery voltage    |
| 89<br>(L/W)                  | Ground | Headlamp HI (RH)                                     | Output           | Ignition switch ON  | • Lighting switch HI<br>• Lighting switch PASS | Battery voltage    |
|                              |        |  |                  |   | Lighting switch OFF                            | 0 V                |
| 90<br>(G)                    | Ground | Headlamp HI (LH)                                     | Output           | Ignition switch ON  | • Lighting switch HI<br>• Lighting switch PASS | Battery voltage    |
|                              |        |  |                  |   | Lighting switch OFF                            | 0 V                |
| 91<br>(LG/R)                 | Ground | Parking lamp (RH)                                    | Output           | Ignition switch ON  | Lighting switch 1ST                            | Battery voltage    |
|                              |        | Side marker lamp (RH)                                |                  |   | Lighting switch OFF                            | 0 V                |
| 92<br>(LG/B)                 | Ground | Parking lamp (LH)                                    | Output           | Ignition switch ON  | Lighting switch 1ST                            | Battery voltage    |
|                              |        | Side marker lamp (LH)                                |                  |   | Lighting switch OFF                            | 0 V                |
| 99<br>(BR/W)                 | Ground | Ambient sensor ground                                | —                | Ignition switch ON  |  | 0V                 |
| 100<br>(SB)                  | Ground | Ambient sensor                                       | —                | Ignition switch ON  |  | 5V                 |
| 101<br>(W)                   | Ground | Refrigerant pressure sensor ground                   | —                | Ignition switch ON  |  | 0V                 |
| 102<br>(R)                   | Ground | Refrigerant pressure sensor                          | —                | • Ignition switch ON (READY)<br>• Both A/C switch and blower motor switch ON (electric compressor operates) |  | 1.0 - 4.0V         |
| 103<br>(P)                   | Ground | Refrigerant pressure sensor power supply             | —                | Ignition switch ON  |  | 5V                 |
| 105<br>(V)                   | Ground | Daytime light relay control (Only for Canada models) | Output           | Ignition switch ON  | Daytime light system active                    | Battery voltage    |
|                              |        |  |                  | Ignition switch ON  | Daytime light system inactive                  | 0 V                |

## Fail Safe

INFOID:000000010069907

## CAN COMMUNICATION CONTROL

When CAN communication with ECM and 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 ECM

| Control part   | Fail-safe in operation   |
|----------------|--|
| Cooling fan    | <ul style="list-style-type: none"> <li>• Signals cooling fans ON when the ignition switch is turned ON</li> <li>• Signals cooling fans OFF when the ignition switch is turned OFF</li> </ul> |
| A/C compressor | A/C relay OFF  |
| Generator      | Outputs the power generation command signal (PWM signal) 0%  |

If No CAN Communication Is Available With BCM

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

| Control part  | Fail-safe in operation   |
|---|--|
| Headlamp  | <ul style="list-style-type: none"> <li>• Turns ON the headlamp low relay when the ignition switch is turned ON</li> <li>• Turns OFF the headlamp low relay when the ignition switch is turned OFF</li> <li>• Headlamp high relay OFF</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Parking lamps</li> <li>• Side marker lamps</li> <li>• License plate lamps</li> <li>• Illumination</li> <li>• Tail lamps</li> </ul> | <ul style="list-style-type: none"> <li>• Turns ON the tail lamp relay when the ignition switch is turned ON</li> <li>• Turns OFF the tail lamp relay when the ignition switch is turned OFF</li> </ul>   |
| Front wiper   | <ul style="list-style-type: none"> <li>• The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed.</li> <li>• The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.</li> </ul> |
| Front fog lamps (if equipped)   | Front fog lamp relay OFF   |
| Horn  | Horn OFF   |
| Ignition relay  | The status just before activation of fail-safe is maintained.  |
| Starter motor   | Starter control relay OFF  |

## IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay-1 inside it.
- IPDM E/R judges the ignition relay-1 error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay-1 cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay-1 malfunction when the ignition switch is turned OFF.

| DTC                  | Ignition switch | Ignition relay-1 | Tail lamp relay |
|----------------------|-----------------|------------------|-----------------|
| —                    | ON              | ON               | —               |
| —                    | OFF             | OFF              | —               |
| B2098: IGN RELAY ON  | OFF             | ON               | ON (10 minutes) |
| B2099: IGN RELAY OFF | ON              | OFF              | —               |

### NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

## FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 seconds activation and 20 seconds stop five times.

| Ignition switch | Front wiper switch | Auto stop signal   |
|-----------------|--------------------|--|
| ON              | OFF                | Front wiper stop position signal cannot be input 10 seconds. |
|                 | ON                 | The signal does not change for 10 seconds.                   |

### NOTE:

This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

## STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

## DTC Index

INFOID:0000000110069908

| CONSULT display  | Fail-safe | TIME <sup>NOTE</sup> |        | Refer to               |
|--|-----------|----------------------|--------|------------------------|
| No DTC is detected.<br>further testing<br>may be required. | —         | —                    | —      | —                      |
| U1000: CAN COMM CIRCUIT                                    | ×         | CRNT                 | 1 – 39 | <a href="#">PCS-15</a> |
| B2098: IGN RELAY ON  | ×         | CRNT                 | 1 – 39 | <a href="#">PCS-16</a> |
| B2099: IGN RELAY OFF                                       | —         | CRNT                 | 1 – 39 | <a href="#">PCS-17</a> |
| B210B: START CONT RLY ON                                   | —         | CRNT                 | 1 – 39 | <a href="#">SEC-69</a> |
| B210C: START CONT RLY OFF                                  | —         | CRNT                 | 1 – 39 | <a href="#">SEC-72</a> |
| B210D: STARTER RELAY ON                                    | —         | CRNT                 | 1 – 39 | <a href="#">SEC-72</a> |
| B210E: STARTER RELAY OFF                                   | —         | CRNT                 | 1 – 39 | <a href="#">SEC-74</a> |
| B210F: INTRLCK/PNP SW ON                                   | —         | CRNT                 | 1 – 39 | <a href="#">SEC-76</a> |
| B2110: INTRLCK/PNP SW OFF                                  | —         | CRNT                 | 1 – 39 | <a href="#">SEC-78</a> |

### NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.



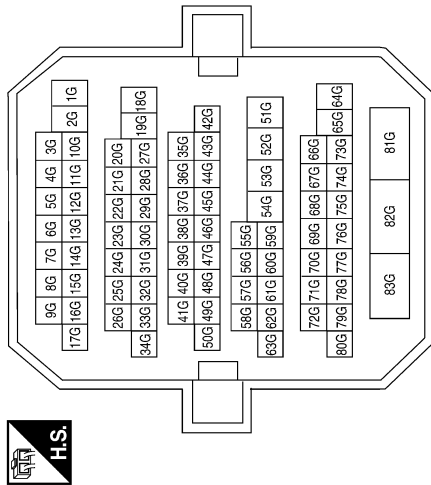
# HEADLAMP

< WIRING DIAGRAM >

[XENON TYPE]

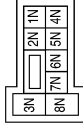
## HEADLAMP CONNECTORS - XENON

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



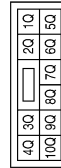
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



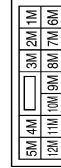
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6Q           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12M          | O             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

# HEADLAMP

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 4  | 5  | 6  | 7  | 8  | 9  | 10 |    |    |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 1            | Y/R           | BAT           |
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 |

ABLIA3998GB

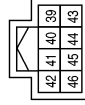
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# HEADLAMP

< WIRING DIAGRAM >

[XENON TYPE]

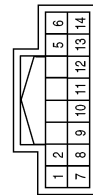
|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



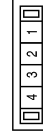
| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



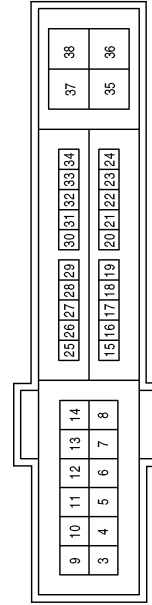
|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12           | B             | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



ABLIA5280GB



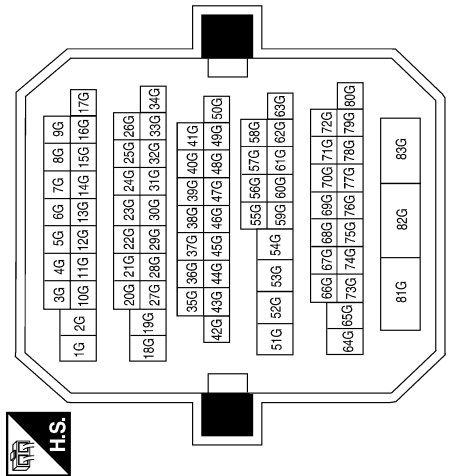
# HEADLAMP

< WIRING DIAGRAM >

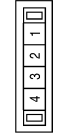
[XENON TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|                 |                     |
|-----------------|---------------------|
| Connector No.   | E22                 |
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E222   |
| Connector Name  | FRONT COMBINATION LAMP RH (WITHOUT DAYTIME LIGHT SYSTEM) |
| Connector Color | BLACK  |



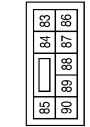
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | L/W           | -           |
| 4            | B             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E213                      |
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | G             | -           |
| 4            | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E200   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 83           | R/Y           | HEADLAMP LO RH |
| 84           | L             | HEADLAMP LO LH |
| 89           | L/W           | HEADLAMP HI RH |
| 90           | G             | HEADLAMP HI LH |

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# HEADLAMP

< WIRING DIAGRAM >

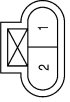
[XENON TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E232   |
| Connector Name  | FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | R/Y           | -           |
| 2            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | E231  |
| Connector Name  | FRONT COMBINATION LAMP LH (WITH XENON HEADLAMP SYSEM) |
| Connector Color | GRAY  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

ABLIA4001GB

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

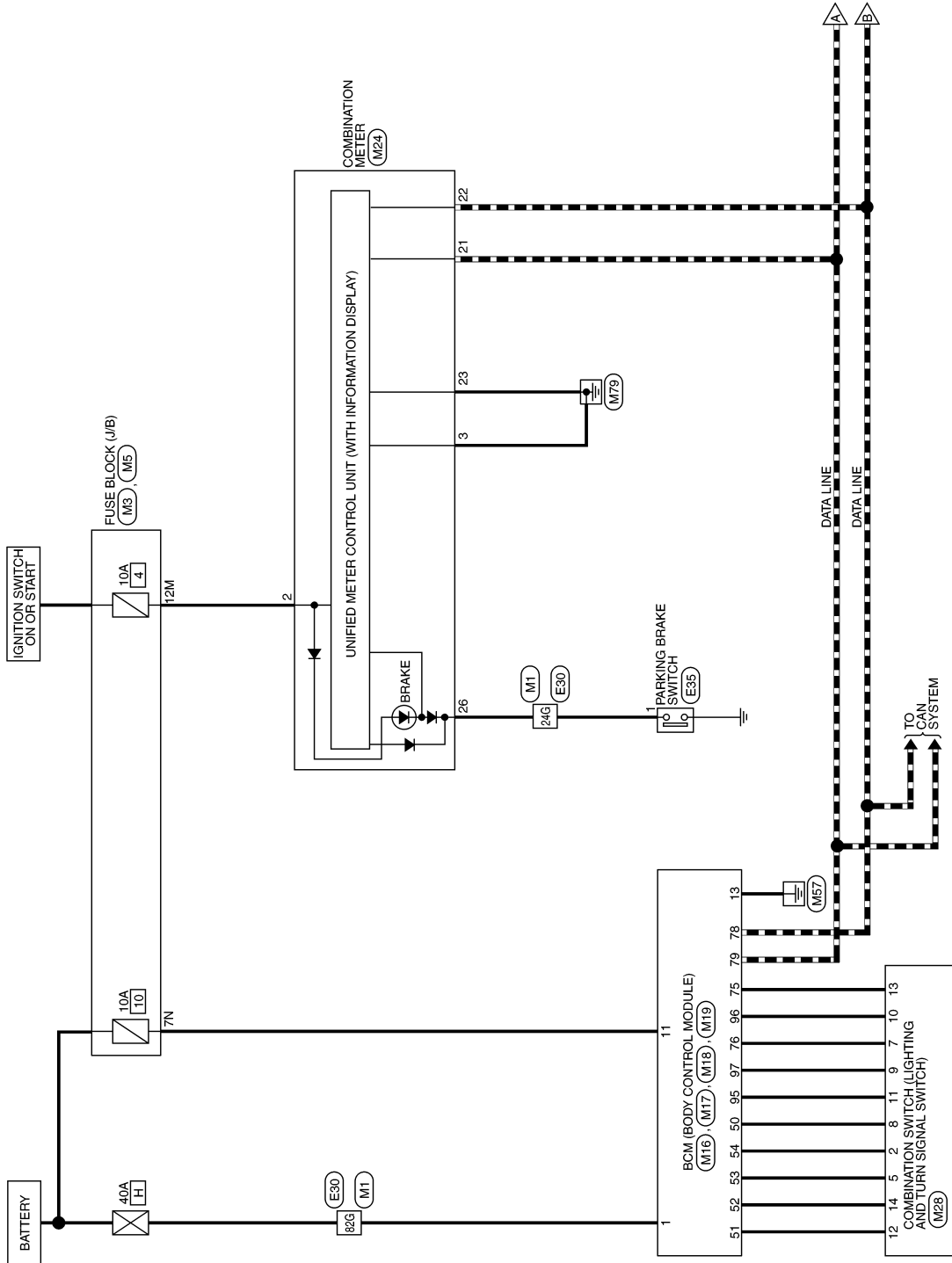
[XENON TYPE]

## DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

INFOID:000000010050248

### DAYTIME LIGHT SYSTEM - XENON



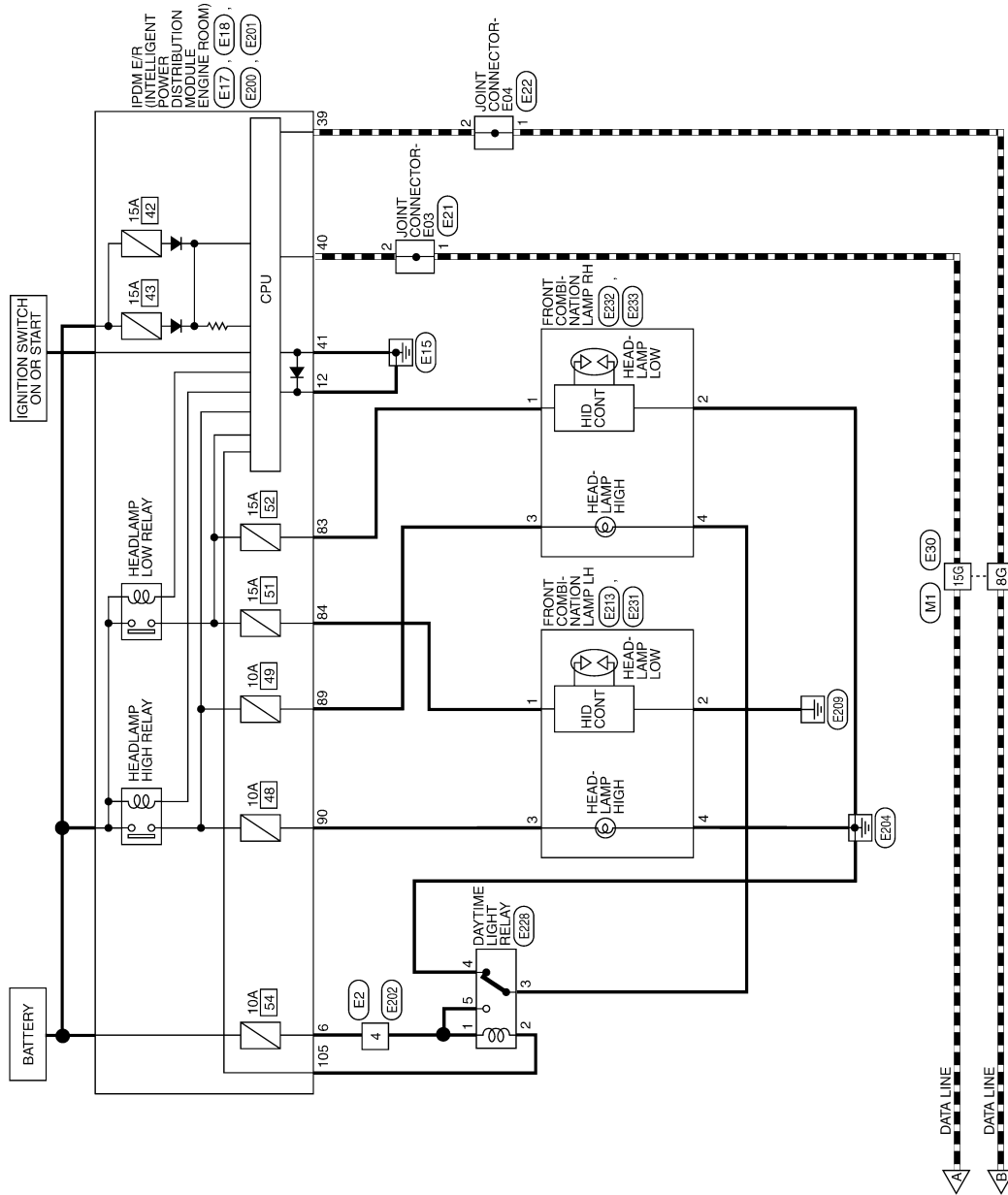
ABLWA2266GB

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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]



ABLWA1136GB

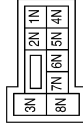
# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

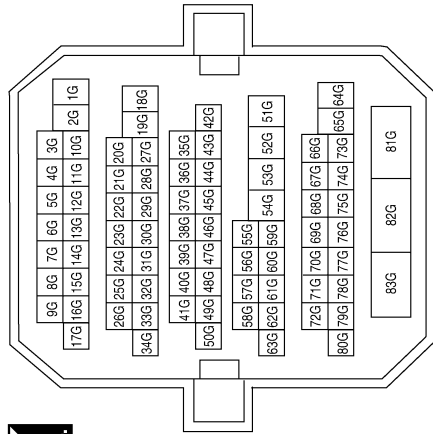
## DAYTIME LIGHT SYSTEM CONNECTORS - XENON

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



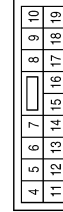
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 24G          | G/R           | -           |
| 82G          | W/B           | -           |



|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



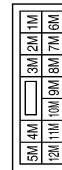
| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12M          | O             | -           |

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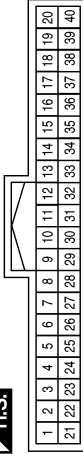
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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >


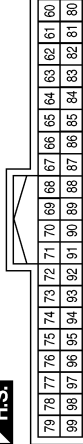
[XENON TYPE]

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |


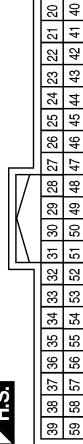
| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |
| 26           | G/R           | PKB           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |


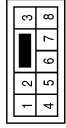
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |


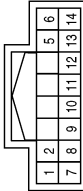
|                 |              |
|-----------------|--------------|
| Connector No.   | E2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |

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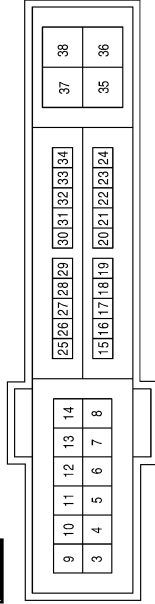
# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | L             | DTRL/DEICER |
| 12           | B             | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



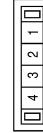
|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |



|                 |                     |
|-----------------|---------------------|
| Connector No.   | E22                 |
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

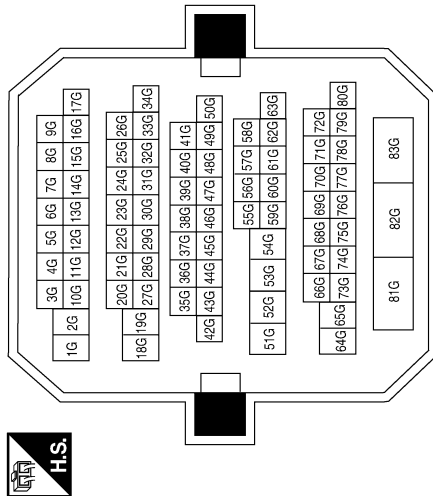
|                 |                      |
|-----------------|----------------------|
| Connector No.   | E35                  |
| Connector Name  | PARKING BRAKE SWITCH |
| Connector Color | BLACK                |



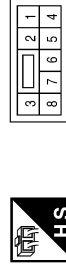
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 24G          | P             | -           |
| 82G          | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

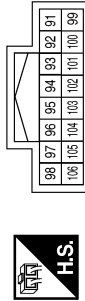


|                 |              |
|-----------------|--------------|
| Connector No.   | E202         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



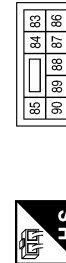
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | SB            | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E201   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 105          | V             | DTRL RLY    |

|                 |  |
|-----------------|--|
| Connector No.   | E200   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 83           | R/Y           | HEADLAMP LO RH |
| 84           | L             | HEADLAMP LO LH |
| 89           | L/W           | HEADLAMP HI RH |
| 90           | G             | HEADLAMP HI LH |

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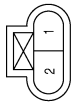


# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E231   |
| Connector Name  | FRONT COMBINATION LAMP LH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | E228                |
| Connector Name  | DAYTIME LIGHT RELAY |
| Connector Color | BLACK               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | SB            | -           |
| 2            | V             | -           |
| 3            | GR/R          | -           |
| 4            | B             | -           |
| 5            | SB            | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E213                      |
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | G             | -           |
| 4            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | E233  |
| Connector Name  | FRONT COMBINATION LAMP RH (WITH DAYTIME LIGHT SYSTEM) |
| Connector Color | BLACK   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | L/W           | -           |
| 4            | GR/R          | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E232   |
| Connector Name  | FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | R/Y           | -           |
| 2            | B             | -           |

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# AUTO LIGHT SYSTEM

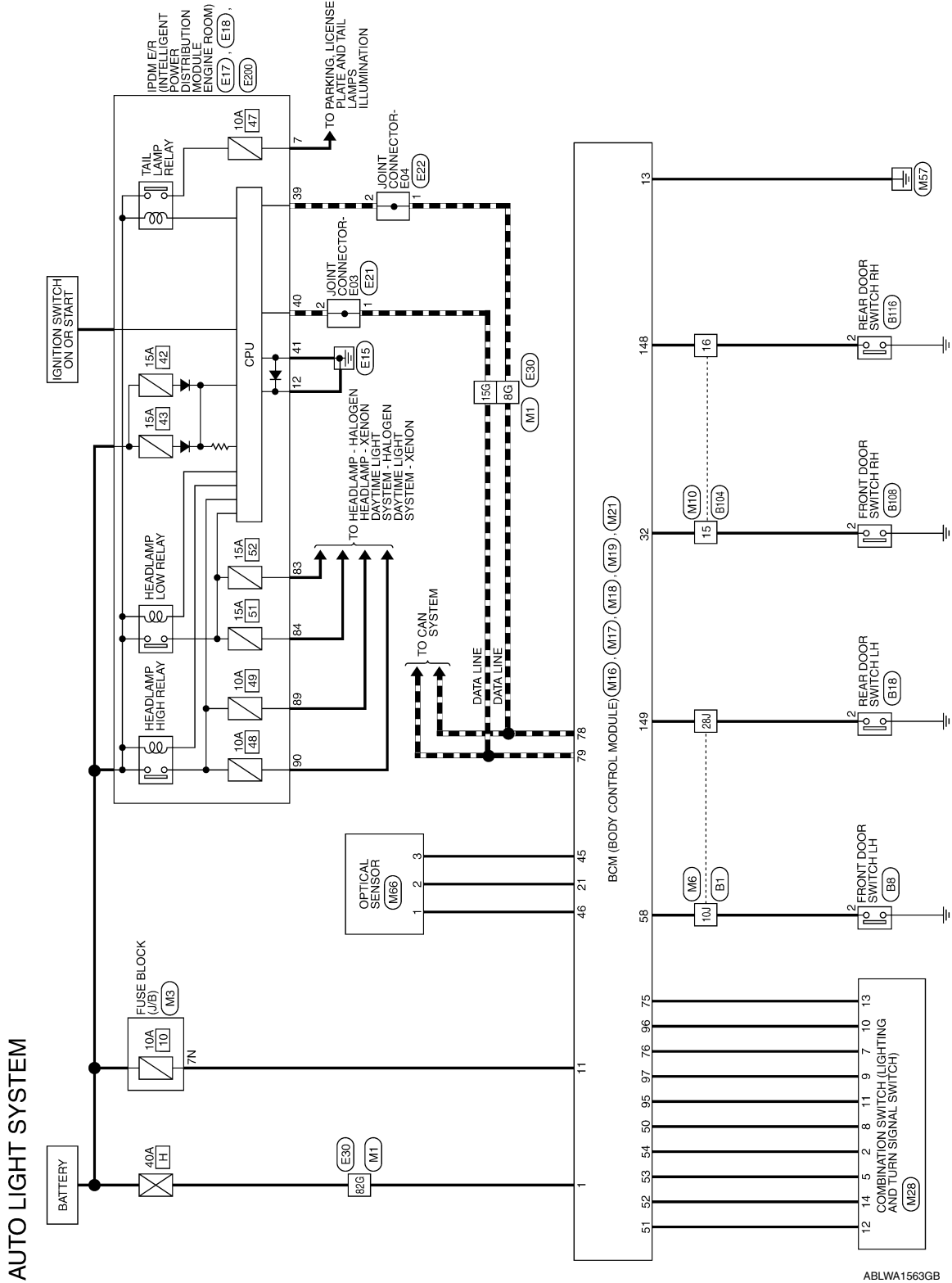
< WIRING DIAGRAM >

[XENON TYPE]

## AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:000000010050249



ABLWA1563GB

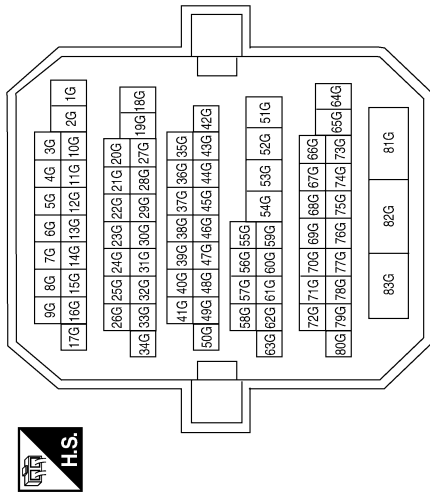
# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

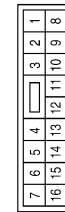
## AUTO LIGHT SYSTEM CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



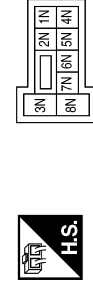
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M10          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



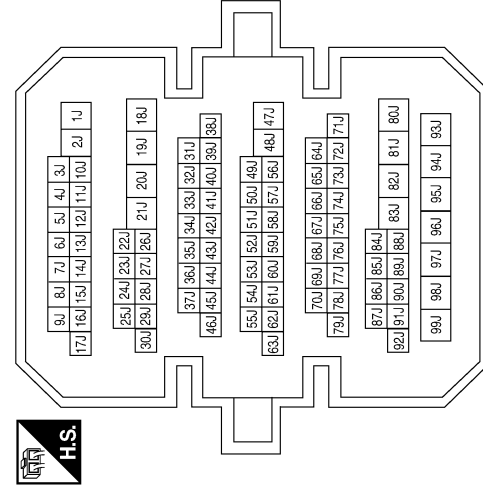
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 15           | R/B           | -           |
| 16           | R/W           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10J          | SB            | -           |
| 28J          | R/B           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

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

EXL

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name         |
|--------------|---------------|---------------------|
| 21           | P/B           | A/L SIGNAL TYPE 1   |
| 32           | R/B           | AS DOOR SW 1        |
| 45           | P             | GND RF2 A/L         |
| 46           | V/W           | A/L POWER SUPPLY 5V |
| 50           | LG/B          | INPUT 5             |
| 51           | L/W           | INPUT 1             |
| 52           | G/B           | INPUT 2             |
| 53           | LG/R          | INPUT 3             |
| 54           | G/Y           | INPUT 4             |
| 58           | SB            | DR DOOR SW          |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M21                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GRAY                      |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 131 | 130 | 129 | 128 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 |
| 151 | 150 | 149 | 148 | 147 | 146 | 145 | 144 | 143 | 142 | 141 | 140 | 139 | 138 | 137 | 136 | 135 | 134 | 133 | 132 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 148          | R/W           | RR DOOR SW  |
| 149          | R/B           | RL DOOR SW  |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



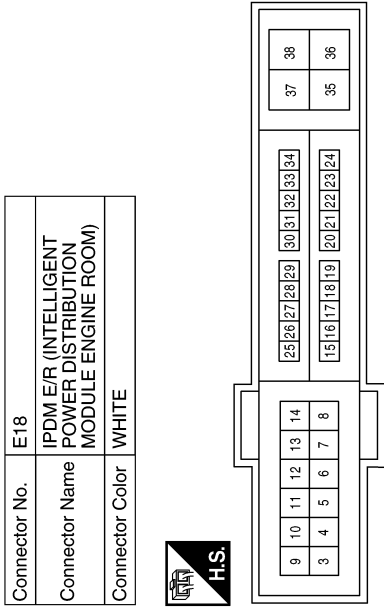
|    |    |   |    |    |    |
|----|----|---|----|----|----|
| 1  | 2  | 3 | 4  | 5  | 6  |
| 7  | 8  | 9 | 10 | 11 | 12 |
| 13 | 14 |   |    |    |    |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

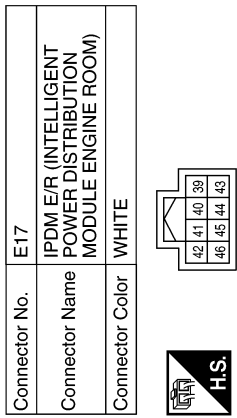
# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

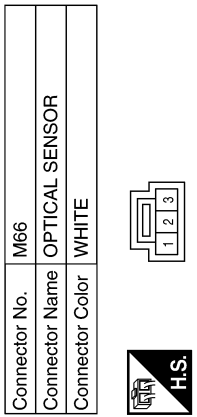
[XENON TYPE]



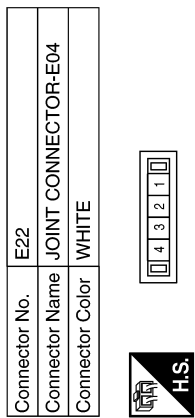
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | GR            | TAIL/ILLUMI |
| 12           | B             | GND (POWER) |



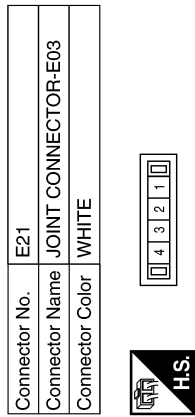
| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | V/W           | -           |
| 2            | P/B           | -           |
| 3            | P             | -           |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

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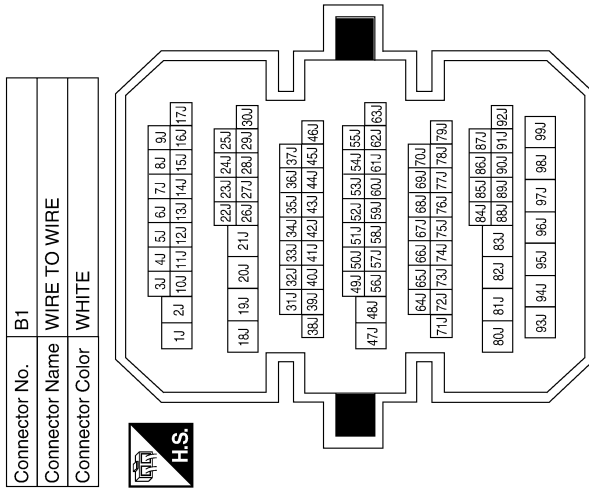
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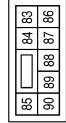
# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

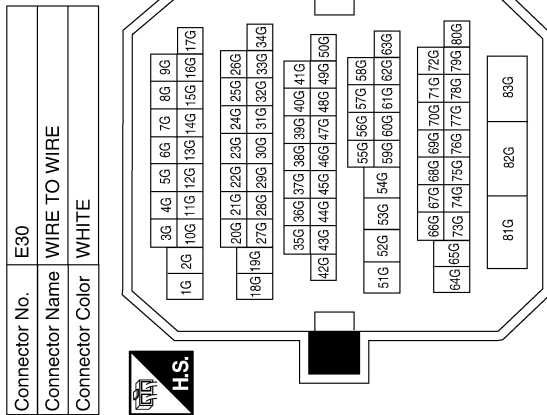
[XENON TYPE]



|                 |  |
|-----------------|--|
| Connector No.   | E200   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |

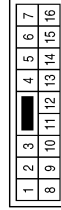


| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 83           | R/Y           | HEADLAMP LO RH |
| 84           | L             | HEADLAMP LO LH |
| 89           | L/W           | HEADLAMP HI RH |
| 90           | G             | HEADLAMP HI LH |



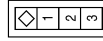
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



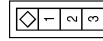
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 15           | GR            | -           |
| 16           | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E200   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | BR            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | SB            | -           |

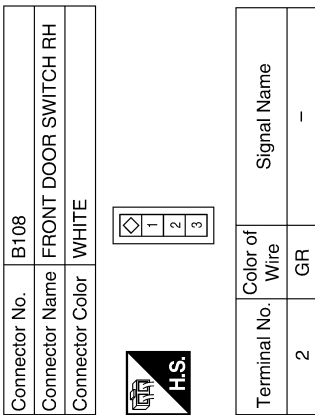
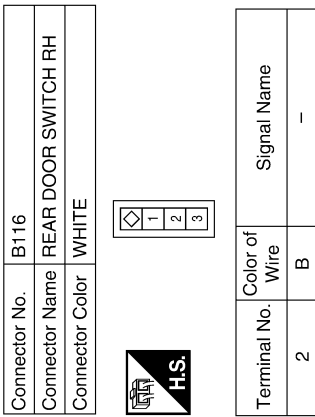
ABLIA0509GB

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

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# FRONT FOG LAMP SYSTEM

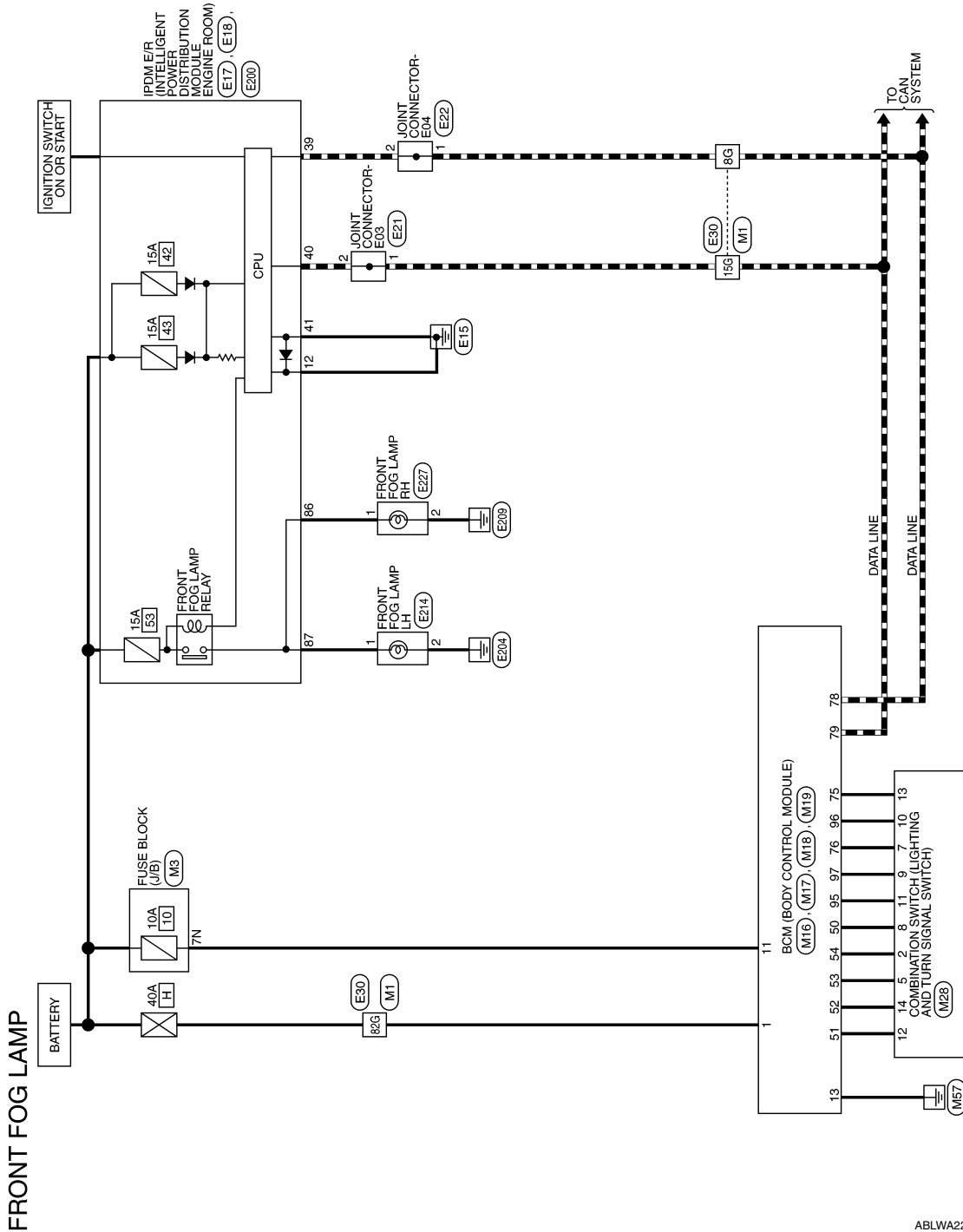
< WIRING DIAGRAM >

[XENON TYPE]

## FRONT FOG LAMP SYSTEM

Wiring Diagram

INFOID:000000010050250



ABLWA2261GB



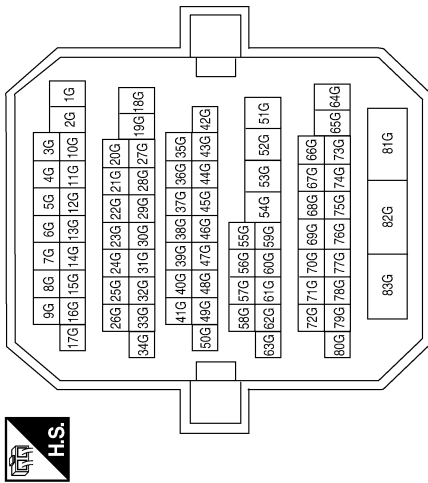
# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

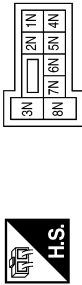
## FRONT FOG LAMP CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



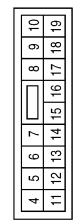
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

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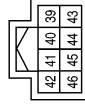
EXL

# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

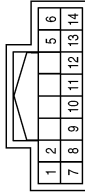
[XENON TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



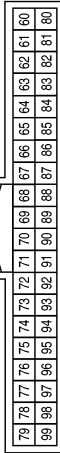
| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



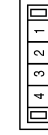
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

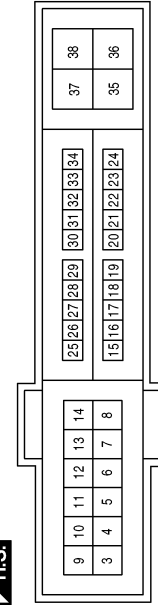
|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

|               |             |
|---------------|-------------|
| Terminal No.  | 12          |
| Color of Wire | B           |
| Signal Name   | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



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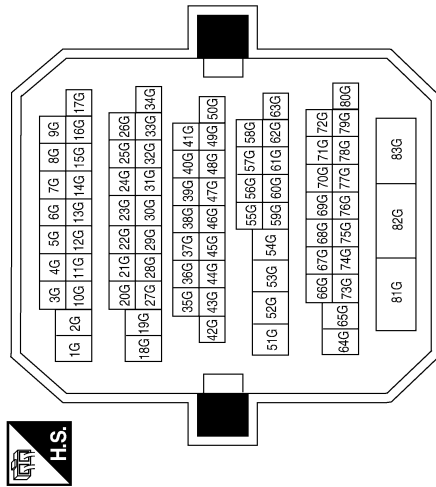
# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

| Connector No.   | E30          |
|-----------------|--------------|
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Connector No.   | E22                 |
|-----------------|---------------------|
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

| Connector No.   | E227              |
|-----------------|-------------------|
| Connector Name  | FRONT FOG LAMP RH |
| Connector Color | BLACK             |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/R           | -           |
| 2            | B             | -           |

| Connector No.   | E214              |
|-----------------|-------------------|
| Connector Name  | FRONT FOG LAMP LH |
| Connector Color | BLACK             |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L/Y           | -           |
| 2            | B             | -           |

| Connector No.   | E200   |
|-----------------|--|
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 86           | W/R           | FR FOG LAMP RH |
| 87           | L/Y           | FR FOG LAMP LH |

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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

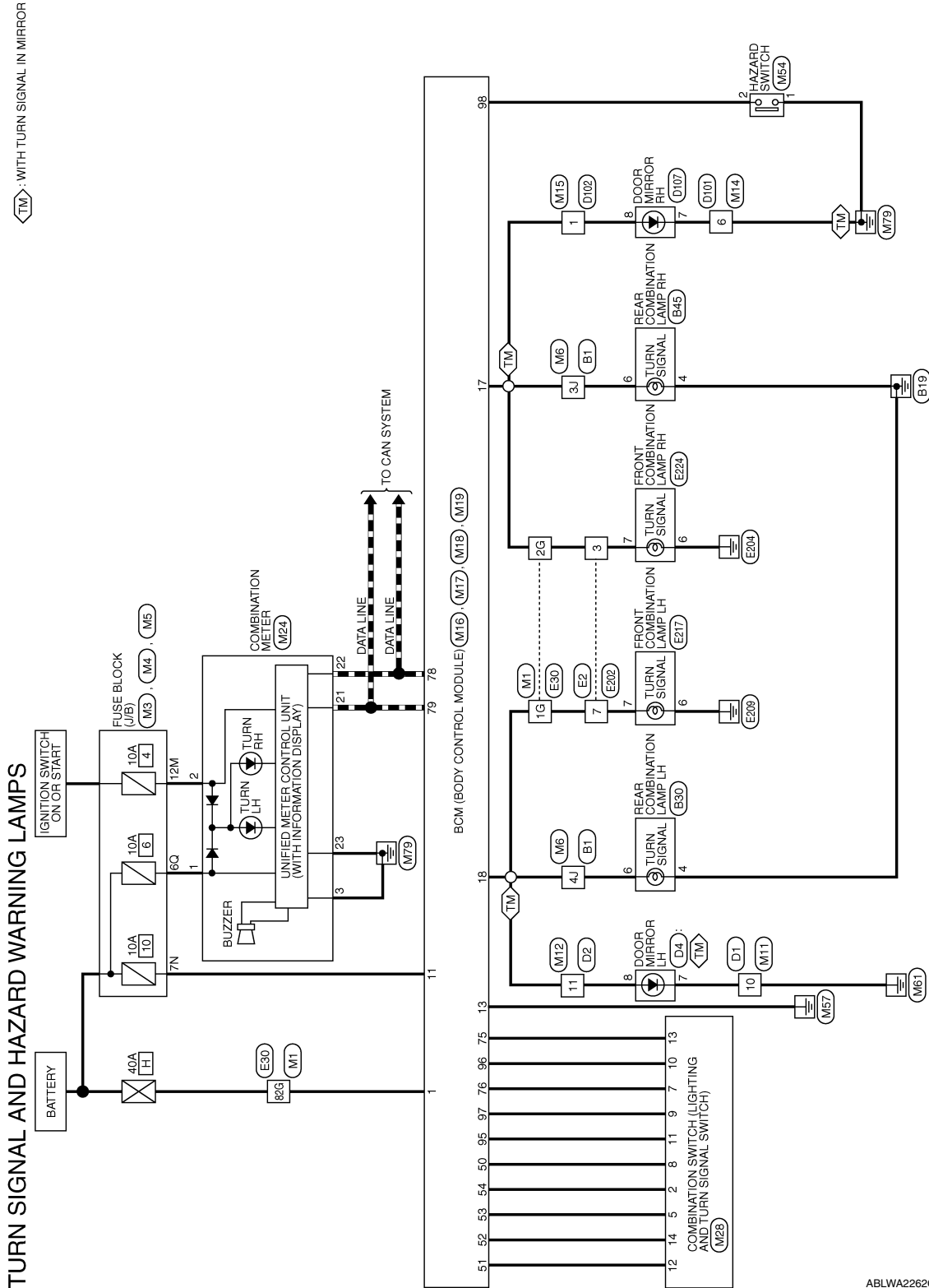
< WIRING DIAGRAM >

[XENON TYPE]

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

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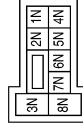
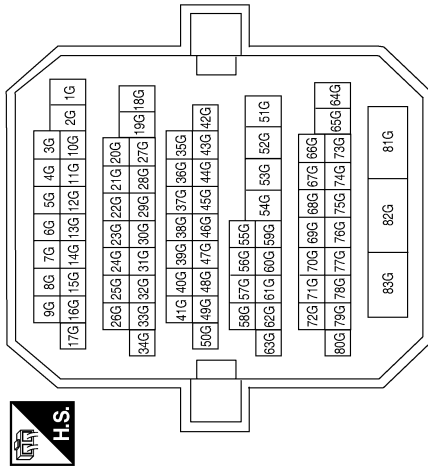
# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

## TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

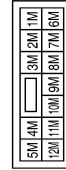
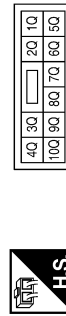


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1G           | G/Y           | -           |
| 2G           | G/B           | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6Q           | Y/R           | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12M          | O             | -           |

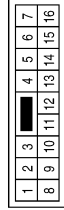
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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

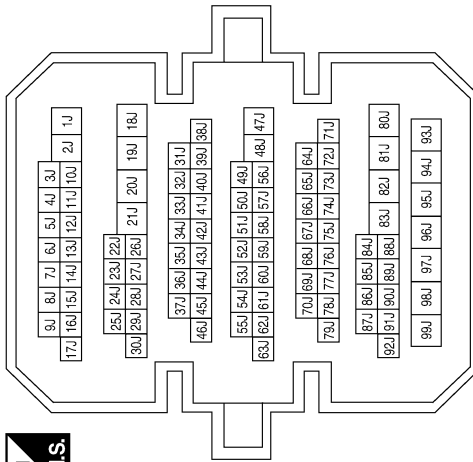
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| Connector No.   | M11          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |    |               |   |             |   |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 10 | Color of Wire | B | Signal Name | - |
|--------------|----|---------------|---|-------------|---|

|              |          |               |            |             |        |
|--------------|----------|---------------|------------|-------------|--------|
| Terminal No. | 3J<br>4J | Color of Wire | G/B<br>G/Y | Signal Name | -<br>- |
|--------------|----------|---------------|------------|-------------|--------|

|                 |              |
|-----------------|--------------|
| Connector No.   | M6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

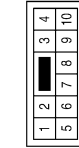


|                 |              |
|-----------------|--------------|
| Connector No.   | M15          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |   |               |     |             |   |
|--------------|---|---------------|-----|-------------|---|
| Terminal No. | 1 | Color of Wire | G/B | Signal Name | - |
|--------------|---|---------------|-----|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | M14          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 6 | Color of Wire | B | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | M12          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |    |               |     |             |   |
|--------------|----|---------------|-----|-------------|---|
| Terminal No. | 11 | Color of Wire | G/Y | Signal Name | - |
|--------------|----|---------------|-----|-------------|---|

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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 4  | 5  | 6  | 7  | 8  | 9  | 10 |    |    |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |
| 17           | G/B           | FR FLASHER   |
| 18           | G/Y           | FL FLASHER   |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



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

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 |

| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 1            | Y/R           | BAT           |
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |
| 98           | G/O           | HAZARD SW   |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 |

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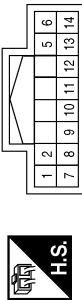
EXL

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |               |
|-----------------|---------------|
| Connector No.   | M54           |
| Connector Name  | HAZARD SWITCH |
| Connector Color | WHITE         |



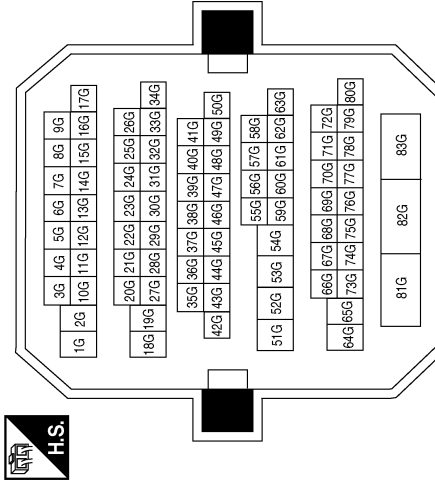
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | G/O           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | SB            | -           |
| 7            | Y             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1G           | Y             | -           |
| 2G           | SB            | -           |
| 82G          | LG            | -           |



# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E224                      |
| Connector Name  | FRONT COMBINATION LAMP RH |
| Connector Color | GRAY                      |



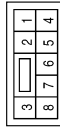
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | B             | -           |
| 7            | G/B           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E217                      |
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | GRAY                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | B             | -           |
| 7            | G/Y           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E202         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | G/B           | -           |
| 7            | G/Y           | -           |

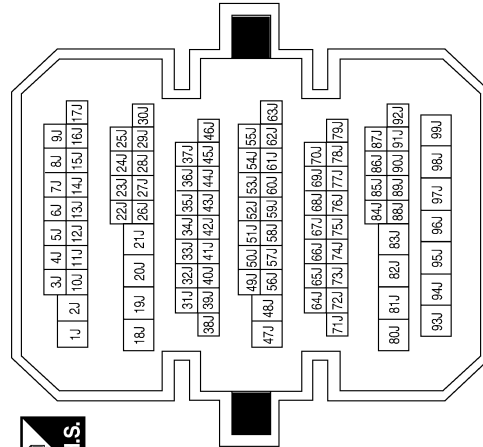
|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | B             | -           |
| 6            | LG            | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3J           | BR            | -           |
| 4J           | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



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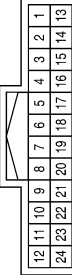
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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >


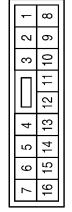
[XENON TYPE]

|                 |              |
|-----------------|--------------|
| Connector No.   | D2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |


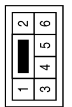
|              |    |               |    |             |   |
|--------------|----|---------------|----|-------------|---|
| Terminal No. | 11 | Color of Wire | GR | Signal Name | - |
|--------------|----|---------------|----|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | D1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |


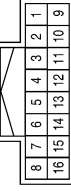
|              |    |               |   |             |   |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 10 | Color of Wire | B | Signal Name | - |
|--------------|----|---------------|---|-------------|---|

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |


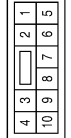
|              |   |               |    |             |   |
|--------------|---|---------------|----|-------------|---|
| Terminal No. | 4 | Color of Wire | B  | Signal Name | - |
|              | 6 |               | BR |             | - |

|                 |              |
|-----------------|--------------|
| Connector No.   | D102         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |


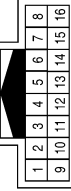
|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 1 | Color of Wire | W | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | D101         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 6 | Color of Wire | B | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |                |
|-----------------|----------------|
| Connector No.   | D4             |
| Connector Name  | DOOR MIRROR LH |
| Connector Color | WHITE          |

|              |   |               |    |             |   |
|--------------|---|---------------|----|-------------|---|
| Terminal No. | 7 | Color of Wire | B  | Signal Name | - |
|              | 8 |               | GR |             | - |

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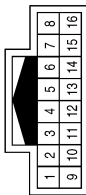
# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

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|-----------------|----------------|
| Connector No.   | D107           |
| Connector Name  | DOOR MIRROR RH |
| Connector Color | WHITE          |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | B             | -           |
| 8            | W             | -           |

ABLIA4011GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

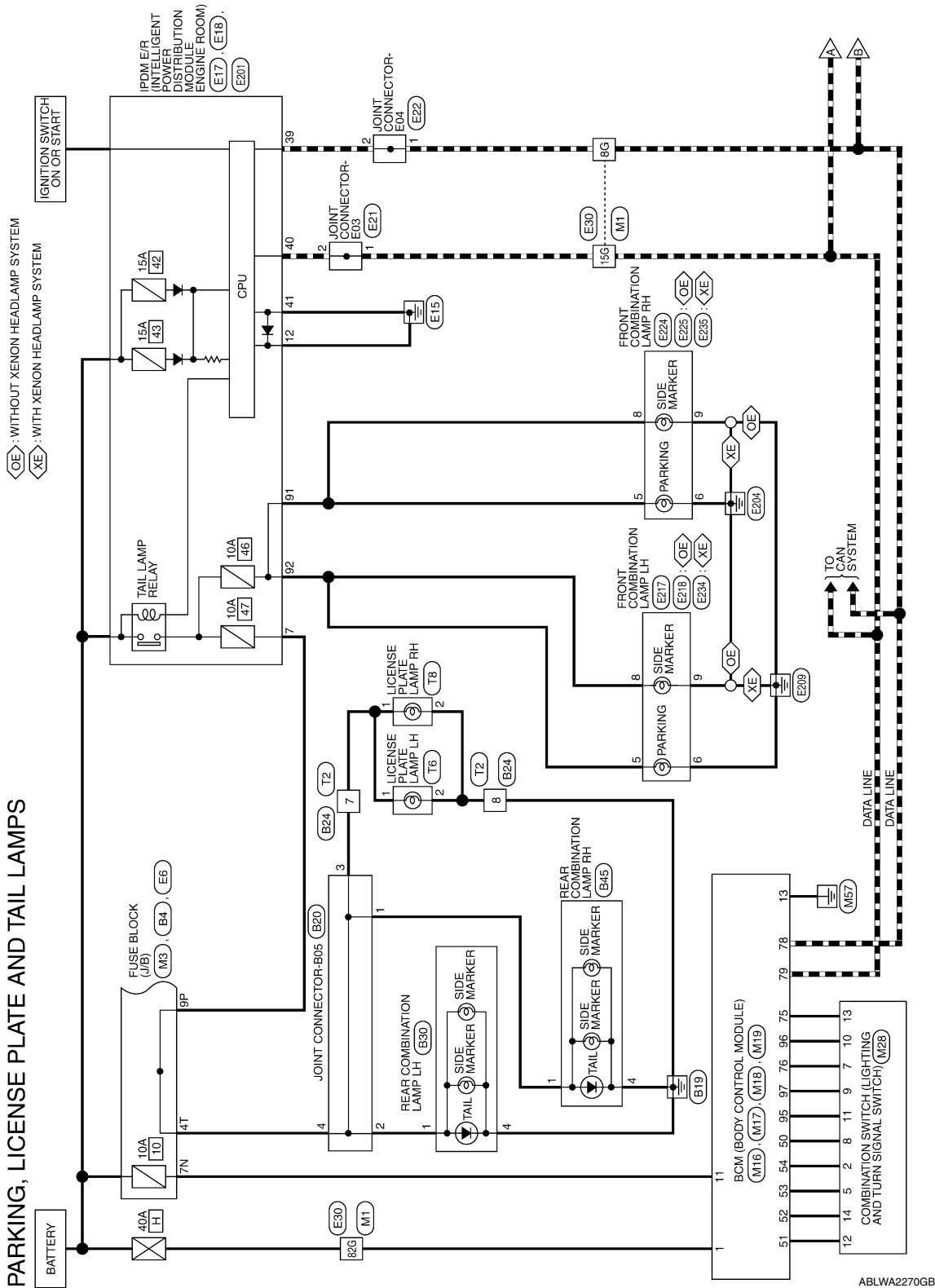
< WIRING DIAGRAM >

[XENON TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram

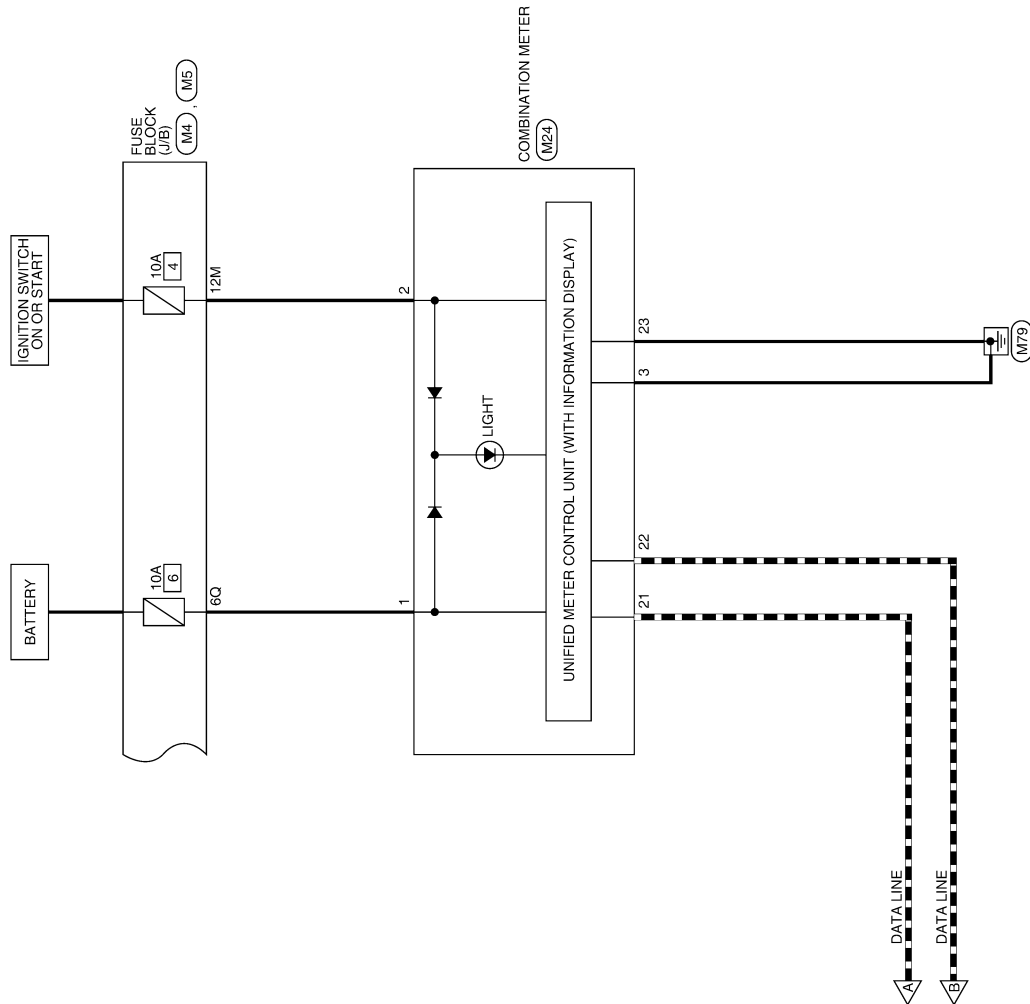
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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]



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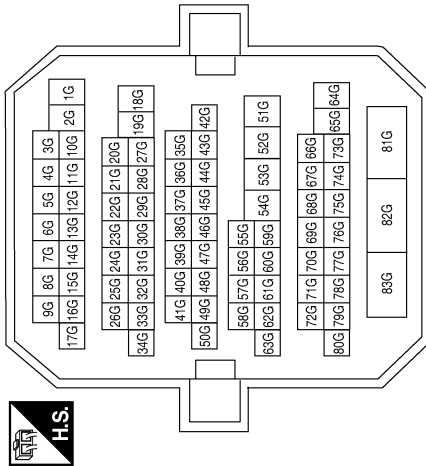
# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

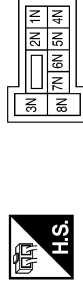
## PARKING, LICENCE PLATE AND TAIL LAMPS CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



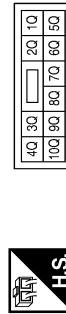
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6Q           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12M          | O             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 4  | 5  | 6  | 7  | 8  | 9  | 10 |    |    |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



|   |   |   |    |    |    |    |    |
|---|---|---|----|----|----|----|----|
| 1 | 2 | 5 | 6  |    |    |    |    |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 |

| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 1            | Y/R           | BAT           |
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |

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EXL

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

|                 |                  |
|-----------------|------------------|
| Connector No.   | E6               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9P           | GR            | -           |

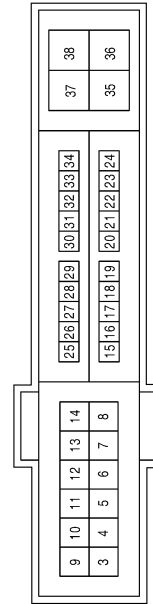
|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | GR            | TAIL/ILLUMI |
| 12           | B             | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



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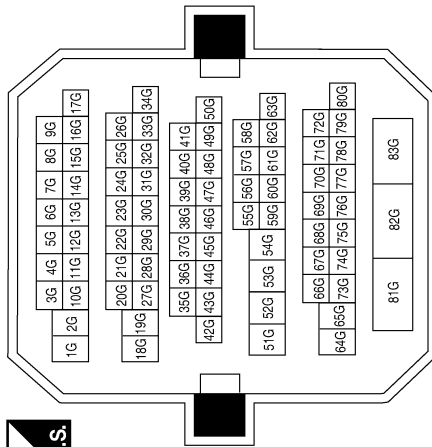
# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

| Connector No.   | E30          |
|-----------------|--------------|
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Connector No.   | E22                 |
|-----------------|---------------------|
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

| Connector No.   | E218  |
|-----------------|---|
| Connector Name  | FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY  |



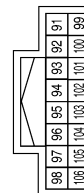
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/B          | -           |
| 9            | B             | -           |

| Connector No.   | E217                      |
|-----------------|---------------------------|
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | GRAY                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5            | LG/B          | -           |
| 6            | B             | -           |

| Connector No.   | E201   |
|-----------------|--|
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 91           | LG/R          | CLEARANCE RH |
| 92           | LG/B          | CLEARANCE LH |

ABLIA4005GB

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EXL

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[XENON TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E234   |
| Connector Name  | FRONT COMBINATION LAMP LH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/B          | -           |
| 9            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | E225  |
| Connector Name  | FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY  |



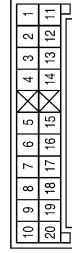
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/R          | -           |
| 9            | B             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E224                      |
| Connector Name  | FRONT COMBINATION LAMP RH |
| Connector Color | GRAY                      |



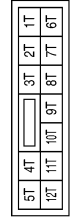
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5            | LG/R          | -           |
| 6            | B             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B20                 |
| Connector Name  | JOINT CONNECTOR-B05 |
| Connector Color | BLUE                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |
| 3            | L             | -           |
| 4            | L             | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | B4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | BROWN            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4T           | L             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E235   |
| Connector Name  | FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/R          | -           |
| 9            | B             | -           |

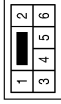
ABLIA4006GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

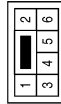
[XENON TYPE]

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|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |



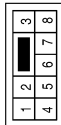
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 4            | B             | -           |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 4            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B24          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | L             | -           |
| 8            | B             | -           |

|                 |                       |
|-----------------|-----------------------|
| Connector No.   | T8                    |
| Connector Name  | LICENSE PLATE LAMP RH |
| Connector Color | BROWN                 |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

|                 |                       |
|-----------------|-----------------------|
| Connector No.   | T6                    |
| Connector Name  | LICENSE PLATE LAMP LH |
| Connector Color | BROWN                 |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | T2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | L             | -           |
| 8            | B             | -           |

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EXL

# STOP LAMP

[XENON TYPE]

< WIRING DIAGRAM >

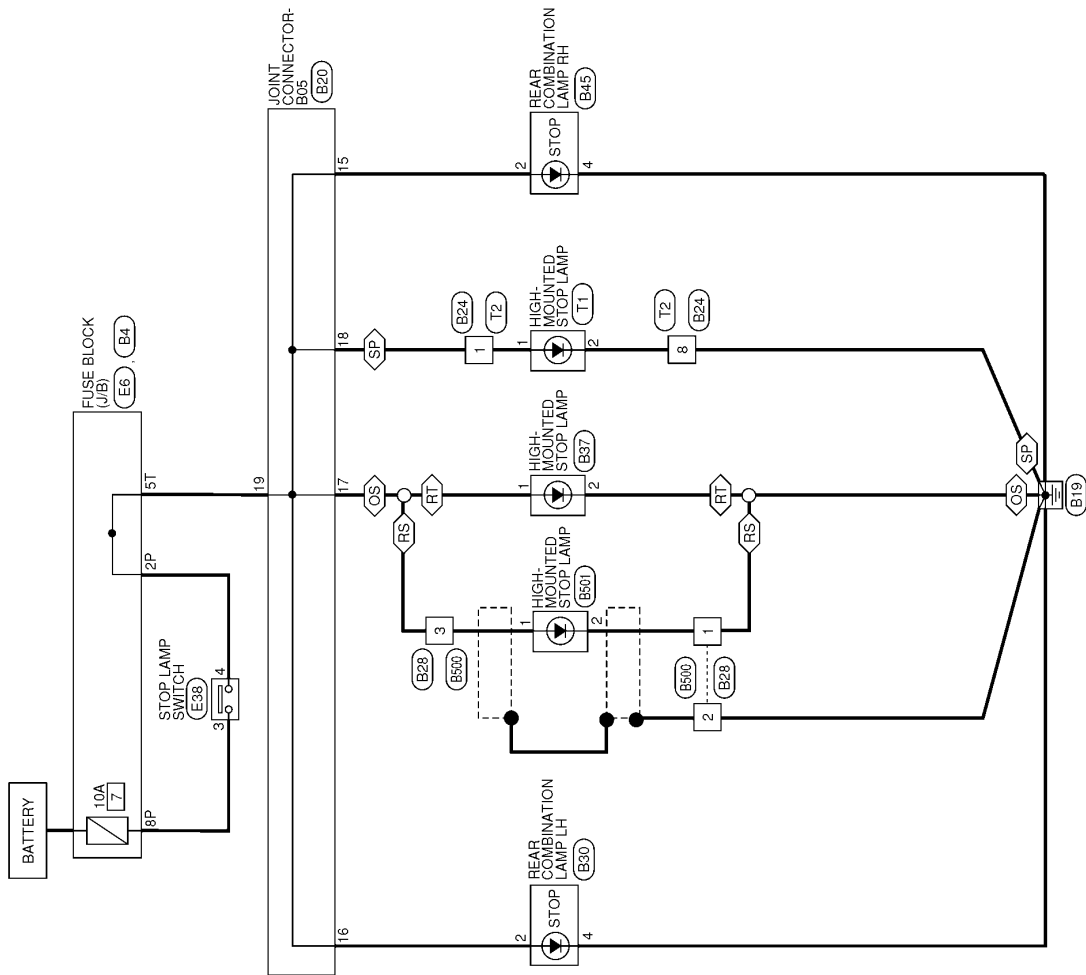
## STOP LAMP

### Wiring Diagram

INFOID:000000010050253

- OS : WITHOUT REAR SPOILER
- RS : WITH REAR SUNSHADE
- RT : WITHOUT REAR SUNSHADE
- SP : WITH REAR SPOILER

### STOP LAMP - XENON



ABLWA2260GB

# STOP LAMP

< WIRING DIAGRAM >

[XENON TYPE]

## STOP LAMP CONNECTORS

|                 |                  |
|-----------------|------------------|
| Connector No.   | E6               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



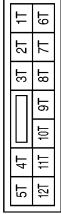
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2P           | LG            | -           |
| 8P           | R             | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | E38              |
| Connector Name  | STOP LAMP SWITCH |
| Connector Color | WHITE            |



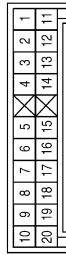
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | R             | -           |
| 4            | LG            | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | B4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | BROWN            |



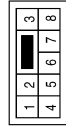
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5T           | O             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B20                 |
| Connector Name  | JOINT CONNECTOR-B05 |
| Connector Color | BLUE                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 15           | O             | -           |
| 16           | O             | -           |
| 17           | O             | -           |
| 18           | O             | -           |
| 19           | O             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B24          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 8            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B28          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | B             | -           |
| 3            | O             | -           |

ABLIA0526GB

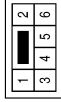
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# STOP LAMP

< WIRING DIAGRAM >

[XENON TYPE]

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |



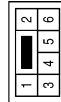
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | O             | -           |
| 4            | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | B37  |
| Connector Name  | HIGH-MOUNTED STOP LAMP (WITHOUT REAR SUNSHADE) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | B             | -           |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | O             | -           |
| 4            | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | T1   |
| Connector Name  | HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER) |
| Connector Color | BROWN                                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | B501  |
| Connector Name  | HIGH-MOUNTED STOP LAMP (WITH REAR SUNSHADE) |
| Connector Color | GRAY  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B500         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | B             | -           |
| 3            | O             | -           |

ABLIA5460GB

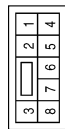
# STOP LAMP

< WIRING DIAGRAM >

[XENON TYPE]

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| Connector No.   | T2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 8            | B             | -           |

ABLIA0528GB

# BACK-UP LAMP

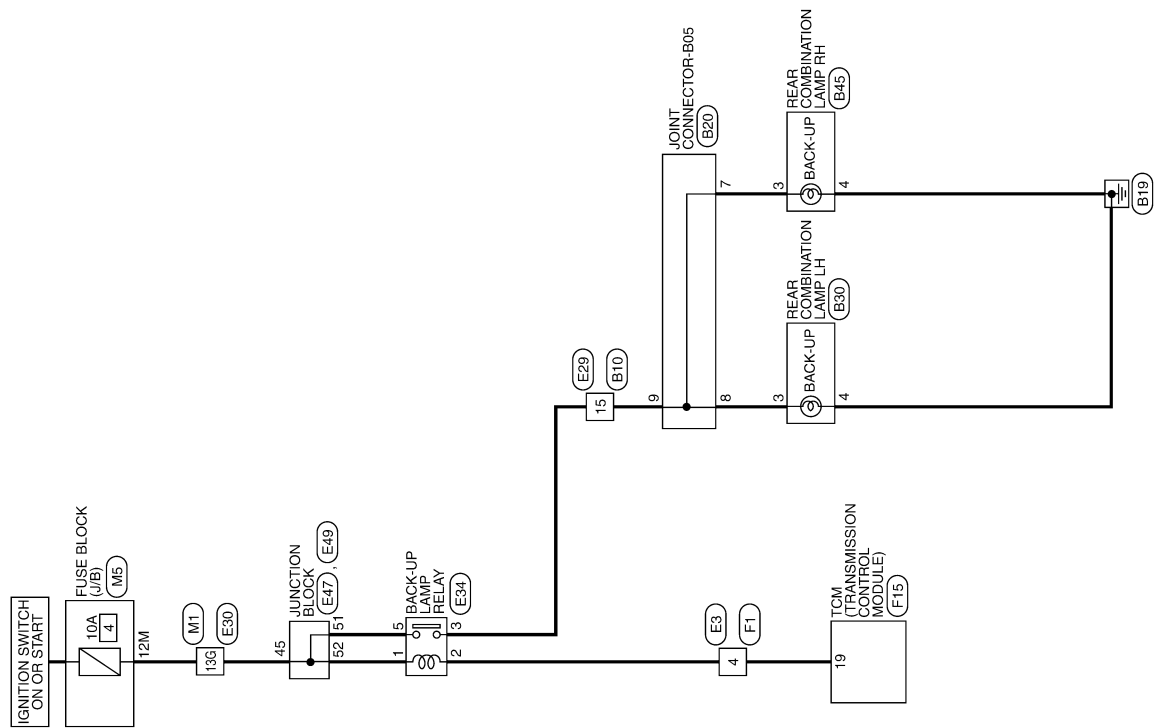
< WIRING DIAGRAM >

[XENON TYPE]

## BACK-UP LAMP

Wiring Diagram

INFOID:000000010050254



BACK-UP LAMP

ABLWA1142GB



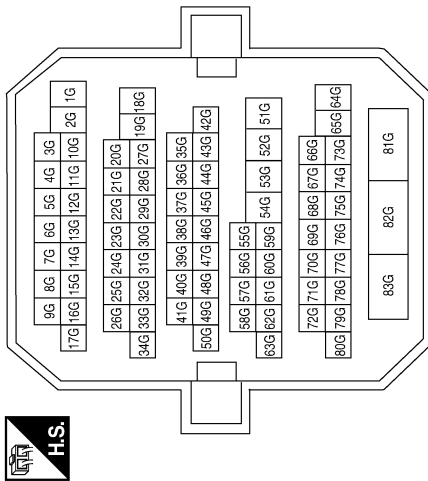
# BACK-UP LAMP

< WIRING DIAGRAM >

[XENON TYPE]

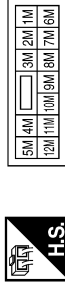
## BACK-UP LAMP CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



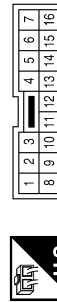
|              |     |               |   |             |   |
|--------------|-----|---------------|---|-------------|---|
| Terminal No. | 13G | Color of Wire | O | Signal Name | - |
|--------------|-----|---------------|---|-------------|---|

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



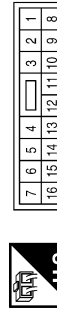
|              |     |               |   |             |   |
|--------------|-----|---------------|---|-------------|---|
| Terminal No. | 12M | Color of Wire | O | Signal Name | - |
|--------------|-----|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | E3           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 4 | Color of Wire | R | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | E29          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |    |               |   |             |   |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 15 | Color of Wire | W | Signal Name | - |
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# BACK-UP LAMP

< WIRING DIAGRAM >

[XENON TYPE]

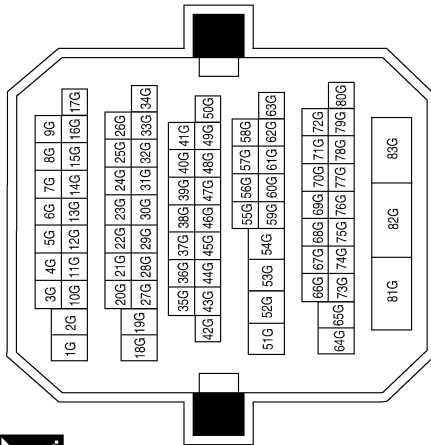
|                 |                    |
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| Connector No.   | E34                |
| Connector Name  | BACK-UP LAMP RELAY |
| Connector Color | BLUE               |



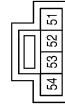
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | R             | -           |
| 3            | W             | -           |
| 5            | LG            | -           |

|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 13G          | BR            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|                 |                |
|-----------------|----------------|
| Connector No.   | E49            |
| Connector Name  | JUNCTION BLOCK |
| Connector Color | BROWN          |



|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 51           | LG            | -           |
| 52           | O             | -           |

|                 |                |
|-----------------|----------------|
| Connector No.   | E47            |
| Connector Name  | JUNCTION BLOCK |
| Connector Color | WHITE          |



|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 45           | BR            | -           |

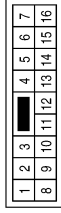
ABLIA0530GB

# BACK-UP LAMP

< WIRING DIAGRAM >

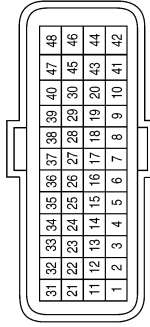
[XENON TYPE]

|                 |              |
|-----------------|--------------|
| Connector No.   | B10          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



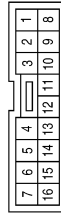
|              |    |               |   |             |   |
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| Terminal No. | 15 | Color of Wire | V | Signal Name | - |
|--------------|----|---------------|---|-------------|---|

|                 |                                   |
|-----------------|-----------------------------------|
| Connector No.   | F15                               |
| Connector Name  | TCM (TRANSMISSION CONTROL MODULE) |
| Connector Color | BLACK                             |



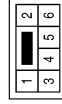
|              |    |               |     |             |              |
|--------------|----|---------------|-----|-------------|--------------|
| Terminal No. | 19 | Color of Wire | G/B | Signal Name | REV LAMP RLY |
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|-----------------|--------------|
| Connector No.   | F1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



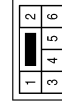
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|--------------|---|---------------|-----|-------------|---|
| Terminal No. | 4 | Color of Wire | G/B | Signal Name | - |
|--------------|---|---------------|-----|-------------|---|

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 3 | Color of Wire | V | Signal Name | - |
| 4            | B | B             | - | -           |   |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 3 | Color of Wire | V | Signal Name | - |
| 4            | B | B             | - | -           |   |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B20                 |
| Connector Name  | JOINT CONNECTOR-B05 |
| Connector Color | BLUE                |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 7 | Color of Wire | V | Signal Name | - |
| 8            | V | V             | - | -           |   |
| 9            | V | V             | - | -           |   |

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# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

## SYMPTOM DIAGNOSIS

### EXTERIOR LIGHTING SYSTEM SYMPTOMS

#### Symptom Table

INFOID:0000000010050255

**CAUTION:**

Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

| Symptom   |   | Possible cause  | Inspection item  |
|---|---|---|--|
| Head lamp does not switch to the high beam.                                       | One side  | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Harness between IPDM E/R and the front combination lamp</li> <li>• Front combination lamp (High beam relay)</li> <li>• IPDM E/R</li> </ul>                 | Head lamp (HI) circuit. Refer to <a href="#">EXL-36</a> .  |
|   | Both sides  | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM"<br>Refer to <a href="#">EXL-143</a> .  |  |
| High beam indicator lamp is not turned ON. (Head lamp switches to the high beam.) |   | <ul style="list-style-type: none"> <li>• Combination meter</li> <li>• BCM</li> </ul>  | <ul style="list-style-type: none"> <li>• Combination meter. Data monitor "HI-BEAM IND".</li> <li>• BCM (HEAD LAMP). Active test "HEADLAMP".</li> </ul> |
| Headlamp does not switch to the low beam.   | One side  | Front combination lamp (Low beam relay)   | —  |
|   | Both sides  | <ul style="list-style-type: none"> <li>• Combination switch (lighting and turn signal switch)</li> <li>• Harness between the combination switch (lighting and turn signal switch) and BCM</li> <li>• BCM</li> </ul> | Combination switch (lighting and turn signal switch). Refer to <a href="#">EXL-21</a> .  |
|   |   | High beam request signal  | IPDM E/R. Data monitor "HL HI REQ".  |
|   |   | IPDM E/R  | —  |
| Headlamp does not turn ON.  | One side  | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Bulb</li> <li>• Harness between IPDM E/R and the front combination lamp</li> <li>• Front combination lamp</li> <li>• IPDM E/R</li> </ul>                   | Headlamp (LO) circuit. Refer to <a href="#">EXL-40</a> .   |
|   | Both sides  | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-144</a> , " <a href="#">Description</a> ".   |  |
| Headlamp does not turn OFF.   | When the ignition switch is turned ON                                   | <ul style="list-style-type: none"> <li>• BCM</li> <li>• Combination switch (lighting and turn signal switch)</li> </ul>   | Combination switch (lighting and turn signal switch). Refer to <a href="#">EXL-21</a> .  |
|   | The ignition switch is turned OFF (After activating the battery saver). | IPDM E/R  | —  |

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

| Symptom   | Possible cause   | Inspection item  |  |
|---|--|--|--|
| Headlamp is not turned ON/OFF with the lighting switch AUTO.  | <ul style="list-style-type: none"> <li>• Combination switch (lighting and turn signal switch)</li> <li>• Harness between the combination switch (lighting and turn signal switch) and BCM</li> <li>• BCM</li> </ul>  | Combination switch (lighting and turn signal switch). Refer to <a href="#">EXL-21</a> .  |  |
|   | <ul style="list-style-type: none"> <li>• Optical sensor</li> <li>• Harness between the optical sensor and BCM</li> <li>• BCM</li> </ul>  | Optical sensor. Refer to <a href="#">EXL-53</a> .  |  |
| Daytime light system does not activate.   | <ul style="list-style-type: none"> <li>• Either high beam bulb</li> <li>• Parking brake switch</li> <li>• Combination switch (lighting and turn signal switch)</li> <li>• BCM</li> <li>• IPDM E/R</li> <li>• Daytime light relay</li> <li>• Harness between IPDM E/R and daytime light relay.</li> </ul> | Daytime light system description. Refer to <a href="#">EXL-11</a> , " <a href="#">System Description</a> ".  |  |
| Front fog lamp is not turned ON.  | One side   | <ul style="list-style-type: none"> <li>• Front fog lamp bulb</li> <li>• Harness between IPDM E/R and the front combination lamp</li> <li>• Front combination lamp</li> <li>• IPDM E/R</li> </ul>                         | Front fog lamp circuit. Refer to <a href="#">EXL-43</a> .  |
|   | Both side  | <b>Symptom diagnosis</b><br>"BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-146</a> .  |  |
| Parking lamp is not turned ON.  | One side   | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Parking lamp bulb</li> <li>• Harness between IPDM E/R and the front/rear combination lamp</li> <li>• Front/rear combination lamp</li> <li>• IPDM E/R</li> </ul> | Parking lamp circuit. Refer to <a href="#">EXL-45</a> .  |
|   | Both sides   | <b>Symptom diagnosis</b><br>"PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON".<br>Refer to <a href="#">EXL-145</a> .   |  |
| Turn signal lamp does not blink.  | Indicator lamp is normal. (The applicable side performs the high flasher activation).  | <ul style="list-style-type: none"> <li>• Harness between BCM and each turn signal lamp</li> <li>• Turn signal lamp bulb</li> <li>• Door mirror (if equipped with turn signals in the door mirrors)</li> </ul>            | Turn signal lamp circuit. Refer to <a href="#">EXL-49</a> .  |
| Turn signal indicator lamp does not blink.  | One side   | Combination meter  | —  |
|   | Both sides (Always)  | <ul style="list-style-type: none"> <li>• Turn signal indicator lamp signal</li> <li>• Combination meter</li> <li>• BCM</li> </ul>  | <ul style="list-style-type: none"> <li>• Combination meter. Data monitor "TURN IND".</li> <li>• BCM (FLASHER). Active test "FLASHER".</li> </ul> |
|   | Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)   | <ul style="list-style-type: none"> <li>• The combination meter power supply and the ground circuit</li> <li>• Combination meter</li> </ul>   | Combination meter. Power supply and the ground circuit Refer to <a href="#">MWI-37</a> .   |
| <ul style="list-style-type: none"> <li>• Hazard warning lamp does not activate.</li> <li>• Hazard warning lamp continues activating. (Turn signal is normal)</li> </ul> | <ul style="list-style-type: none"> <li>• Hazard switch</li> <li>• Harness between the hazard switch and BCM</li> <li>• BCM</li> </ul>  | Hazard switch Refer to <a href="#">EXL-56</a> .  |  |

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EXL

## NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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### NORMAL OPERATING CONDITION

#### Description

INFOID:000000010050256

#### XENON HEADLAMP

- The brightness and color of the light may vary slightly immediately after turning the headlamp ON. This condition will remain until the xenon bulb becomes stable. This is normal.
- Illumination time lag may occur between right and left. This is normal.

#### AUTO LIGHT SYSTEM

The auto light system may not turn the headlamp ON/OFF immediately after passing a dark area or a bright area (short tunnel, sky bridge, shadowed area etc.). This is normal.

# BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

## BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

### Description

INFOID:000000010050257

The headlamps (both sides) do not switch to high beam when the lighting switch is in the HI or PASS setting.

### Diagnosis Procedure

INFOID:000000010050258

#### 1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [EXL-21, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

##### CONSULT DATA MONITOR

1. Select "HL HI REQ" of IPDM E/R DATA MONITOR item.
2. While operating the lighting switch, check the monitor status.

| Monitor item | Condition             |                       | Monitor status |
|--------------|-----------------------|-----------------------|----------------|
| HL HI REQ    | Lighting switch (2ND) | HI or PASS            | ON             |
|              |                       | Except for HI or PASS | OFF            |

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to [EXL-36, "Diagnosis Procedure"](#).

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

## BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

### Description

INFOID:000000010050259

The headlamps (both sides) do not turn ON in any lighting switch setting.

### Diagnosis Procedure

INFOID:000000010050260

#### 1. CHECK COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)

Check the combination switch (lighting and turn signal switch). Refer to [EXL-21, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2. CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

##### Ⓢ CONSULT DATA MONITOR

1. Select "HL LO REQ" of IPDM E/R DATA MONITOR item.
2. While operating the lighting switch, check the monitor status.

| Monitor item | Condition       | Monitor status |     |
|--------------|-----------------|----------------|-----|
| HL LO REQ    | Lighting switch | 2ND            | ON  |
|              |                 | OFF            | OFF |

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3. HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to [EXL-40, "Diagnosis Procedure"](#).

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.



# PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000110050261

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

### Diagnosis Procedure

INFOID:0000000110050262

#### 1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [EXL-21, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

##### CONSULT DATA MONITOR

1. Select "TAIL & CLR REQ" of IPDM E/R DATA MONITOR item.
2. While operating the lighting switch, check the monitor status.

| Monitor item   | Condition       | Monitor status |     |
|----------------|-----------------|----------------|-----|
| TAIL & CLR REQ | Lighting switch | 1ST            | ON  |
|                |                 | OFF            | OFF |

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to [EXL-45, "Diagnosis Procedure"](#).

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000010050263

The front fog lamps do not turn ON in any setting.

### Diagnosis Procedure

INFOID:0000000010050264

#### 1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [EXL-21, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

- YES >> GO TO 2.
- NO >> Repair or replace the malfunctioning part.

#### 2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

##### ⓅCONSULT DATA MONITOR

1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.
2. While operating the front fog lamp switch, check the monitor status.

| Monitor item | Condition                                      | Monitor status |     |
|--------------|--|----------------|-----|
| FR FOG REQ   | Front fog lamp switch<br>(Lighting switch 2ND) | ON             | ON  |
|              |  | OFF            | OFF |

Is the item status normal?

- YES >> GO TO 3.
- NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to [EXL-43, "Diagnosis Procedure"](#).

Is the front fog lamp circuit normal?

- YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).
- NO >> Repair or replace the malfunctioning part.

PRECAUTION

PRECAUTIONS

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

INFOID:000000009465266

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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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 Xenon Headlamp Service

INFOID:000000009465267

**WARNING:**

Comply with the following warnings to prevent any serious accident.

- Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.
- Do not work with wet hands.
- Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Do not turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)
- Do not touch the bulb glass immediately after turning it OFF. It is extremely hot.

**CAUTION:**

Comply with the following cautions to prevent any error and malfunction.

- Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc, by high-voltage leakage or corona discharge.)
- Do not perform HID circuit inspection with a tester.
- Do not touch the xenon bulb glass with hands. Do not put oil and grease on it.
- Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.
- Do not wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).

General precautions for service operations

INFOID:000000009465268

- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.

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# PRECAUTIONS

< PRECAUTION >

[XENON TYPE]

- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. (If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.)

## Precaution for Work

INFOID:000000009731475

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
  - Water soluble dirt:
    - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
    - Then rub with a soft, dry cloth.
  - Oily dirt:
    - Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
    - Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
    - Then rub with a soft, dry cloth.
  - Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
  - For genuine leather seats, use a genuine leather seat cleaner.

# PREPARATION

< PREPARATION >

[XENON TYPE]

## PREPARATION

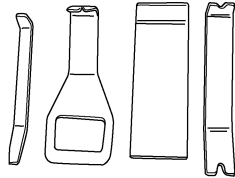
### PREPARATION

#### Special Service Tool

INFOID:000000009465270

The actual shapes of the tools may differ from those illustrated here.

| Tool number<br>(TechMate No.)<br>Tool name | Description              |
|--|--------------------------|
| —<br>(J-46534)<br>Trim Tool Set            | Removing trim components |



AWJIA0483ZZ

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# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

## PERIODIC MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT

#### Description

INFOID:000000009465271

#### PREPARATION BEFORE ADJUSTING

**CAUTION:**

Do not use organic solvent (thinner, gasoline etc.).

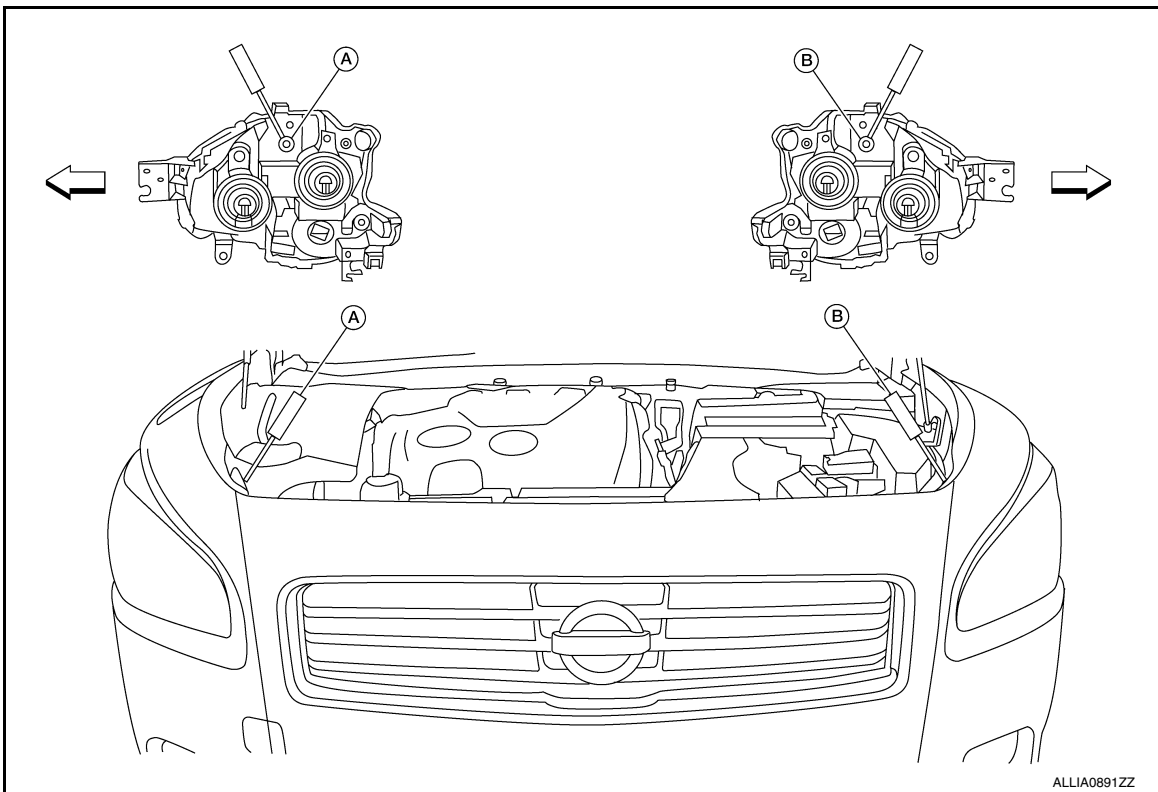
**NOTE:**

- 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.

- Keep all tires inflated to correct pressure.
- Place vehicle on level ground.
- See that the vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in drivers seat.

#### AIMING ADJUSTMENT SCREW



- A. Headlamp RH (UP/DOWN) adjustment screw      B. Headlamp LH (UP/DOWN) adjustment screw      ⇐ Vehicle center

| Adjustment screw |                       | Screw driver rotation | Facing direction |
|------------------|-----------------------|-----------------------|------------------|
| A                | Headlamp RH (UP/DOWN) | Clockwise             | DOWN             |
|                  |                       | Counterclockwise      | UP               |
| B                | Headlamp LH (UP/DOWN) | Clockwise             | DOWN             |
|                  |                       | Counterclockwise      | UP               |

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

## Aiming Adjustment Procedure

INFOID:000000009465272

### NOTE:

Set the screen so that it is perpendicular to the road.

1. Position the screen.
2. Make the distance between the headlamp center and the screen 7.62 m (25 ft).
3. Start the engine and illuminate the headlamp (LO).

### CAUTION:

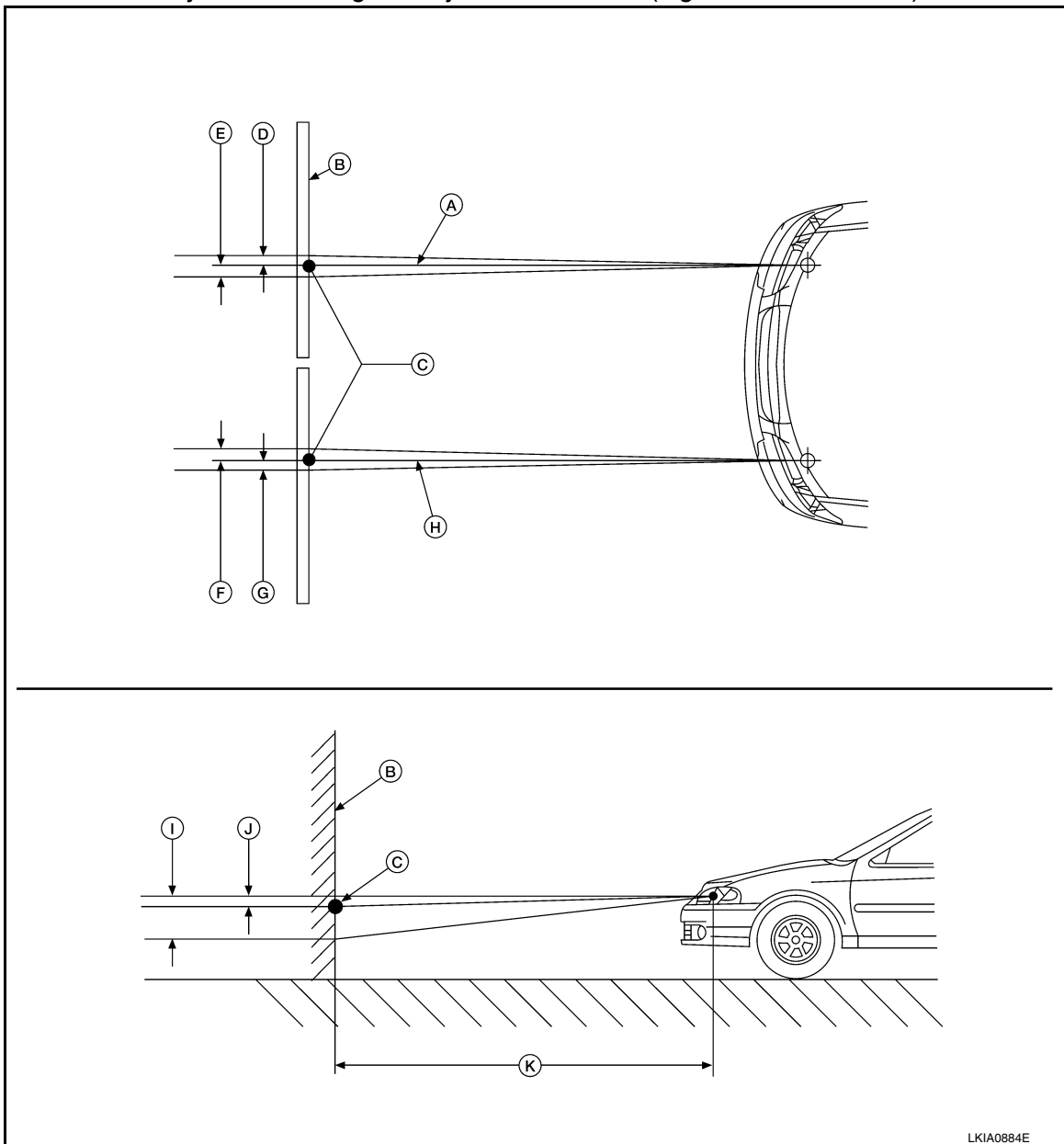
Do not cover the lens surface with tape, etc. The lens is made of plastic.

### NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the screen.

4. Use the adjustment screw to adjust the low beams on the screen, so that it is within the aiming adjustment area.

### Adjustment Using An Adjustment Screen (Light/Dark Borderline)



A. Headlamp beam (RH)

B. Screen

C. Horizontal/Vertical center point of headlamp

D. 66.5 mm (2.6 in)

E. 66.5 mm (2.6 in)

F. 66.5 mm (2.6 in)

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

G. 66.5 mm (2.6 in)

H. Headlamp beam (LH)

I. 53.2 mm (2.1 in)

J. 13.3 mm (0.5 in)

K. 7.62 m (25 ft)



# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

## FRONT FOG LAMP AIMING ADJUSTMENT

### Description

INFOID:000000009465273

### PREPARATION BEFORE ADJUSTING

#### NOTE:

For details, refer to the regulations in your area.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to specification.
- Position vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Ensure engine coolant and engine oil are filled to correct levels and fuel tank is full.
- Confirm spare tire, jack and tools are properly stowed.
- Wipe off dirt on the fog lamp.

#### CAUTION:

**Do not use organic solvent (thinner, gasoline etc.).**

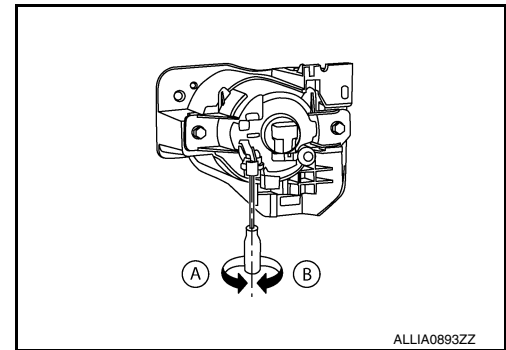
### AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment as shown.

#### NOTE:

A screwdriver or hexagonal wrench [6 mm (0.24 in)] can be used for adjustment.

- A: Up
- B: Down



### Aiming Adjustment Procedure

INFOID:000000009465274

#### NOTE:

Set the screen so that it is perpendicular to the road.

1. Position the screen.
2. Make the distance between the fog lamp center and the screen 7.62 m (25.0 ft).
3. Start the engine and illuminate fog lamp.

#### CAUTION:

**Do not cover the lens surface with tape, etc. because it is made of plastic.**

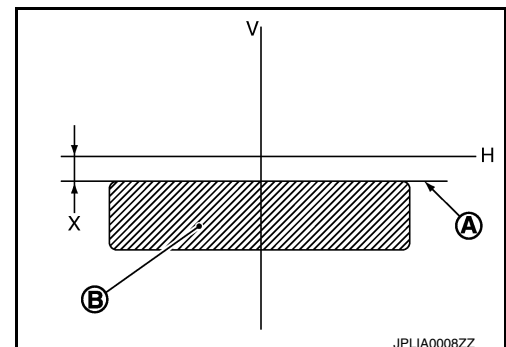
#### NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the screen..

4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4.0 in).

- Front fog lamp light distribution on the screen is as shown.

- A: Cutoff line
- B: High illuminance area
- H: Horizontal center line of front fog lamp
- V: Vertical center line of front fog lamp
- X: Cutoff line height



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# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

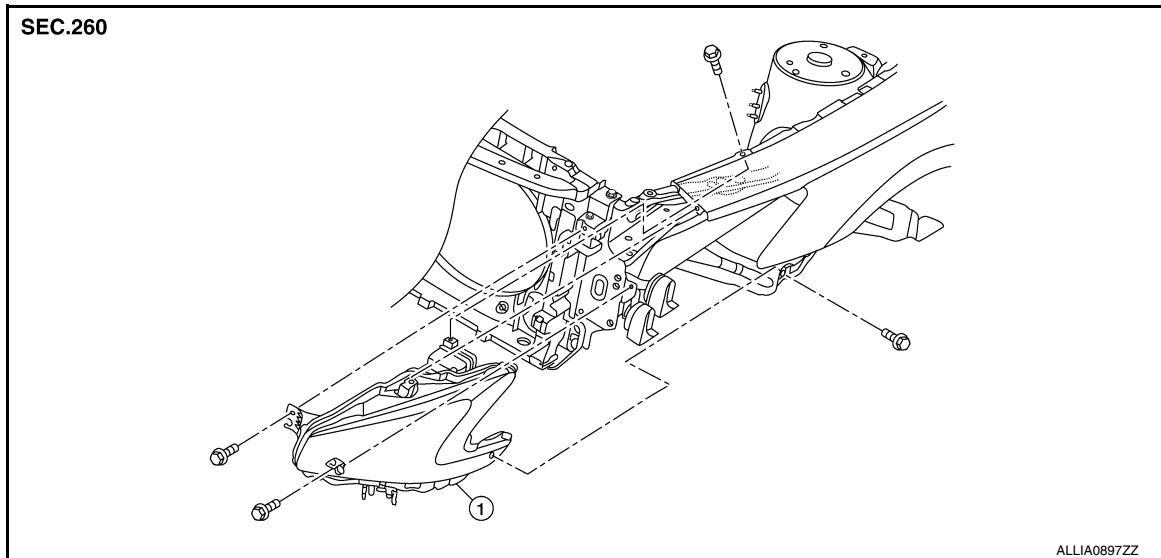
[XENON TYPE]

## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View

INFOID:000000009465275



1. Front combination lamp

### Removal and Installation

INFOID:000000009465276

#### FRONT COMBINATION LAMP

Removal

**CAUTION:**

**Disconnect the battery negative terminal or remove the fuse.**

1. Remove the front bumper fascia. Refer to [EXT-16, "Removal and Installation"](#).
2. Remove the front combination lamp bolts.
3. Remove the harness clips from the front combination lamp assembly.
4. Pull out the front combination lamp toward the front of vehicle.
5. Disconnect the harness connectors from the front combination lamp and remove.

Installation

Installation is in the reverse order of removal.

**NOTE:**

After installation, perform headlamp aiming adjustment. Refer to [EXL-150, "Description"](#).

#### XENON BULB

Removal

**WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.**

**CAUTION:**

- After installing the bulb, install the plastic cover and the bulb socket securely for watertightness.
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.
- Disconnect the battery negative terminal or remove the fuse.

1. Remove the front combination lamp. Refer to [EXL-154, "Removal and Installation"](#).

## FRONT COMBINATION LAMP

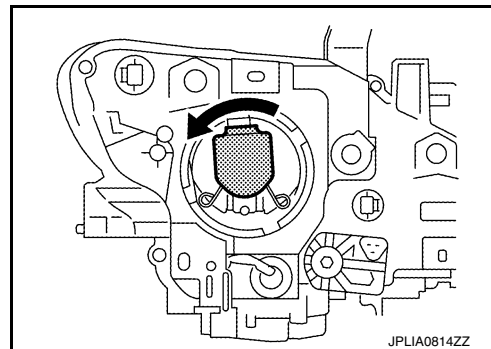
### < REMOVAL AND INSTALLATION >

[XENON TYPE]

2. Remove screw from cover and rotate the plastic cover counterclockwise and unlock from the front combination lamp.
3. Rotate the xenon bulb socket counterclockwise and unlock from the front combination lamp.
4. Unlock the retaining spring and remove the xenon bulb from the front combination lamp.

**CAUTION:**

**Do not break the xenon bulb ceramic tube when replacing the bulb.**



#### Installation

Installation is in the reverse order of removal.

#### HALOGEN BULB (HIGH BEAM)

##### Removal

1. Remove the front combination lamp. Refer to [EXL-154, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket.

##### Installation

Installation is in the reverse order of removal.

#### FRONT TURN SIGNAL LAMP BULB

##### Removal

1. Remove the front combination lamp. Refer to [EXL-154, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket.

##### Installation

Installation is in the reverse order of removal.

#### FRONT SIDE MARKER LAMP BULB

##### Removal

1. Remove the front combination lamp. Refer to [EXL-154, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket.

##### Installation

Installation is in the reverse order of removal.

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# FRONT FOG LAMP

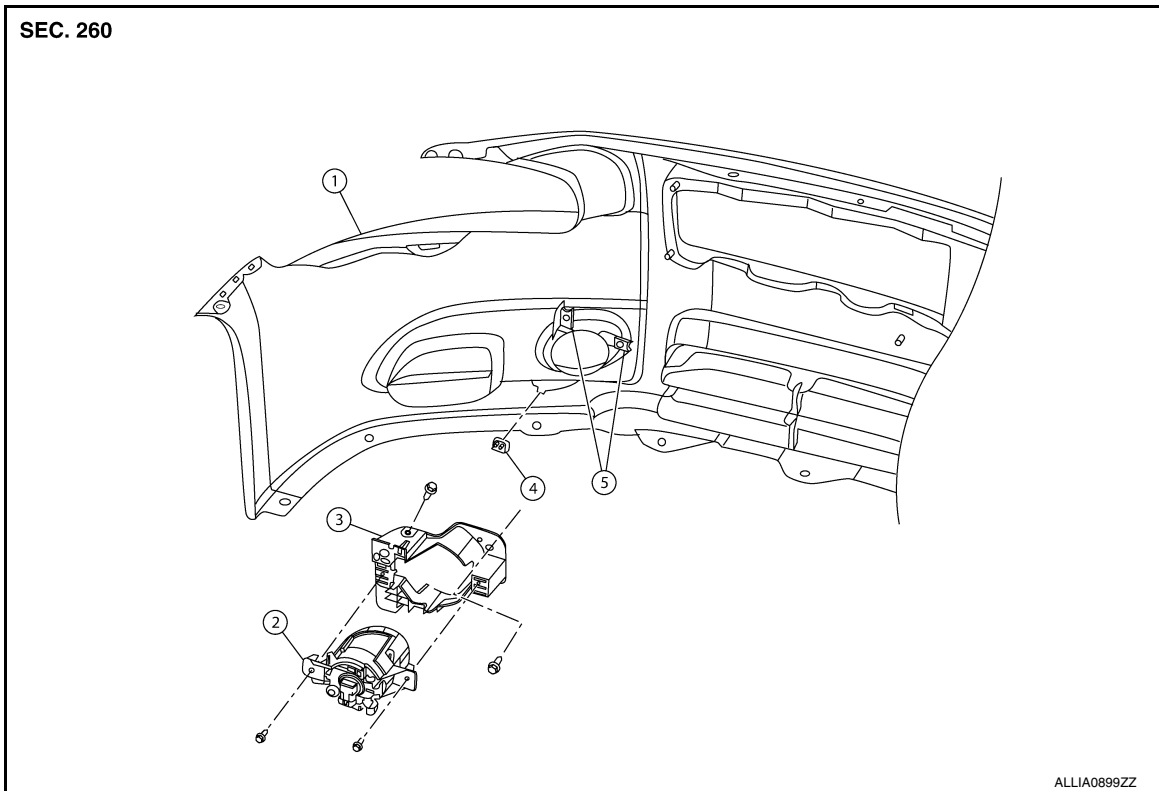
< REMOVAL AND INSTALLATION >

[XENON TYPE]

## FRONT FOG LAMP

Exploded View

INFOID:000000009465277



- |                        |                   |                           |
|------------------------|-------------------|---------------------------|
| 1. Front bumper fascia | 2. Front fog lamp | 3. Front fog lamp bracket |
| 4. Clip                | 5. Spring nuts    |                           |

## Removal and Installation

INFOID:000000009465278

### FRONT FOG LAMP

#### Removal

1. Remove the front bumper fascia. Refer to [EXT-16. "Removal and Installation"](#).
2. Disconnect the harness connector from the fog lamp.
3. Remove the front fog lamp bolts.
4. Remove the front fog lamp.

#### Installation

Installation is in the reverse order of removal.

#### NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to [EXL-153. "Aiming Adjustment Procedure"](#).

### FRONT FOG LAMP BULB

#### Removal

#### WARNING:

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.

#### CAUTION:

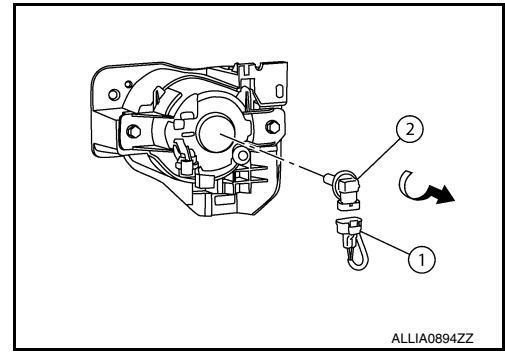
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

# FRONT FOG LAMP

## < REMOVAL AND INSTALLATION >

[XENON TYPE]

1. Remove the front fender protector. Refer to [EXT-24, "Removal and Installation"](#).
2. Disconnect the harness connector (1) from the fog lamp.
3. Rotate the bulb (2) counterclockwise and unlock it.



### Installation

Installation is in the reverse order of removal.

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# OPTICAL SENSOR

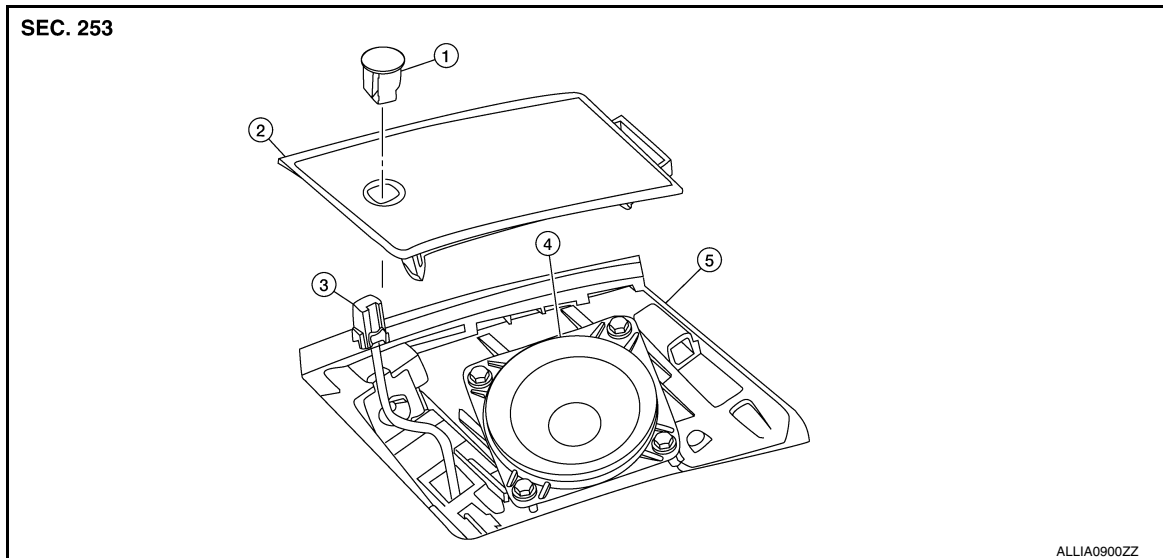
< REMOVAL AND INSTALLATION >

[XENON TYPE]

## OPTICAL SENSOR

### Exploded View

INFOID:000000009465279



- |                             |                                    |                                     |
|-----------------------------|------------------------------------|-------------------------------------|
| 1. Optical sensor           | 2. LH front tweeter speaker grille | 3. Optical sensor harness connector |
| 4. LH front tweeter speaker | 5. Instrument panel                |                                     |

### Removal and Installation

INFOID:000000009465280

#### **CAUTION:**

**Whenever a suitable tool is used, always wrap a cloth around the end of the tool to protect components from damage.**

#### REMOVAL

1. Carefully remove the LH front tweeter speaker grille using a suitable tool.
2. Insert a suitable tool between the optical sensor and the LH front tweeter speaker grille. Lift the optical sensor upward.
3. Disconnect the harness connector from the optical sensor and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# DOOR MIRROR TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## DOOR MIRROR TURN SIGNAL LAMP

### Removal and Installation

INFOID:00000009465281

The door mirror turn signal lamp is an integral part of the door mirror and must be replaced as an assembly. Refer to [MIR-19. "Removal and Installation"](#).

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# LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## LIGHTING & TURN SIGNAL SWITCH

### Removal and Installation

INFOID:000000009465282

#### NOTE:

The lighting and turn signal switch is integral with the combination switch assembly.

#### REMOVAL

1. Unlock steering wheel.

#### CAUTION:

- Before servicing, disconnect both battery terminals and wait at least three minutes
  - Do not use air tools or electric tools for servicing.
  - After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
  - In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
  - If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to [SRC-12, "SRS Operation Check"](#).
2. Remove steering column covers. Refer to [IP-13, "Removal and Installation"](#).
  3. Rotate steering wheel clockwise to access first combination switch bolt, then remove bolt.
  4. Rotate steering wheel counter-clockwise to access second combination switch bolt, then remove bolt.
  5. Disconnect the harness connectors from the lighting and turn signal switch and remove.

#### INSTALLATION

Installation is in the reverse order of removal.



# HAZARD SWITCH

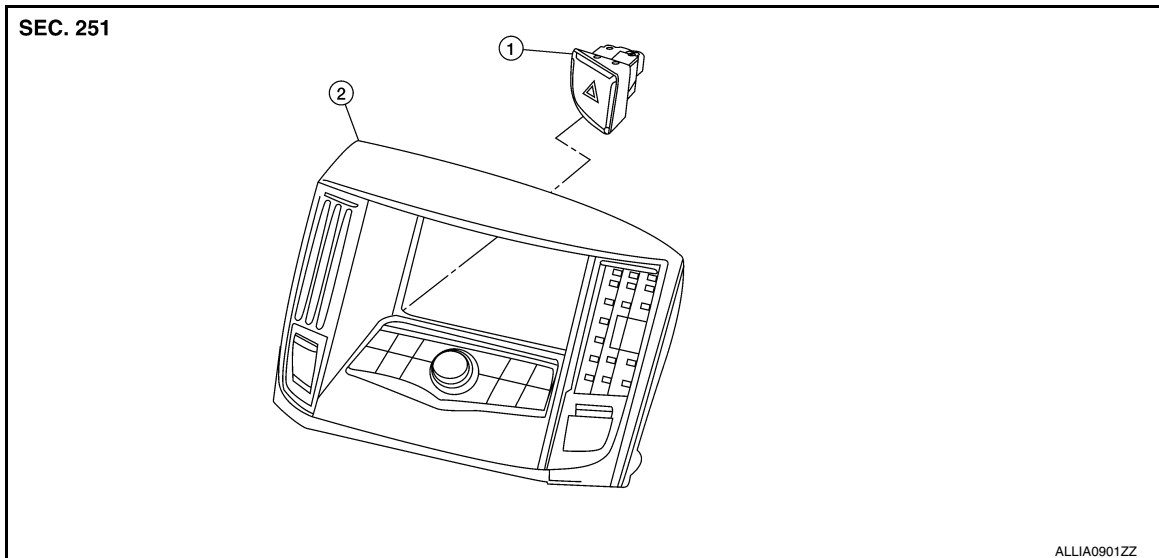
< REMOVAL AND INSTALLATION >

[XENON TYPE]

## HAZARD SWITCH

### Exploded View

INFOID:00000009465283



1. Hazard switch

2. Cluster lid D

### Removal and Installation

INFOID:00000009465284

#### REMOVAL

1. Remove cluster lid D. Refer to [IP-18, "Removal and Installation"](#).
2. Disconnect the harness connector from the hazard switch and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

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EXL

# REAR COMBINATION LAMP

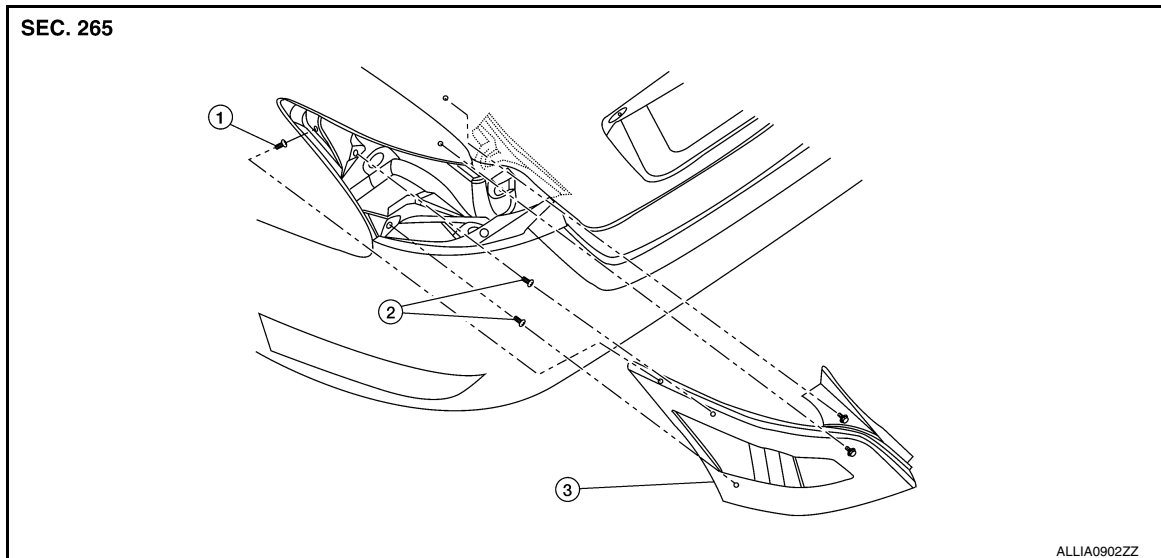
< REMOVAL AND INSTALLATION >

[XENON TYPE]

## REAR COMBINATION LAMP

### Exploded View

INFOID:000000009465285



1. Slide clip

2. Grommets

3. Rear combination lamp

### Removal and Installation

INFOID:000000009465286

#### REAR COMBINATION LAMP

##### Removal

1. Remove the trunk side finisher. Refer to [INT-36, "Removal and Installation"](#).
2. Remove the rear combination lamp nuts.
3. Pull the rear combination lamp toward the rear of the vehicle to remove it.
4. Disconnect the harness connector from the rear combination lamp.

##### Installation

Installation is in the reverse order of removal.

#### **WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.**

#### **CAUTION:**

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.

#### STOP/TAIL LAMP

Replacement is integral with rear combination lamp. Refer to [EXL-162, "Exploded View"](#).

#### REAR SIDE MARKER LAMP BULB

##### Removal

1. Remove the rear combination lamp. Refer to [EXL-162, "Exploded View"](#).
2. Rotate the rear side marker lamp socket counterclockwise and unlock from rear combination lamp.
3. Remove the bulb from the rear side marker lamp socket.

##### Installation

Installation is in the reverse order of removal.

#### REAR TURN SIGNAL LAMP BULB

# REAR COMBINATION LAMP

[XENON TYPE]

## < REMOVAL AND INSTALLATION >

### Removal

1. Remove the rear combination lamp. Refer to [EXL-162, "Exploded View"](#).
2. Rotate the rear turn signal lamp socket counterclockwise and unlock from rear combination lamp.
3. Remove the bulb from the rear turn signal lamp socket.

### Installation

Installation is in the reverse order of removal.

### BACK-UP LAMP BULB

### Removal

1. Remove the rear combination lamp. Refer to [EXL-162, "Exploded View"](#).
2. Rotate the back-up lamp socket counterclockwise and unlock from rear combination lamp.
3. Remove the bulb from the back-up lamp socket.

### Installation

Installation is in the reverse order of removal.

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# HIGH-MOUNTED STOP LAMP

< REMOVAL AND INSTALLATION >

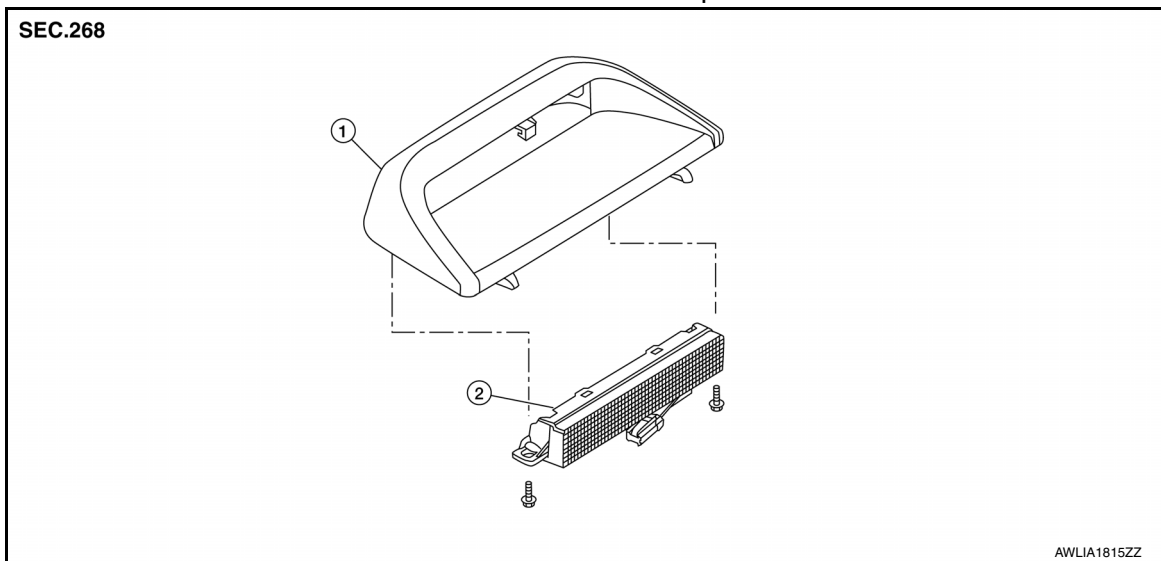
[XENON TYPE]

## HIGH-MOUNTED STOP LAMP

Exploded View

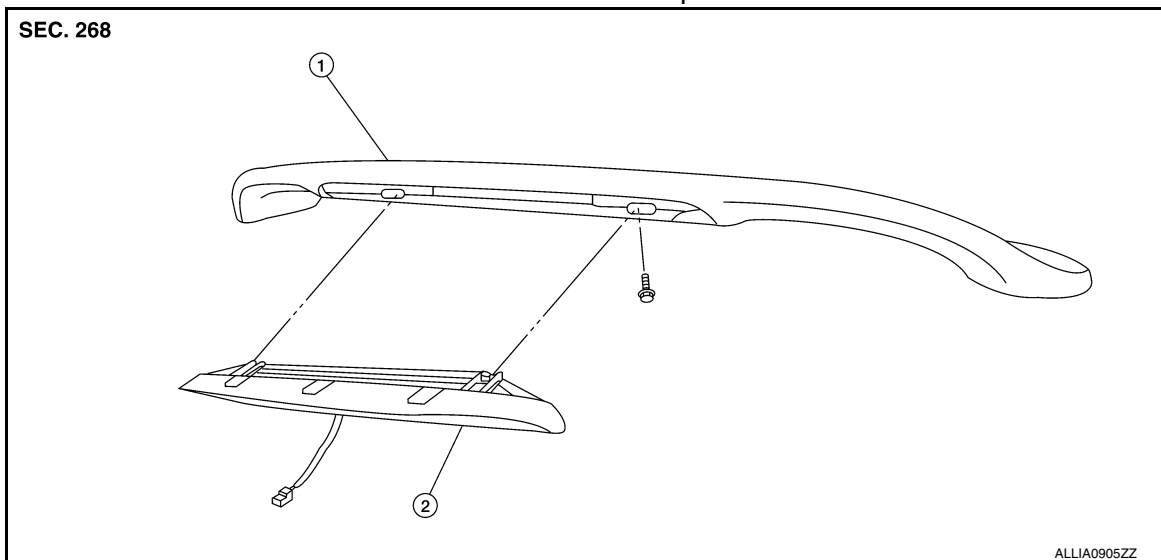
INFOID:000000009465287

### Models Without Rear Spoiler



1. High-mounted stop lamp cover
2. High-mounted stop lamp bulb

### Models With Rear Spoiler



1. Rear spoiler
2. High-mounted stop lamp assembly

## Removal and Installation

INFOID:000000009465288

### WITHOUT REAR SPOILER

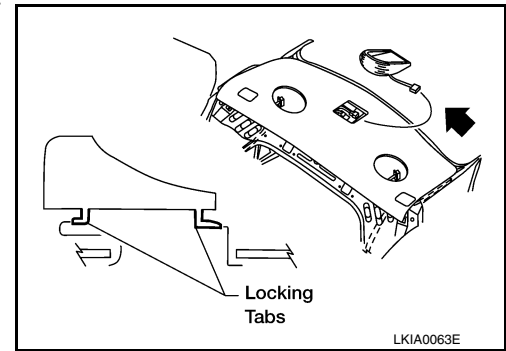
Removal

# HIGH-MOUNTED STOP LAMP

## < REMOVAL AND INSTALLATION >

[XENON TYPE]

1. Slide the high-mounted stop lamp rearward on the parcel shelf to give clearance to the front locking tabs.
2. Lift the front of the high-mounted stop lamp up and slide it forward to give clearance to the rear locking tabs.
3. Disconnect the harness connector from the high-mounted stop lamp and remove.



### Installation

Installation is in the reverse order of removal.

### WITH REAR SPOILER

#### Removal

1. Remove the high-mounted stop lamp screws.
2. Remove the high-mounted stop lamp from the rear spoiler far enough to gain access to the connector.
3. Disconnect the harness connector from the high-mounted stop lamp and remove.

#### Installation

Installation is in the reverse order of removal.

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# LICENSE PLATE LAMP

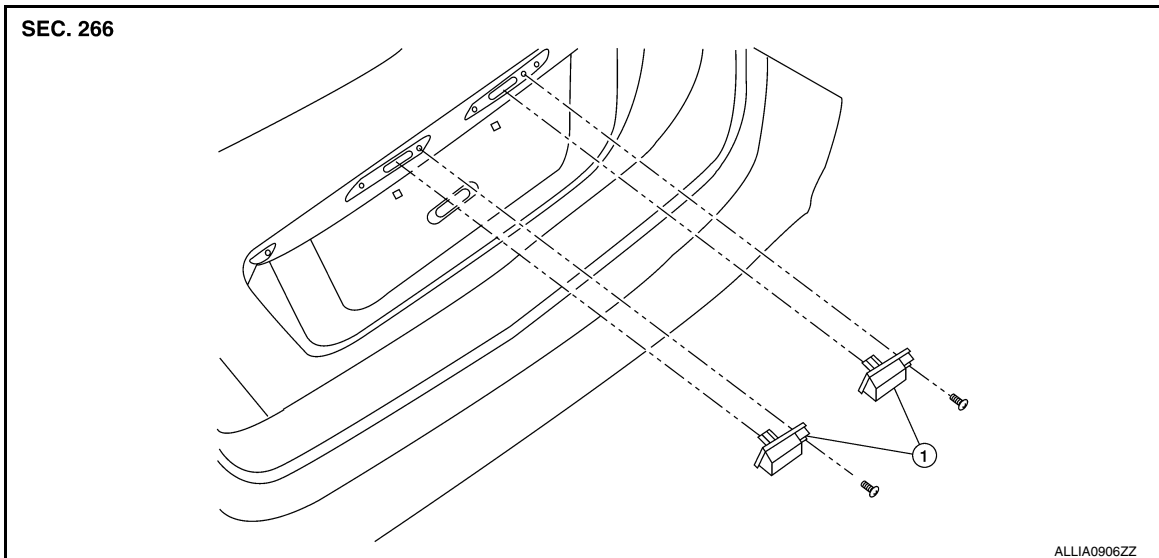
< REMOVAL AND INSTALLATION >

[XENON TYPE]

## LICENSE PLATE LAMP

### Exploded View

INFOID:000000009465289



1. License plate lamp

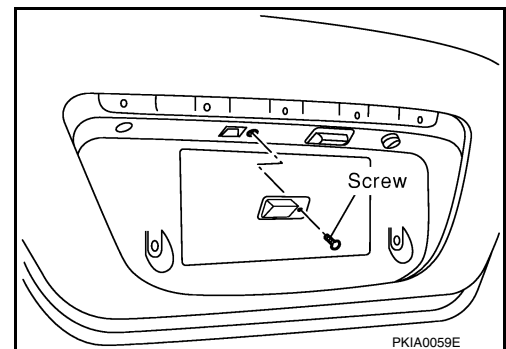
### Removal and Installation

INFOID:000000009465290

## LICENSE PLATE LAMP

### Removal

1. Remove the license lamp finisher. Refer to [EXT-31, "Removal and Installation"](#).
2. Position trunk lid finisher aside. Refer to [INT-36, "Exploded View"](#).
3. Remove the license plate lamp screw and remove the license plate lamp.



### Installation

Installation is in the reverse order of removal.

## LICENSE PLATE LAMP BULB

### Removal

#### **WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.**

#### **CAUTION:**

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.

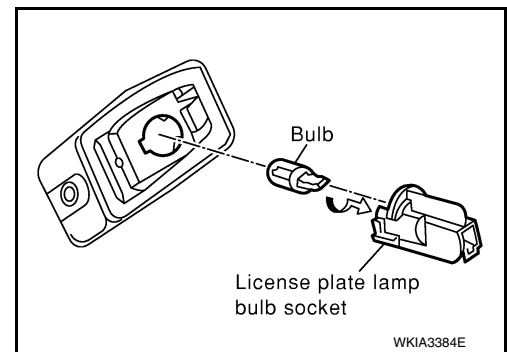
1. Position trunk lid finisher aside. Refer to [INT-36, "Exploded View"](#).

# LICENSE PLATE LAMP

## < REMOVAL AND INSTALLATION >

[XENON TYPE]

2. Turn the license plate lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the license plate lamp bulb socket.



### Installation

Installation is in the reverse order of removal.

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# FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[XENON TYPE]

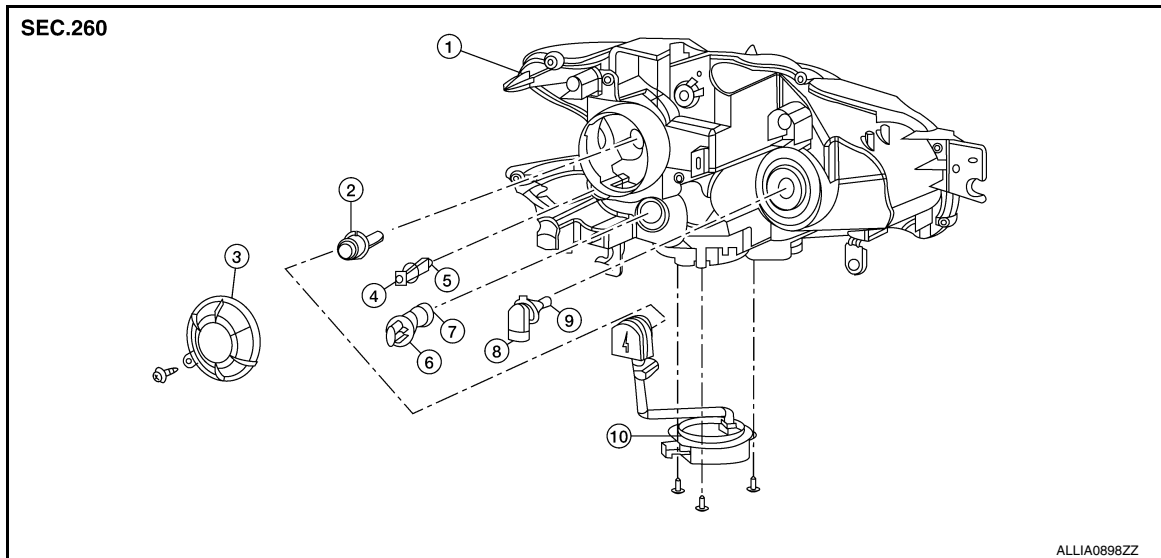
## UNIT DISASSEMBLY AND ASSEMBLY

### FRONT COMBINATION LAMP

#### Disassembly and Assembly

INFOID:000000009465291

#### EXPLODED VIEW



- |  |                                    |                                  |
|--|------------------------------------|----------------------------------|
| 1. Front combination lamp                  | 2. Xenon bulb                      | 3. Plastic cover                 |
| 4. Side marker lamp socket                 | 5. Side marker lamp bulb           | 6. Front turn signal lamp socket |
| 7. Front turn signal lamp bulb             | 8. Halogen bulb socket (high beam) | 9. Halogen bulb (high beam)      |
| 10. HID control unit and xenon bulb socket |                                    |                                  |

#### **CAUTION:**

**HID control unit and xenon bulb socket cannot be disassembled.**

#### DISASSEMBLY

1. Remove the screw from cover and rotate the plastic cover counterclockwise and unlock it.
2. Rotate the xenon bulb socket counterclockwise and unlock it.
3. Unlock the retaining spring and remove the xenon bulb.
4. Remove the HID control unit installation screws.
5. Remove the screw and disconnect the harness connector from the HID control unit.
6. Remove the xenon bulb socket from front combination lamp.
7. Rotate the halogen bulb socket counterclockwise and unlock it.
8. Remove the bulb from halogen bulb socket.
9. Rotate the front turn signal lamp socket counterclockwise and unlock it.
10. Remove the bulb from front turn signal lamp socket.
11. Rotate the front side marker lamp socket counterclockwise and unlock it.
12. Remove the bulb from front side marker lamp socket.

#### ASSEMBLY

Assembly is in the reverse order of disassembly.

#### **CAUTION:**

- Install HID control unit securely.
- After installing the bulb, install the plastic cover and the bulb socket securely for watertightness.



# REAR COMBINATION LAMP

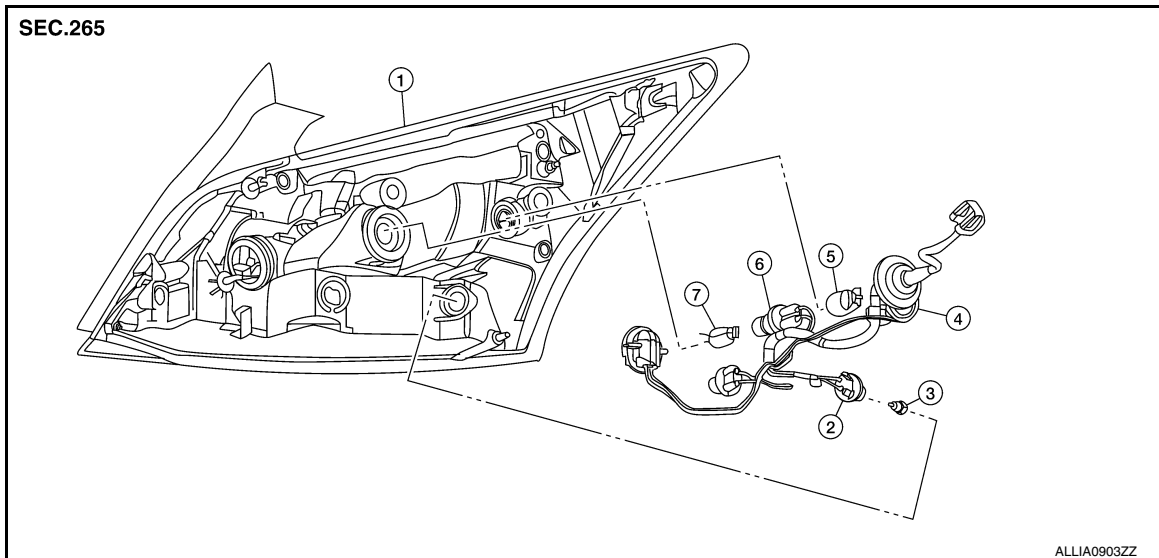
< UNIT DISASSEMBLY AND ASSEMBLY >

[XENON TYPE]

## REAR COMBINATION LAMP

### Disassembly and Assembly

INFOID:00000009465292



- |                                 |                                 |                               |
|---------------------------------|---------------------------------|-------------------------------|
| 1. Rear combination lamp        | 2. Rear side marker lamp socket | 3. Rear side marker lamp bulb |
| 4. Rear turn signal lamp socket | 5. Rear turn signal lamp bulb   | 6. Back-up lamp socket        |
| 7. Back-up lamp bulb            |                                 |                               |

#### DISASSEMBLY

1. Rotate the rear side marker lamp socket counterclockwise and unlock it.
2. Remove the bulb from rear side marker lamp socket.
3. Rotate the rear turn signal lamp socket counterclockwise and unlock it.
4. Remove the bulb from rear turn signal lamp socket.
5. Rotate the back-up lamp socket counterclockwise and unlock it.
6. Remove the bulb from back up lamp socket.

#### ASSEMBLY

Assembly is in the reverse order of disassembly.

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# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[XENON TYPE]

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Bulb Specifications

INFOID:000000009465293

| Item                         |                              | Wattage (W)* |
|------------------------------|------------------------------|--------------|
| Front combination lamp       | Headlamp (Xenon low beam)    | 35           |
|                              | Headlamp (Halogen high beam) | 65           |
|                              | Park/Turn lamp               | 28/8         |
|                              | Front side marker lamp       | 5            |
| Front fog lamp               |                              | 55           |
| Door mirror turn signal lamp |                              | —            |
| Rear combination lamp        | Stop lamp                    | —            |
|                              | Tail lamp                    | —            |
|                              | Rear turn signal lamp        | 21           |
|                              | Rear side marker lamp        | 5            |
|                              | Back-up lamp                 | 18           |
| License plate lamp           |                              | 5            |
| High-mounted stop lamp       | Without rear spoiler         | —            |
|                              | With rear spoiler            | —            |

\*: Always check with the Parts Department for the latest parts information.

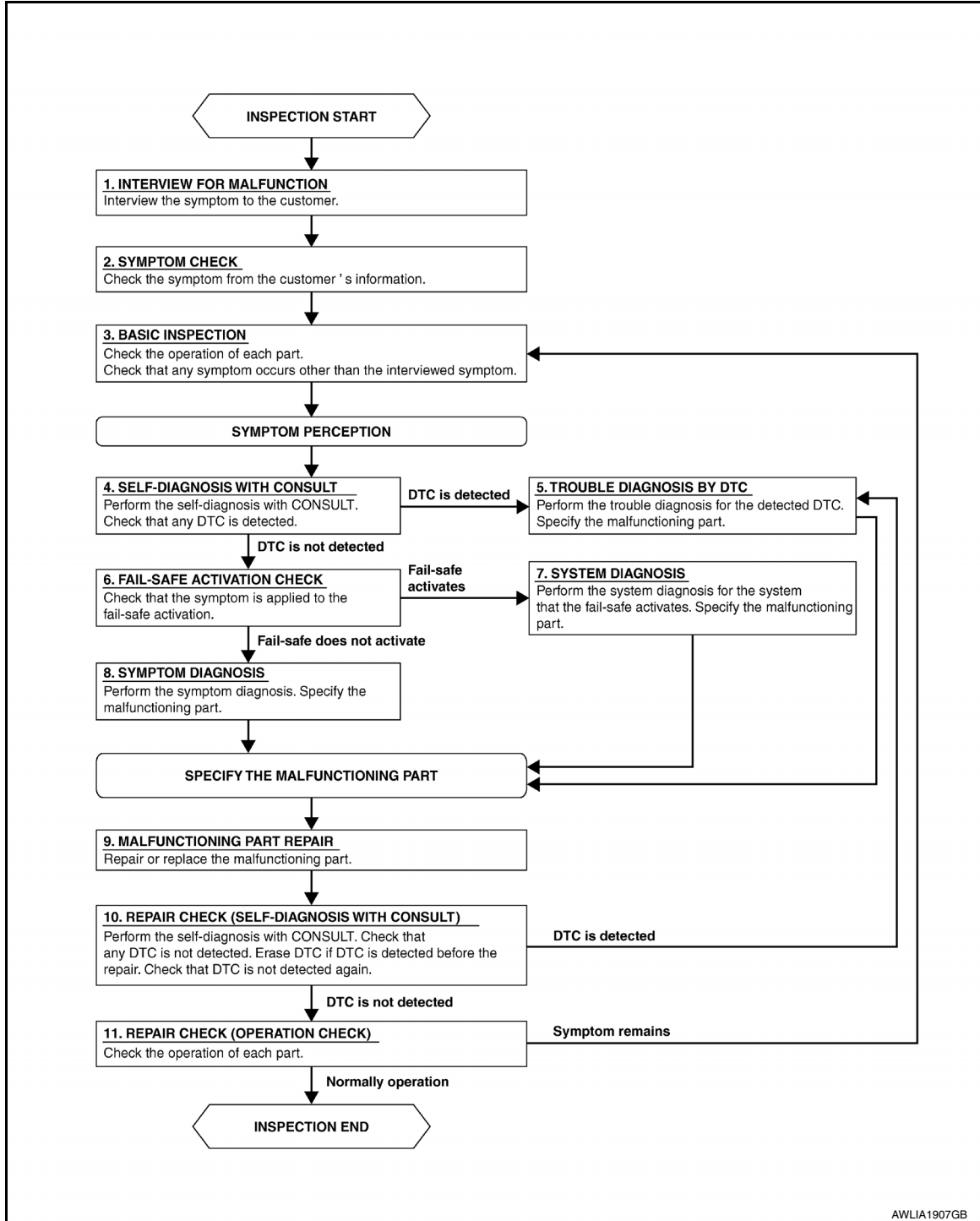
**BASIC INSPECTION**

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000010051020

OVERALL SEQUENCE



DETAILED FLOW

**1. INTERVIEW FOR MALFUNCTION**

Find out what the customer's concerns are.

# DIAGNOSIS AND REPAIR WORKFLOW

[HALOGEN TYPE]

< BASIC INSPECTION >

---

>> GO TO 2.

## 2. SYMPTOM CHECK

---

Verify the symptom from the customer's information.

>> GO TO 3.

## 3. BASIC INSPECTION

---

Check the operation of each part. Check if any concerns occur other than those mentioned in the customer interview.

>> GO TO 4.

## 4. SELF-DIAGNOSIS WITH CONSULT

---

Perform the self diagnosis with CONSULT. Check if any DTC is detected.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

## 5. TROUBLE DIAGNOSIS BY DTC

---

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9.

## 6. FAIL-SAFE ACTIVATION CHECK

---

Determine if the customer's concern is related to fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7.

NO >> GO TO 8.

## 7. SYSTEM DIAGNOSIS

---

Perform the system diagnosis for the system in which the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9.

## 8. SYMPTOM DIAGNOSIS

---

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

## 9. MALFUNCTION PART REPAIR

---

Repair or replace the malfunctioning part.

>> GO TO 10.

## 10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

---

Perform the self diagnosis with CONSULT. Verify that no DTCs are detected. Erase all DTCs which were detected prior to the repair. Perform the self diagnosis with CONSULT again. Verify that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 11.

## 11. REPAIR CHECK (OPERATION CHECK)

---

Check the operation of each part.

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN TYPE]

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 3.

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# HEADLAMP

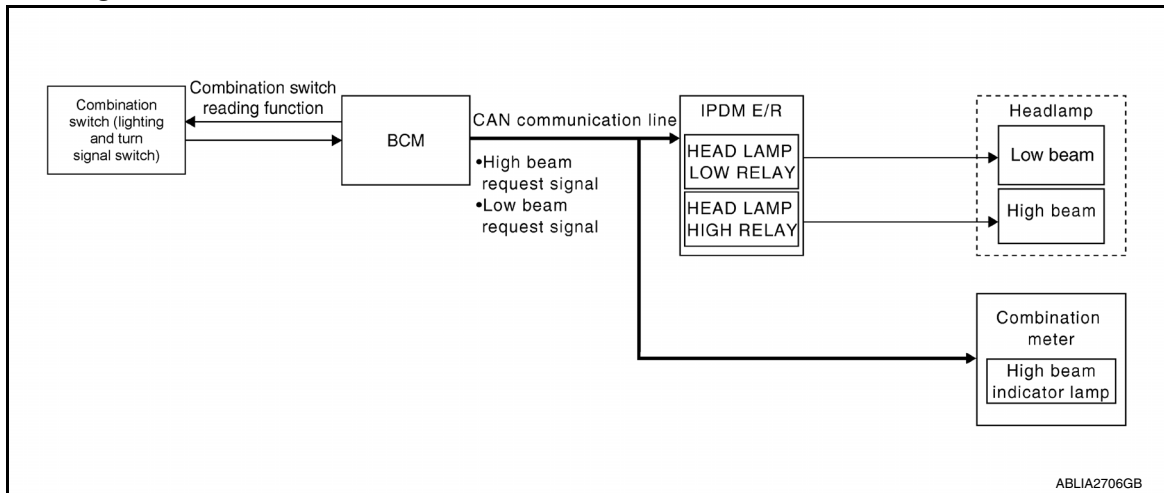
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## SYSTEM DESCRIPTION

### HEADLAMP

#### System Diagram



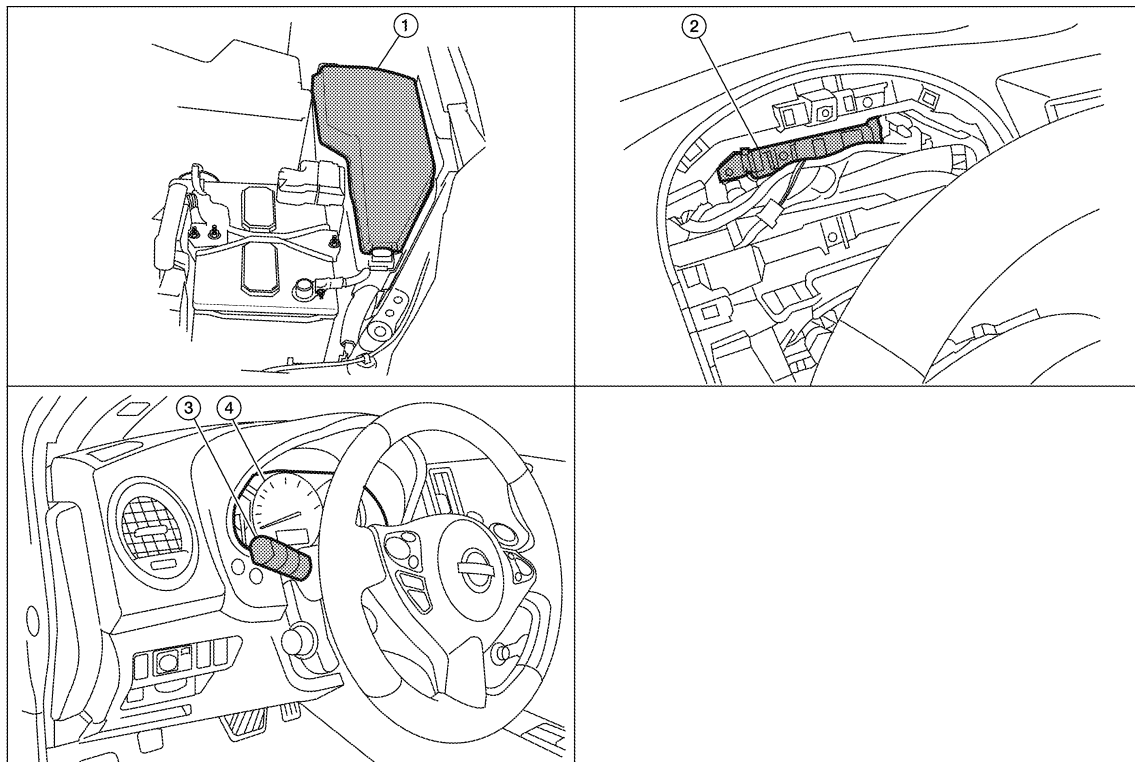
#### System Description

INFOID:0000000010051022

Control of the headlamp system operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the lighting switch is placed in the 2nd position, the BCM (body control module) receives input requesting the headlamps and park lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the headlamp high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

#### Component Parts Location

INFOID:0000000010051023



# HEADLAMP

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

1. IPDM E/R E17, E18, E200
2. BCM M16, M17, M18, M19 (view with combination meter removed)
3. Combination switch (lighting and turn signal switch) M28
4. Combination meter M24

A

## Component Description

INFOID:000000010051024

B

### LOW BEAM OPERATION

When the lighting switch is in 2ND position, the BCM receives input requesting the headlamps to illuminate. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the headlamp low relay coil which supplies power to the low beam headlamps.

C

### HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the lighting switch in the 2ND position and placed in HIGH position, the BCM receives input requesting the headlamp high beams to illuminate. The flash-to-pass feature can be used any time and also sends a signal to the BCM. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the combination meter controls the ON/OFF status of the HIGH BEAM indicator. The CPU of the IPDM E/R controls the headlamp high relay coil which supplies power to the high beam headlamps.

D

The combination meter receives a high beam request signal (ON) through the CAN communication lines and turns the high beam indicator lamp ON.

E

F

### EXTERIOR LAMP BATTERY SAVER CONTROL

With the lighting switch (combination switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to [EXL-193. "BATTERY SAVER : CONSULT Function \(BCM - BATTERY SAVER\)"](#).

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# DAYTIME RUNNING LIGHT SYSTEM

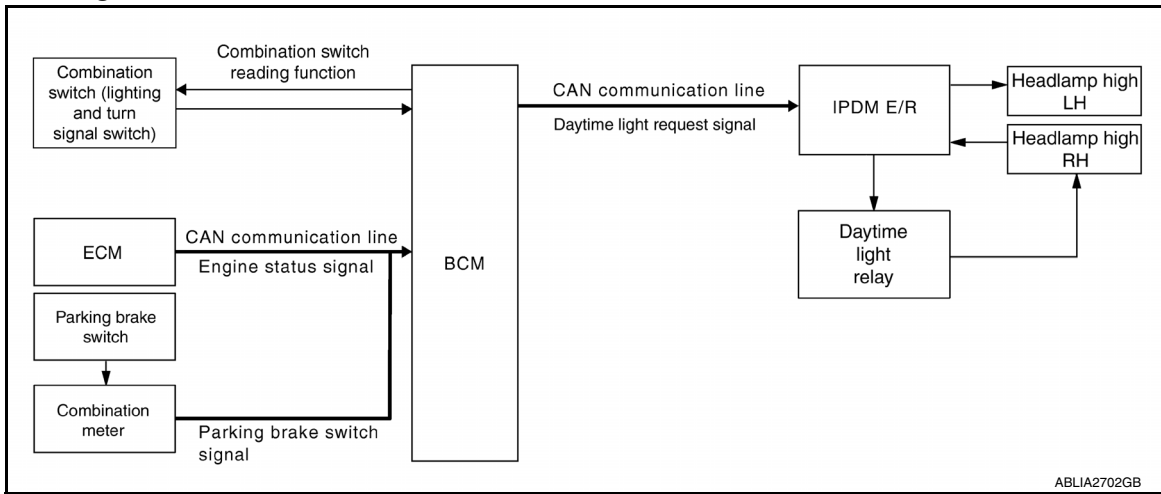
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## DAYTIME RUNNING LIGHT SYSTEM

### System Diagram

INFOID:0000000010051025



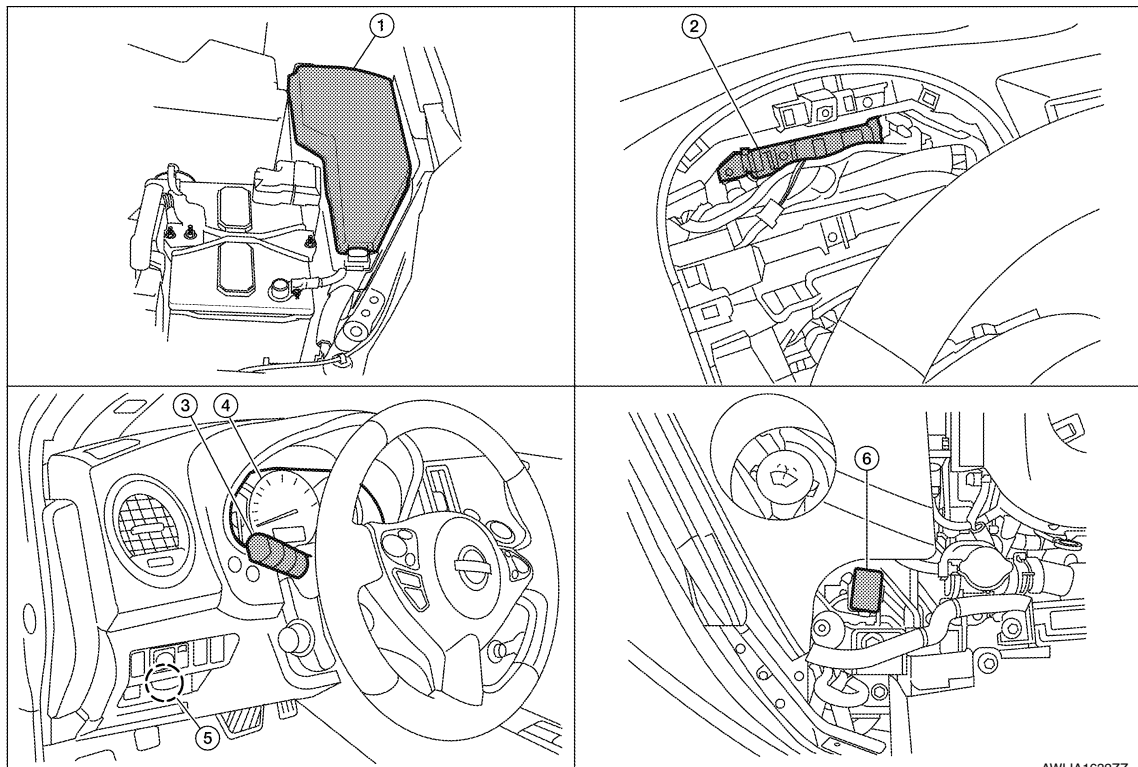
### System Description

INFOID:0000000010051026

The headlamp system for Canada vehicles is equipped with a daytime light relay that activates the high beam headlamps at approximately half illumination whenever the engine is running. If the parking brake is depressed before the engine is started, the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is depressed.

### Component Parts Location

INFOID:0000000010051027



AWLIA1692ZZ

- |                                  |   |   |
|----------------------------------|---|---|
| 1. IPDM E/R E17, E18, E200, E201 | 2. BCM M16, M17, M18, M19 (view with combination meter removed) | 3. Combination switch (lighting and turn signal switch) M28 |
| 4. Combination meter M24         | 5. Parking brake switch E35                                     | 6. Daytime light relay E228                                 |



# DAYTIME RUNNING LIGHT SYSTEM

[HALOGEN TYPE]

< SYSTEM DESCRIPTION >

INFOID:0000000110051028

## Component Description

After starting the engine with the parking brake released and the lighting switch in the OFF or 1ST position, the headlamp high beam automatically turns on. With the lighting switch in the 2nd position or with autolamps ON, the headlamps function the same as conventional light systems.

## OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay which in turn, provides power to the ground side of the RH high beam lamp. Power flows backward through the RH high beam lamp to the IPDM E/R, through the high beam fuses, through the LH high beam lamp circuit to the LH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

| Engine                                   |           | With engine stopped |    |   |     |    |   |     |    |   | With engine running |    |   |     |    |   |     |    |   |
|--|-----------|---------------------|----|---|-----|----|---|-----|----|---|---------------------|----|---|-----|----|---|-----|----|---|
| Lighting switch                          |           | OFF                 |    |   | 1ST |    |   | 2ND |    |   | OFF                 |    |   | 1ST |    |   | 2ND |    |   |
|  |           | Hi                  | Lo | P | Hi  | Lo | P | Hi  | Lo | P | Hi                  | Lo | P | Hi  | Lo | P | Hi  | Lo | P |
| Headlamp                                 | High beam | -                   | -  | - | -   | -  | x | x   | -  | x | ●*                  | ●* | x | ●*  | ●* | x | x   | -  | x |
|  | Low beam  | -                   | -  | - | -   | -  | x | x   | x  | x | -                   | -  | x | -   | -  | x | x   | x  | x |
| Tail lamp                                |           | -                   | -  | - | x   | x  | x | x   | x  | x | -                   | -  | - | x   | x  | x | x   | x  | x |
| License and instrument illumination lamp |           | -                   | -  | - | x   | x  | x | x   | x  | x | -                   | -  | - | x   | x  | x | x   | x  | x |

- Hi: "HIGH BEAM" position
- Lo: "LOW BEAM" position
- P: "FLASH TO PASS" position
- x: Lamp "ON"
- -: Lamp "OFF"
- ●: Lamp dims. (Added functions)
- \*: When starting the engine with the parking brake released, the daytime lights will operate.  
When starting the engine with the parking brake depressed, the daytime lights will not operate.

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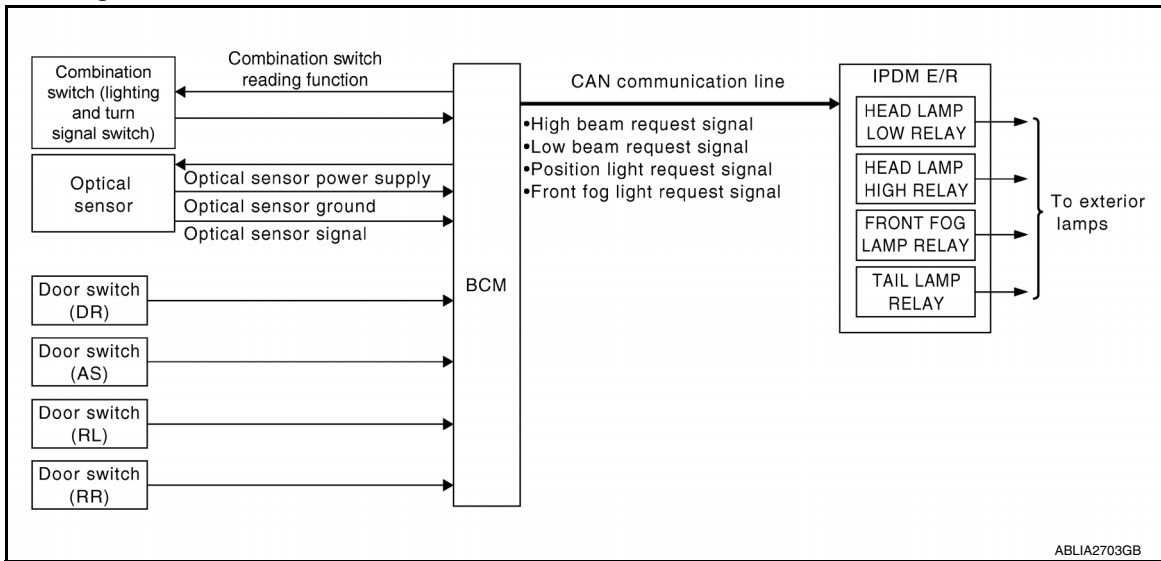
EXL

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## AUTO LIGHT SYSTEM

### System Diagram

INFOID:000000010051029



### System Description

INFOID:000000010051030

- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail, front fog lamps and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness of 800 to 2,500 lux, converts light (lux) to voltage, and then sends the optical sensor signal to BCM.

### OUTLINE

The auto light control system has an optical sensor that detects outside brightness. When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, refer to [EXL-191, "HEADLAMP : CONSULT Function \(BCM - HEAD LAMP\)"](#).

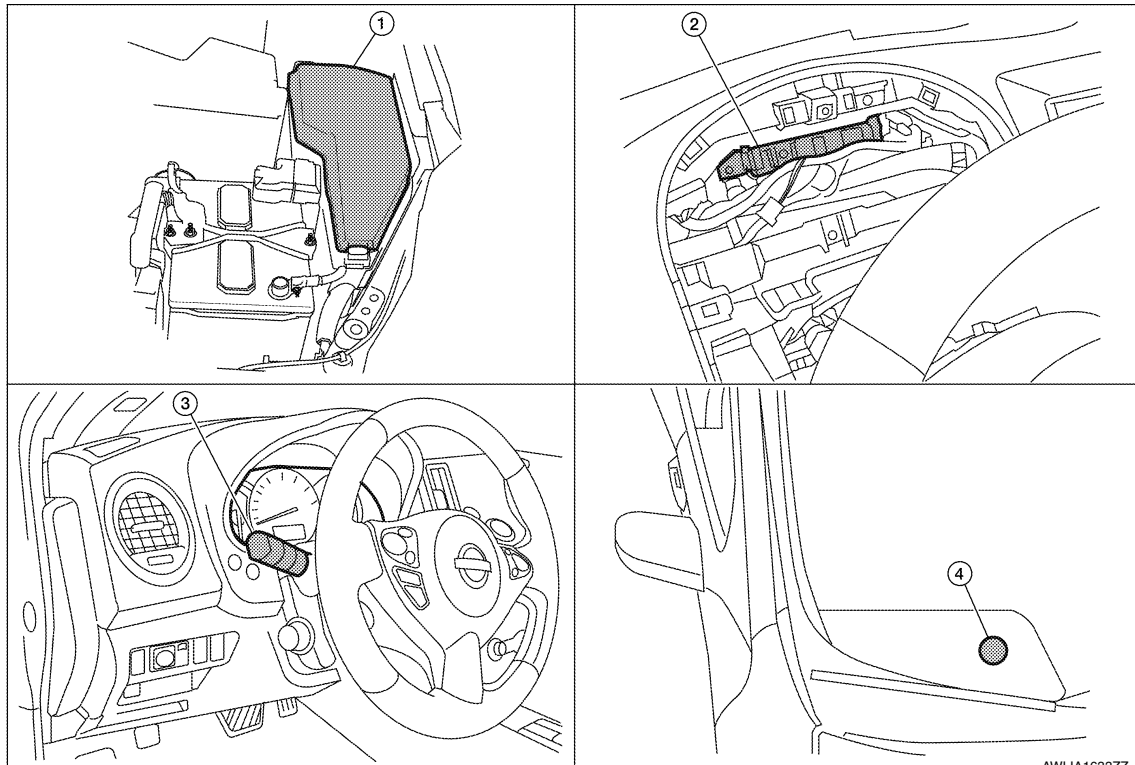
# AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## Component Parts Location

INFOID:000000010051031



1. IPDM E/R E17, E18, E20
2. BCM M16, M17, M18, M19, M21 (view with combination meter removed)
3. Combination switch (lighting and turn signal switch) M28
4. Optical sensor M66

## Component Description

INFOID:000000010051032

## AUTO LIGHT OPERATION

### Applicable lamps

- Low beam headlamp
- Parking, license plate and tail lamps
- High beam headlamp (with the lighting switch in HIGH BEAM position)
- Front fog lamp (with the lighting switch in front fog lamp ON position)

When the lighting switch is in AUTO position with the ignition switch in ON position, BCM detects the AUTO LIGHT (ON) by BCM combination switch (lighting and turn signal switch) reading function. BCM automatically turns ON/OFF the applicable lamps according to ambient brightness.

### NOTE:

Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT. Refer to [EXL-191, "HEADLAMP : CONSULT Function \(BCM - HEAD LAMP\)"](#).

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# FRONT FOG LAMP

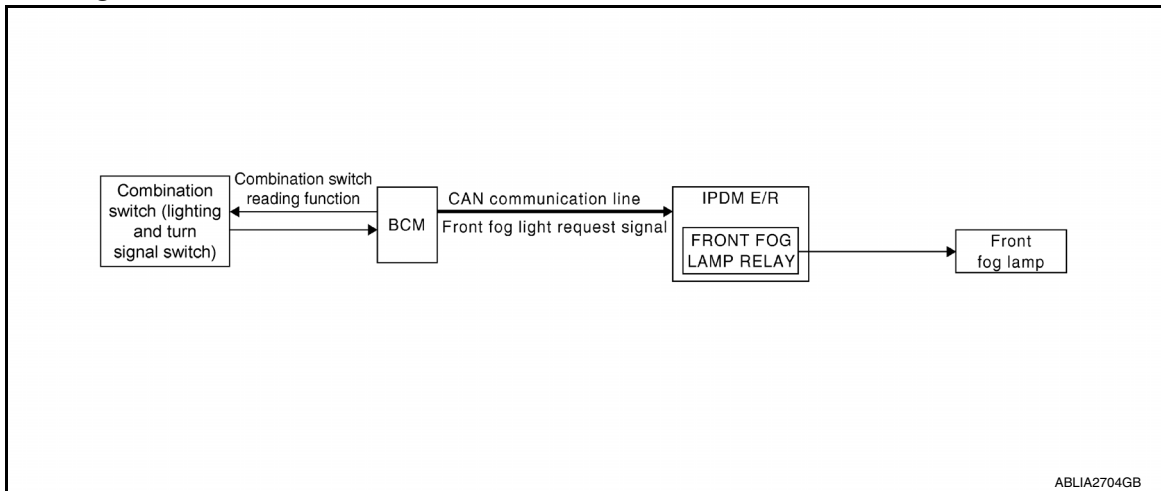
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## FRONT FOG LAMP

### System Diagram

INFOID:0000000010051033



ABLIA2704GB

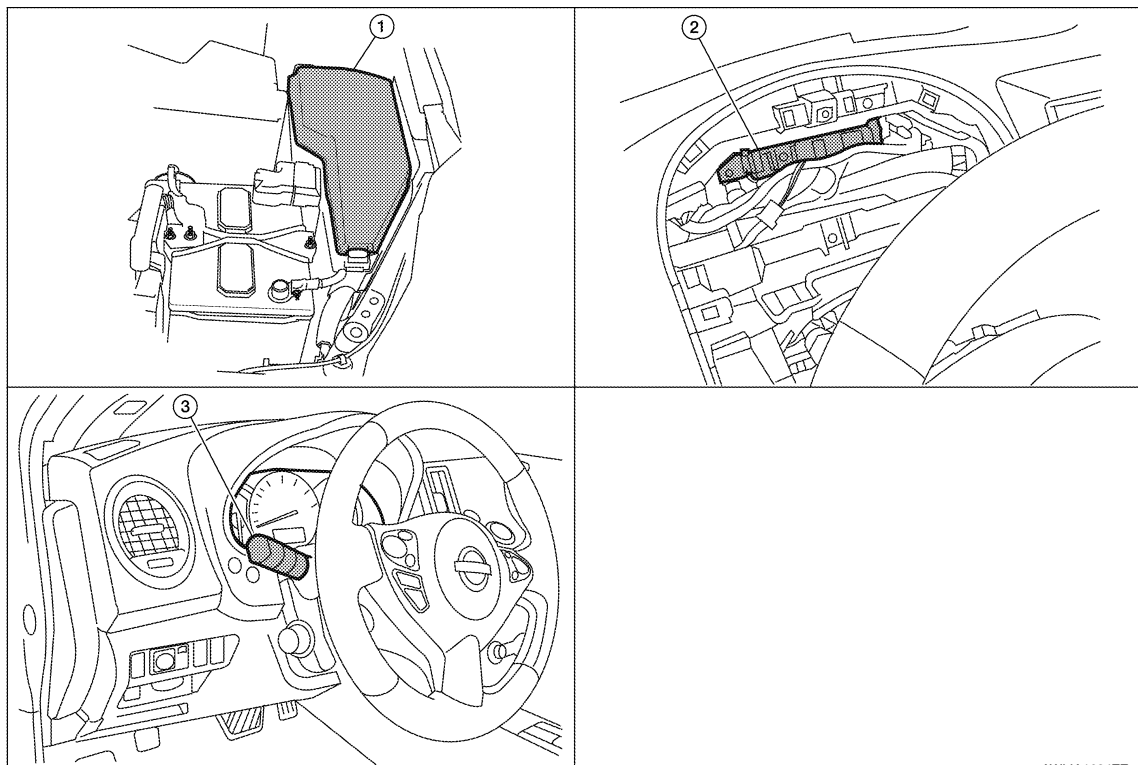
### System Description

INFOID:0000000010051034

- BCM (Body Control Module) controls front fog lamp operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates front fog lamp according to CAN communication signals from BCM.
- Combination meter operates front fog lamp indicator according to inputs via the CAN communication lines.

### Component Parts Location

INFOID:0000000010051035



AWLIA1634ZZ

1. IPDM E/R E17, E18, E200

2. BCM M16, M17, M18, M19 (view with combination meter removed)

3. Combination switch (lighting and turn signal switch) M28

# FRONT FOG LAMP

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## Component Description

INFOID:000000010051036

### FRONT FOG LAMP OPERATION

When the lighting switch is in front fog lamp ON position and also in 1ST or 2ND position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal through the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.

The combination meter also receives a front fog lamp request ON signal through the CAN communication lines at which time it turns the front fog indicator ON.

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**EXL**

# TURN SIGNAL AND HAZARD WARNING LAMPS

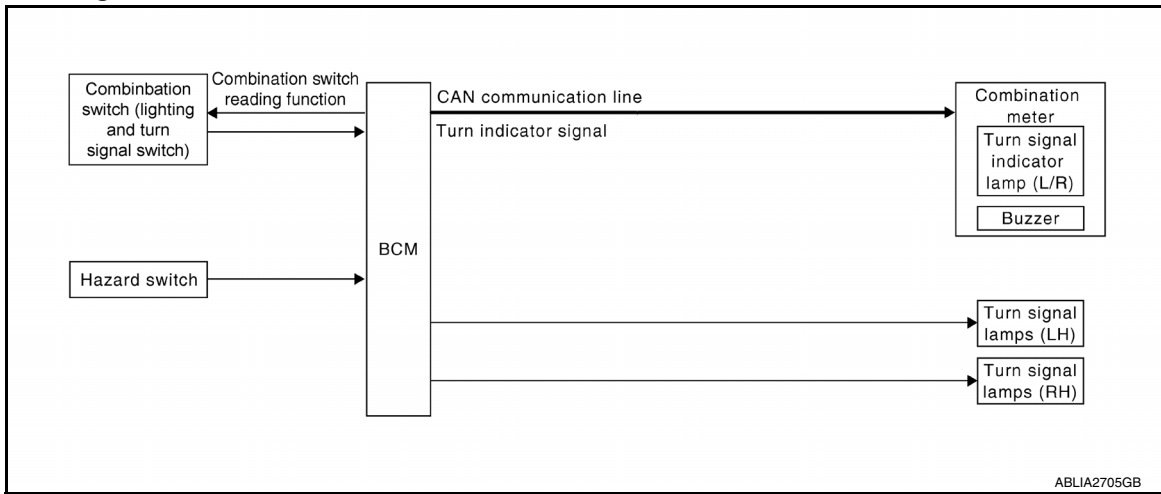
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## TURN SIGNAL AND HAZARD WARNING LAMPS

### System Diagram

INFOID:0000000010051037



ABLIA2705GB

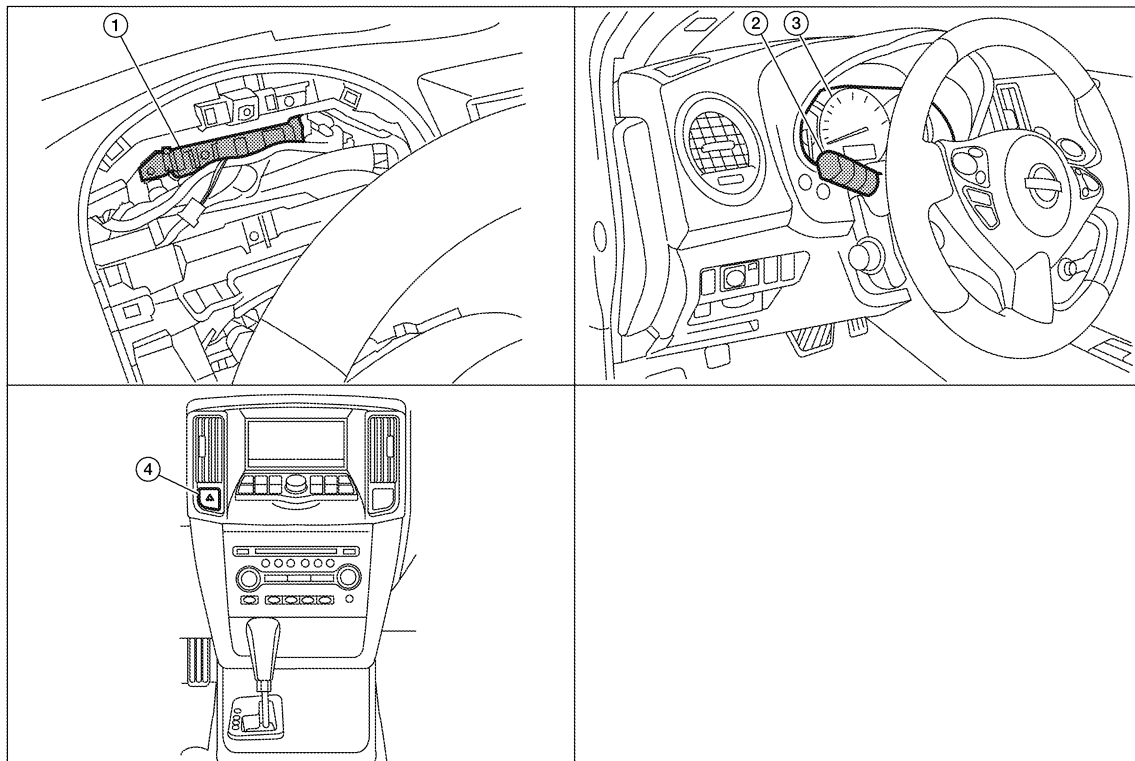
### System Description

INFOID:0000000010051038

- BCM (Body Control Module) controls turn signal lamp (RH and LH) and hazard warning lamp operation.
- Combination meter operates turn signal indicator (RH and LH) according to CAN communication signals from BCM.

### Component Parts Location

INFOID:0000000010051039



AWLIA1635ZZ

1. BCM M16, M17, M18, M19 (view with combination meter removed)
2. Combination switch (lighting and turn signal switch) M28
3. Combination meter M24
4. Hazard switch M54

# TURN SIGNAL AND HAZARD WARNING LAMPS

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## Component Description

INFOID:000000010051040

### TURN SIGNAL OPERATION

When the turn signal switch is in LH or RH position with the ignition switch in ON position, the BCM detects the TURN RH or TURN LH ON request. The BCM outputs the flasher output signal to the respective turn signal lamp. The BCM sends a turn signal indicator ON request through the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

### HAZARD LAMP OPERATION

When the hazard switch is in ON position, the BCM detects the hazard switch signal ON. The BCM outputs the flasher output signal (right and left). The BCM sends a hazard indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

### REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits Intelligent Key signal to BCM, then BCM controls hazard lamps. Refer to [SEC-19, "System Description"](#).

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# PARKING, LICENSE PLATE AND TAIL LAMPS

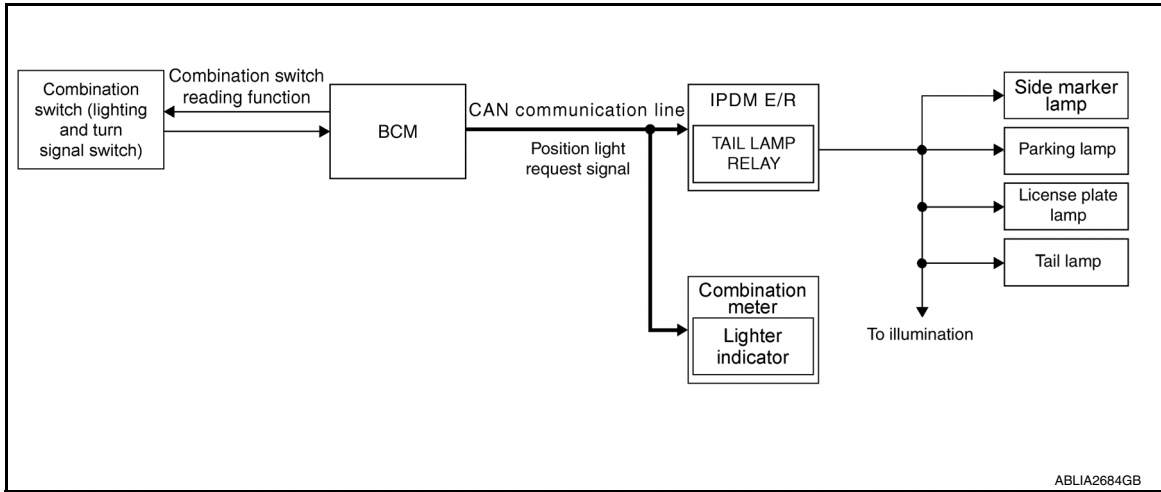
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS

### System Diagram

INFOID:000000010051041



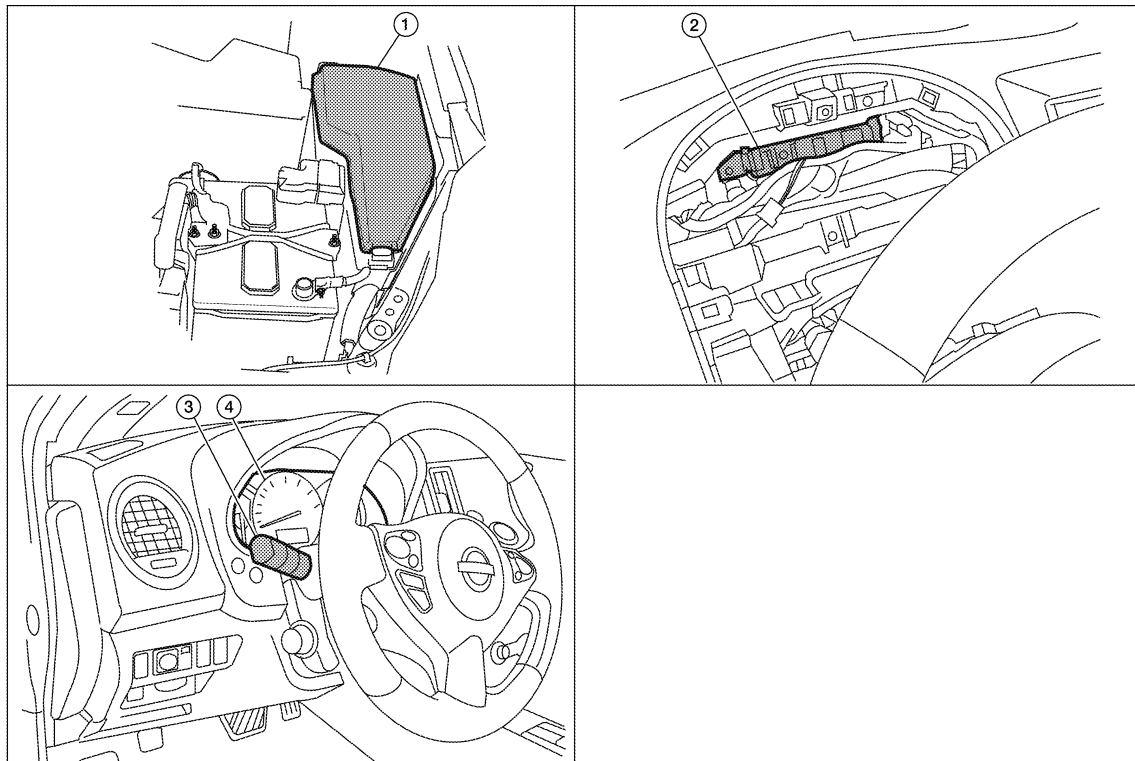
### System Description

INFOID:000000010051042

- BCM (Body Control Module) controls parking, license plate and tail lamps operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate and tail lamps according to CAN communication signals from BCM.

### Component Parts Location

INFOID:000000010051043



AWLIA1631ZZ

1. IPDM E/R E17, E18, E201
4. Combination Meter M24

2. BCM M16, M17, M18, M19 (view with combination meter removed)

3. Combination switch (lighting and turn signal switch) M28



# PARKING, LICENSE PLATE AND TAIL LAMPS

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## Component Description

INFOID:000000010051044

### PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1ST position, BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request through the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to [EXL-193. "BATTERY SAVER : CONSULT Function \(BCM - BATTERY SAVER\)"](#).

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# COMBINATION SWITCH READING SYSTEM

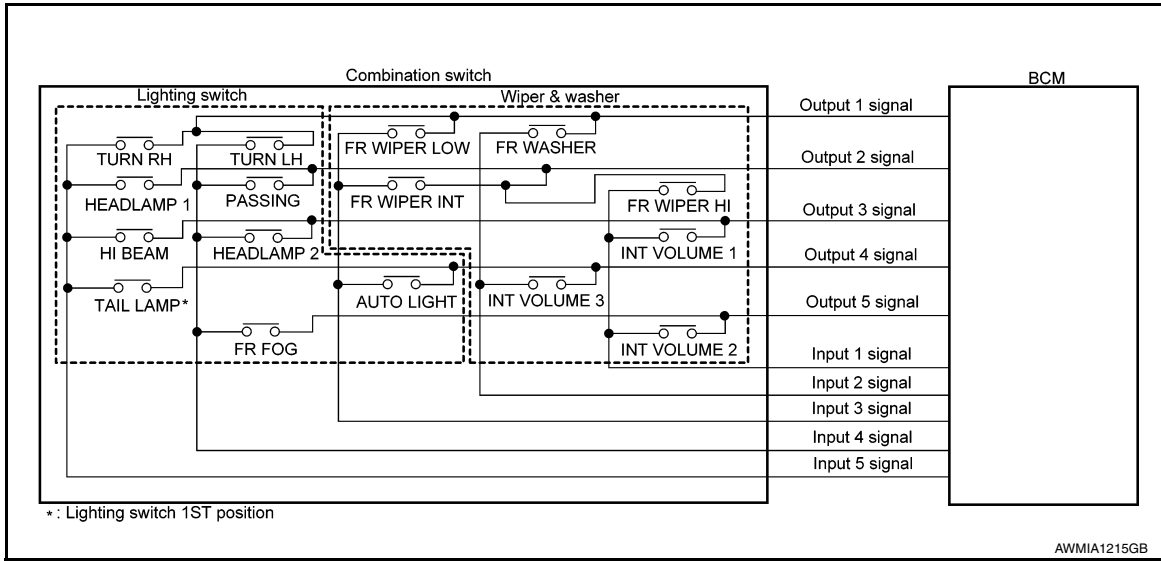
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## COMBINATION SWITCH READING SYSTEM

### System Diagram

INFOID:000000010069909



### System Description

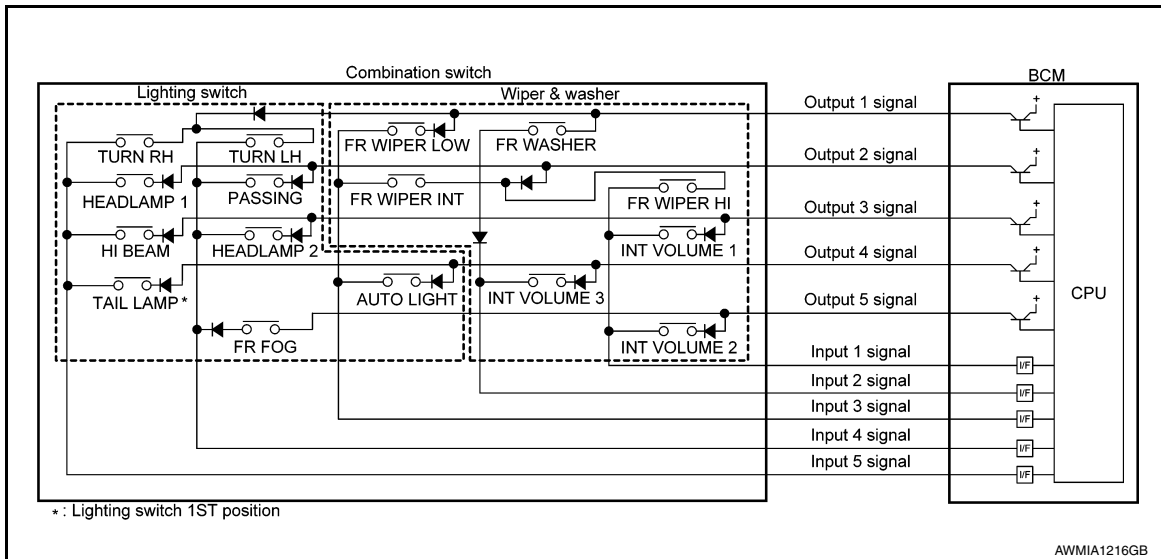
INFOID:000000010069910

#### OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 - 5) and 5 input terminals (INPUT 1 - 5) and reads a maximum of 20 switch states.

#### COMBINATION SWITCH MATRIX

##### Combination switch circuit



#### Combination switch INPUT-OUTPUT system list

| System   | INPUT 1      | INPUT 2   | INPUT 3      | INPUT 4    | INPUT 5    |
|----------|--------------|-----------|--------------|------------|------------|
| OUTPUT 1 | —            | FR WASHER | FR WIPER LOW | TURN LH    | TURN RH    |
| OUTPUT 2 | FR WIPER HI  | —         | FR WIPER INT | PASSING    | HEADLAMP 1 |
| OUTPUT 3 | INT VOLUME 1 | —         | —            | HEADLAMP 2 | HI BEAM    |

# COMBINATION SWITCH READING SYSTEM

< SYSTEM DESCRIPTION >

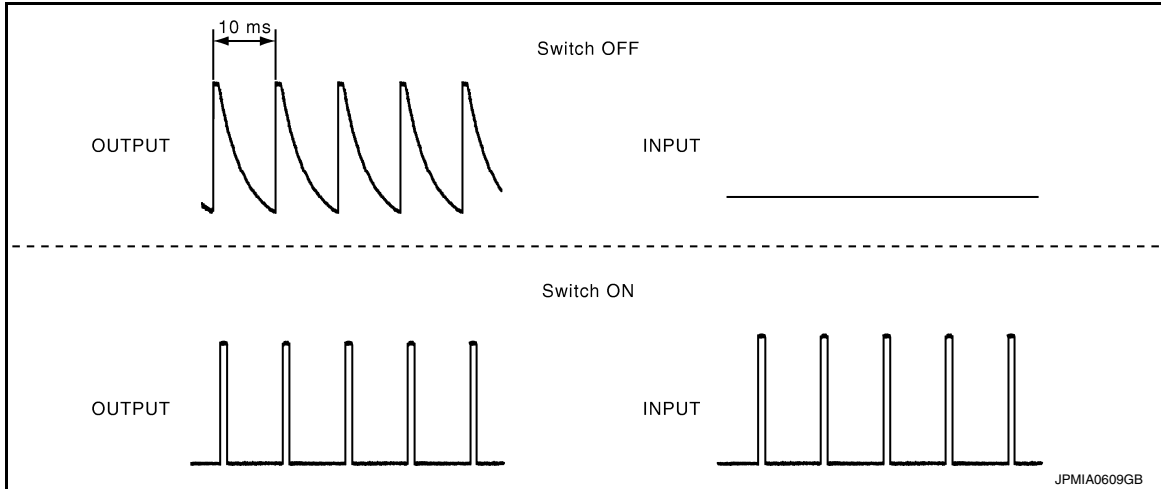
[HALOGEN TYPE]

| System   | INPUT 1      | INPUT 2      | INPUT 3    | INPUT 4 | INPUT 5   |
|----------|--------------|--------------|------------|---------|-----------|
| OUTPUT 4 | —            | INT VOLUME 3 | AUTO LIGHT | —       | TAIL LAMP |
| OUTPUT 5 | INT VOLUME 2 | —            | —          | FR FOG  | —         |

## COMBINATION SWITCH READING FUNCTION

Description

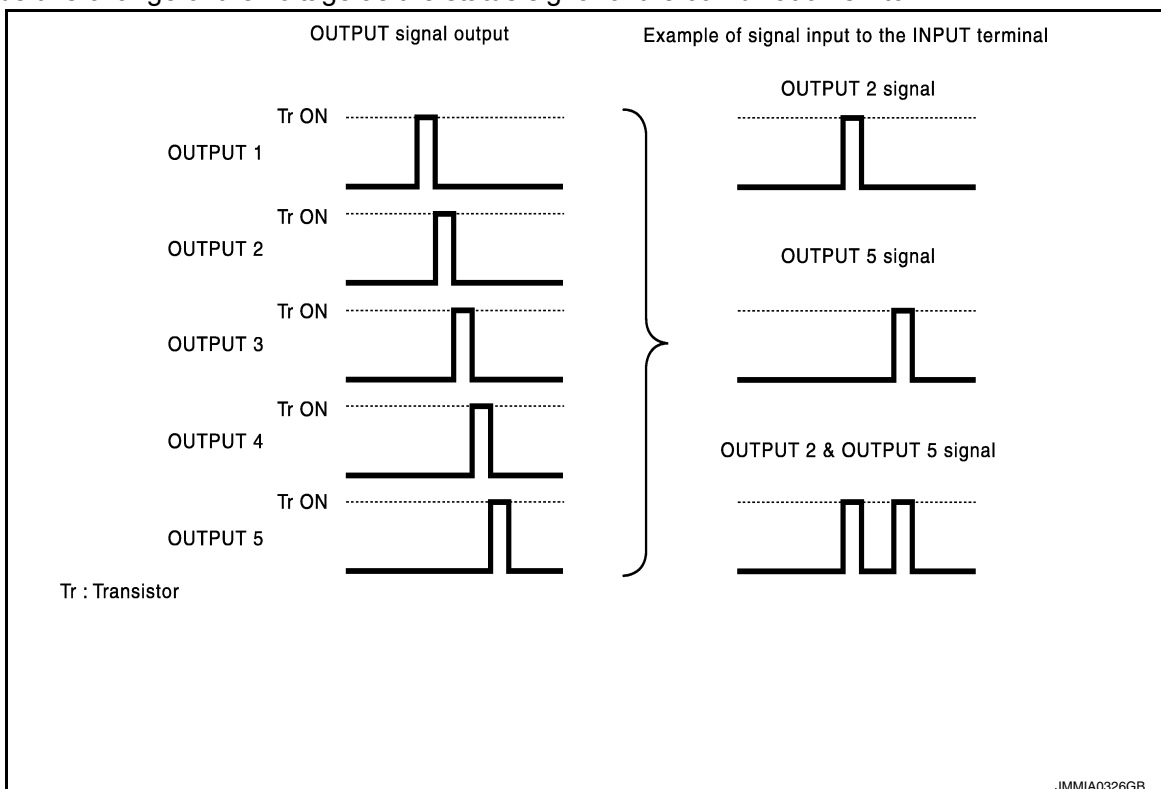
- BCM reads the status of the combination switch at 10ms intervals normally.



**NOTE:**

BCM reads the status of the combination switch at 60ms intervals when BCM is controlled at low power consumption mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 2 →3 →4 →5 and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.



Operation Example

Revision: August 2013

**EXL-187**

2014 Maxima NAM

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EXL

# COMBINATION SWITCH READING SYSTEM

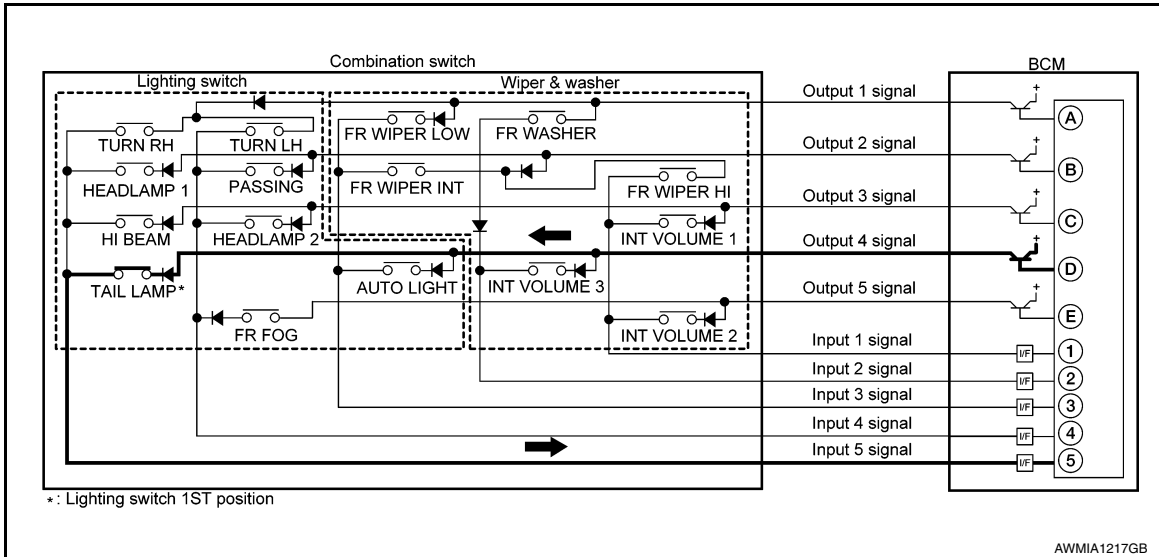
[HALOGEN TYPE]

## < SYSTEM DESCRIPTION >

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

Example 1: When a switch (TAIL LAMP) is turned ON

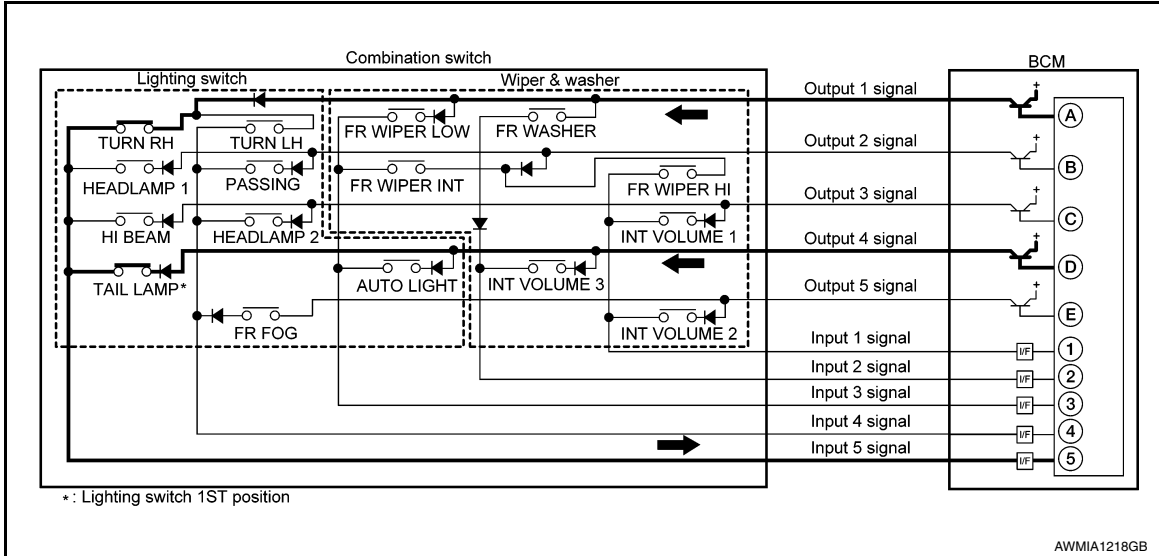
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP is turned ON.



- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TURN RH, TAIL LAMP) are turned ON

- The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

## WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION)

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

# COMBINATION SWITCH READING SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

| Wiper intermittent dial position | Intermittent operation delay interval | INT VOLUME switch ON/OFF status |                     |                     |
|----------------------------------|---------------------------------------|---------------------------------|---------------------|---------------------|
|                                  |                                       | INT VOLUME 1 switch             | INT VOLUME 2 switch | INT VOLUME 3 switch |
| 1                                | Short<br>↑                            | ON                              | ON                  | ON                  |
| 2                                |                                       | ON                              | ON                  | OFF                 |
| 3                                |                                       | ON                              | OFF                 | OFF                 |
| 4                                |                                       | OFF                             | OFF                 | OFF                 |
| 5                                | ↓<br>Long                             | OFF                             | OFF                 | ON                  |
| 6                                |                                       | OFF                             | ON                  | ON                  |
| 7                                |                                       | OFF                             | ON                  | OFF                 |

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EXL

# DIAGNOSIS SYSTEM (BCM)

[HALOGEN TYPE]

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010070051

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

### SYSTEM APPLICATION

BCM can perform the following functions.

| System                               | Sub System           | Direct Diagnostic Mode |                        |              |             |              |               |                       |
|--------------------------------------|----------------------|------------------------|------------------------|--------------|-------------|--------------|---------------|-----------------------|
|                                      |                      | Ecu Identification     | Self Diagnostic Result | Data Monitor | Active Test | Work support | Configuration | CAN Diag Support Mntr |
| Door lock                            | DOOR LOCK            |                        | ×                      | ×            | ×           | ×            |               |                       |
| Rear window defogger                 | REAR DEFOGGER        |                        |                        | ×            | ×           |              |               |                       |
| Warning chime                        | BUZZER               |                        |                        | ×            | ×           |              |               |                       |
| Interior room lamp timer             | INT LAMP             |                        |                        | ×            | ×           | ×            |               |                       |
| Exterior lamp                        | HEADLAMP             |                        |                        | ×            | ×           | ×            |               |                       |
| Wiper and washer                     | WIPER                |                        |                        | ×            | ×           | ×            |               |                       |
| Turn signal and hazard warning lamps | FLASHER              |                        |                        | ×            | ×           | ×            |               |                       |
| Intelligent Key system               | INTELLIGENT KEY      |                        |                        | ×            | ×           | ×            |               |                       |
| Combination switch                   | COMB SW              |                        |                        | ×            |             |              |               |                       |
| BCM                                  | BCM                  | ×                      | ×                      |              |             | ×            | ×             | ×                     |
| Immobilizer                          | IMMU                 |                        | ×                      | ×            | ×           |              |               |                       |
| Interior room lamp battery saver     | BATTERY SAVER        |                        |                        | ×            | ×           | ×            |               |                       |
| Trunk open                           | TRUNK                |                        |                        | ×            | ×           |              |               |                       |
| Vehicle security system              | THEFT ALM            |                        |                        | ×            | ×           | ×            |               |                       |
| RAP system                           | RETAINED PWR         |                        |                        | ×            |             |              |               |                       |
| Signal buffer system                 | SIGNAL BUFFER        |                        |                        | ×            | ×           |              |               |                       |
| TPMS                                 | AIR PRESSURE MONITOR |                        | ×                      | ×            | ×           | ×            |               |                       |

### HEADLAMP

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:000000010070052

### DATA MONITOR

| Monitor Item [Unit]                 | Description  |
|-------------------------------------|--|
| PUSH SW [On/Off]                    | Indicates condition of push button ignition switch                         |
| ENGINE STATE [Stop/Stall/Crank/Run] | Indicates engine status received from ECM on CAN communication line        |
| VEH SPEED 1 [km/h]                  | Indicates vehicle speed signal received from ABS on CAN communication line |
| KEY SW -SLOT [On/Off]               | Indicates condition of key slot  |
| TURN SIGNAL R [On/Off]              | Indicates condition of combination switch                                  |
| TURN SIGNAL L [On/Off]              |  |
| TAIL LAMP SW [On/Off]               |  |
| HI BEAM SW [On/Off]                 |  |
| HEAD LAMP SW 1 [On/Off]             |  |
| HEAD LAMP SW 2 [On/Off]             |  |
| PASSING SW [On/Off]                 |  |
| AUTO LIGHT SW [On/Off]              |  |
| FR FOG SW [On/Off]                  |  |
| DOOR SW-DR [On/Off]                 |  |
| DOOR SW-AS [On/Off]                 | Indicates condition of front door switch RH                                |
| DOOR SW-RR [On/Off]                 | Indicates condition of rear door switch RH                                 |
| DOOR SW-RL [On/Off]                 | Indicates condition of rear door switch LH                                 |
| DOOR SW-BK [On/Off]                 | Indicates condition of trunk switch  |
| OPTICAL SENSOR [V]                  | Indicates voltage signal from optical sensor                               |

### ACTIVE TEST

| Test Item             | Description   |
|-----------------------|---|
| TAIL LAMP             | This test is able to check tail lamp operation [On/Off].                      |
| HEAD LAMP             | This test is able to check head lamp operation [Hi/Low/Off].                  |
| FR FOG LAMP           | This test is able to check front fog lamp operation [On/Off].                 |
| DAYTIME RUNNING LIGHT | This test is able to check daytime running light operation [LH/RH/Off].       |
| ILL DIM SIGNAL        | This test is able to check head lamp illumination dimming operation [On/Off]. |

### WORK SUPPORT

| Support Item           | Setting | Description  |
|------------------------|---------|--|
| CUSTOM A/LIGHT SETTING | MODE 4  | Less sensitive setting than normal setting (Turns ON later than normal operation.)   |
|                        | MODE 3  | More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)                   |
|                        | MODE 2  | More sensitive setting than normal setting (Turns ON earlier than normal operation.) |
|                        | MODE 1* | Normal   |
| BATTERY SAVER SET      | On*     | Exterior lamp battery saver function ON  |
|                        | Off     | Exterior lamp battery saver function OFF   |

# DIAGNOSIS SYSTEM (BCM)

[HALOGEN TYPE]

< SYSTEM DESCRIPTION >

| Support Item  | Setting |          | Description  |
|---------------|---------|----------|--|
| ILL DELAY SET | MODE 8  | 180 sec. | Sets delay timer function operation time<br>(All doors closed) |
|               | MODE 7  | 150 sec. |  |
|               | MODE 6  | 120 sec. |  |
|               | MODE 4  | 60 sec.  |  |
|               | MODE 5  | 90 sec.  |  |
|               | MODE 3  | 30 sec.  |  |
|               | MODE 2  | OFF      |  |
|               | MODE 1* | 45 sec.  |  |

\* : Initial setting

## FLASHER

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

INFOID:0000000010070053

#### DATA MONITOR

| Monitor Item [Unit]    | Description   |
|------------------------|---|
| REQ SW -DR [On/Off]    | Indicates condition of door request switch LH                     |
| REQ SW -AS [On/Off]    | Indicates condition of door request switch RH                     |
| PUSH SW [On/Off]       | Indicates condition of push button ignition switch                |
| TURN SIGNAL R [On/Off] | Indicates condition of turn signal function of combination switch |
| TURN SIGNAL L [On/Off] |   |
| HAZARD SW [On/Off]     | Indicates condition of hazard switch                              |
| RKE-LOCK [On/Off]      | Indicates condition of lock signal from Intelligent Key           |
| RKE-UNLOCK [On/Off]    | Indicates condition of unlock signal from Intelligent Key         |
| RKE-PANIC [On/Off]     | Indicates condition of panic alarm signal from Intelligent Key    |

#### ACTIVE TEST

| Test Item | Description  |
|-----------|--|
| FLASHER   | This test is able to check turn signal lamp operation [Off/LH/RH]. |

#### WORK SUPPORT

| Support Item       | Setting      | Description   |
|--------------------|--------------|---|
| HAZARD ANSWER BACK | Lock/Unlock* | Hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key.    |
|                    | Unlock Only  | Hazard warning lamp activation when doors are unlocked with the Intelligent Key.              |
|                    | Lock Only    | Hazard warning lamp activation when doors are locked with the Intelligent Key.                |
|                    | Off          | No hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key. |

\* : Initial setting

## COMB SW

### COMB SW : CONSULT Function (BCM-COMB SW)

INFOID:0000000010070054

#### DATA MONITOR



# DIAGNOSIS SYSTEM (BCM)

[HALOGEN TYPE]

< SYSTEM DESCRIPTION >

| Monitor Item [Unit]     | Description   |
|-------------------------|---|
| FR WIPER HI [On/Off]    | Indicates condition of wiper operation of combination switch                            |
| FR WIPER LOW [On/Off]   |   |
| FR WASHER SW [On/Off]   |   |
| FR WIPER INT [On/Off]   |   |
| FR WIPER STOP [On/Off]  | Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line |
| INT VOLUME [1 - 7]      | Indicates condition of intermittent wiper operation of combination switch               |
| TURN SIGNAL R [On/Off]  | Indicates condition of right turn signal operation of combination switch                |
| TURN SIGNAL L [On/Off]  | Indicates condition of left turn signal operation of combination switch                 |
| TAIL LAMP SW [On/Off]   | Indicates condition of tail lamp switch operation of combination switch                 |
| HI BEAM SW [On/Off]     | Indicates condition of Hi beam switch operation of combination switch                   |
| HEAD LAMP SW 1 [On/Off] | Indicates condition of head lamp switch 1 operation of combination switch               |
| HEAD LAMP SW 2 [On/Off] | Indicates condition of head lamp switch 2 operation of combination switch               |
| PASSING SW [On/Off]     | Indicates condition of passing switch operation of combination switch                   |
| AUTO LIGHT SW [On/Off]  | Indicates condition of auto light switch operation of combination switch                |
| FR FOG SW [On/Off]      | Indicates condition of front fog lamp switch operation of combination switch            |

## BATTERY SAVER

### BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:000000010070055

#### DATA MONITOR

| Monitor Item [Unit]    | Description   |
|------------------------|---|
| REQ SW -DR [On/Off]    | Indicates condition of door request switch LH                         |
| REQ SW -AS [On/Off]    | Indicates condition of door request switch RH                         |
| PUSH SW [On/Off]       | Indicates condition push button ignition switch                       |
| ACC RLY -F/B [On/Off]  | Indicates condition of accessory relay                                |
| UNLK SEN -DR [On/Off]  | Indicates condition of door unlock sensor                             |
| KEY SW -SLOT [On/Off]  | Indicates condition of key slot                                       |
| DOOR SW-DR [On/Off]    | Indicates condition of front door switch LH                           |
| DOOR SW-AS [On/Off]    | Indicates condition of front door switch RH                           |
| DOOR SW-RR [On/Off]    | Indicates condition of rear door switch RH                            |
| DOOR SW-RL [On/Off]    | Indicates condition of rear door switch LH                            |
| DOOR SW-BK [On/Off]    | Indicates condition of trunk switch                                   |
| CDL LOCK SW [On/Off]   | Indicates condition of lock signal from door lock and unlock switch   |
| CDL UNLOCK SW [On/Off] | Indicates condition of unlock signal from door lock and unlock switch |
| KEY CYL LK-SW [On/Off] | Indicates condition of lock signal from door key cylinder switch      |
| KEY CYL UN-SW [On/Off] | Indicates condition of unlock signal from door key cylinder switch    |
| TRNK/HAT MNTR [On/Off] | Indicates condition of trunk room lamp switch                         |
| RKE-LOCK [On/Off]      | Indicates condition of lock signal from Intelligent Key               |
| RKE-UNLOCK [On/Off]    | Indicates condition of unlock signal from Intelligent Key             |

#### ACTIVE TEST

| Test item     | Description  |
|---------------|--|
| BATTERY SAVER | This test is able to check battery saver operation [On/Off]. |

#### WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

| Support Item          | Setting |         | Description  |
|-----------------------|---------|---------|--|
| ROOM LAMP BAT SAV SET | ON*     |         | Interior room lamp battery saver function ON               |
|                       | OFF     |         | Interior room lamp battery saver function OFF              |
| ROOM LAMP TIMER SET   | MODE 3* | 10 min. | Sets interior room lamp battery saver timer operating time |
|                       | MODE 2  | 60 min. |  |
|                       | MODE 1  | 15 min. |  |
| BATTERY SAVER SET     | ON*     |         | Exterior lamp battery saver function ON                    |
|                       | OFF     |         | Exterior lamp battery saver function OFF                   |

\* : Initial setting

**DIAGNOSIS SYSTEM (IPDM E/R)**

**Diagnosis Description**

INFOID:000000010070056

**AUTO ACTIVE TEST**

**Description**

In auto active test mode, the IPDM E/R sends a drive signal to the following systems to check their operation.

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- Side marker lamps
- License plate lamps
- Tail lamps
- Front fog lamps (if equipped)
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fans

**Operation Procedure**

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)  
**NOTE:**  
 When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn ignition switch OFF.
3. Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.  
**CAUTION:**  
**Close front door RH.**
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
5. The oil pressure warning lamp starts blinking when the auto active test starts.
6. After a series of the following operations is repeated 3 times, auto active test is completed.

**NOTE:**

When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

**CAUTION:**

- **If auto active test mode cannot be actuated, check door switch system. Refer to [DLK-67](#), "[Component Function Check](#)".**
- **Do not start the engine.**

**Inspection in Auto Active Test Mode**

When auto active test mode is actuated, the following 6 steps are repeated 3 times.

| Operation sequence | Inspection Location  | Operation  |
|--------------------|--|--|
| 1                  | Oil pressure warning lamp  | Blinks continuously during operation of auto active test |
| 2                  | Front wiper  | LO for 5 seconds → HI for 5 seconds                      |
| 3                  | <ul style="list-style-type: none"> <li>• Parking lamps</li> <li>• Side marker lamps</li> <li>• License plate lamps</li> <li>• Tail lamps</li> <li>• Front fog lamps (if equipped)</li> </ul> | 10 seconds   |
| 4                  | Headlamps  | LO ↔ HI 5 times  |
| 5                  | A/C compressor (magnet clutch)   | ON ↔ OFF 5 times   |
| 6*                 | Cooling fans   | MID for 5 seconds → HI for 5 seconds                     |

\*: Outputs duty ratio of 50% for 5 seconds → duty ratio of 100% for 5 seconds on the cooling fan control module.

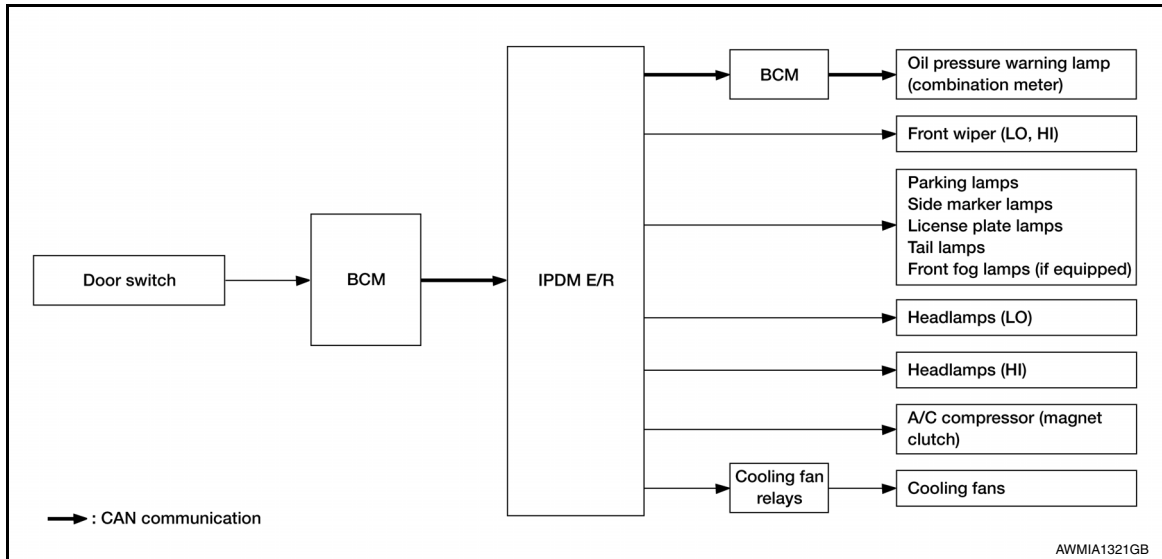
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# DIAGNOSIS SYSTEM (IPDM E/R)

[HALOGEN TYPE]

## < SYSTEM DESCRIPTION >

### Concept of auto active test



- IPDM E/R starts the auto active test with the door switch signals transmitted by BCM via CAN communication. Therefore, the CAN communication line between IPDM E/R and BCM is considered normal if the auto active test starts successfully.
- The auto active test facilitates troubleshooting if any systems controlled by IPDM E/R cannot be operated.

### Diagnosis chart in auto active test mode

| Symptom   | Inspection contents  | Possible cause |   |
|---|--|----------------|---|
| Any of the following components do not operate <ul style="list-style-type: none"> <li>• Parking lamps</li> <li>• Side marker lamps</li> <li>• License plate lamps</li> <li>• Tail lamps</li> <li>• Front fog lamps (if equipped)</li> <li>• Headlamp (HI, LO)</li> <li>• Front wiper</li> </ul> | Perform auto active test.<br>Does the applicable system operate? | YES            | BCM signal input circuit  |
|   |  | NO             | <ul style="list-style-type: none"> <li>• Lamp or motor</li> <li>• Lamp or motor ground circuit</li> <li>• Harness or connector between IPDM E/R and applicable system</li> <li>• IPDM E/R</li> </ul>                          |
| A/C compressor does not operate   | Perform auto active test.<br>Does the magnet clutch operate?     | YES            | <ul style="list-style-type: none"> <li>• Combination meter signal input circuit</li> <li>• CAN communication signal between combination meter and ECM</li> <li>• CAN communication signal between ECM and IPDM E/R</li> </ul> |
|   |  | NO             | <ul style="list-style-type: none"> <li>• Magnet clutch</li> <li>• Harness or connector between IPDM E/R and magnet clutch</li> <li>• IPDM E/R</li> </ul>  |

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

| Symptom                                    | Inspection contents  | Possible cause  |
|--|--|---|
| Oil pressure warning lamp does not operate | Perform auto active test.<br>Does the oil pressure warning lamp blink? | YES <ul style="list-style-type: none"> <li>• Harness or connector between IPDM E/R and oil pressure switch</li> <li>• Oil pressure switch</li> <li>• IPDM E/R</li> </ul>  |
|  |  | NO <ul style="list-style-type: none"> <li>• CAN communication signal between IPDM E/R and BCM</li> <li>• CAN communication signal between BCM and combination meter</li> <li>• Combination meter</li> </ul>   |
| Cooling fan does not operate               | Perform auto active test.<br>Does the cooling fan operate?             | YES <ul style="list-style-type: none"> <li>• ECM signal input circuit</li> <li>• CAN communication signal between ECM and IPDM E/R</li> </ul>   |
|  |  | NO <ul style="list-style-type: none"> <li>• Cooling fan</li> <li>• Harness or connector between cooling fan and cooling fan relays</li> <li>• Cooling fan relays</li> <li>• Harness or connector between IPDM E/R and cooling fan relays</li> <li>• IPDM E/R</li> </ul> |

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## CONSULT Function (IPDM E/R)

INFOID:000000010070057

### APPLICATION ITEM

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

| Direct Diagnostic Mode | Description   |
|------------------------|---|
| ECU Identification     | The IPDM E/R part number is displayed.                                      |
| Self Diagnostic Result | The IPDM E/R self diagnostic results are displayed.                         |
| Data Monitor           | The IPDM E/R input/output data is displayed in real time.                   |
| Active Test            | The IPDM E/R activates outputs to test components.                          |
| CAN Diag Support Mntr  | The result of transmit/receive diagnosis of CAN communication is displayed. |

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EXL

### ECU IDENTIFICATION

The IPDM E/R part number is displayed.

### SELF DIAGNOSTIC RESULT

Refer to [PCS-27, "DTC Index"](#).

### DATA MONITOR

| Monitor Item [Unit]     | Main Signals | Description   |
|-------------------------|--------------|---|
| MOTOR FAN REQ [1/2/3/4] | ×            | Indicates cooling fan speed signal received from ECM on CAN communication line      |
| AC COMP REQ [On/Off]    | ×            | Indicates A/C compressor request signal received from ECM on CAN communication line |
| TAIL&CLR REQ [On/Off]   | ×            | Indicates position light request signal received from BCM on CAN communication line |
| HL LO REQ [On/Off]      | ×            | Indicates low beam request signal received from BCM on CAN communication line       |

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P

## DIAGNOSIS SYSTEM (IPDM E/R)

[HALOGEN TYPE]

### < SYSTEM DESCRIPTION >

| Monitor Item [Unit]           | Main Signals | Description   |
|-------------------------------|--------------|---|
| HL HI REQ [On/Off]            | ×            | Indicates high beam request signal received from BCM on CAN communication line          |
| FR FOG REQ [On/Off]           | ×            | Indicates front fog light request signal received from BCM on CAN communication line    |
| FR WIP REQ [Stop/1LOW/Low/Hi] | ×            | Indicates front wiper request signal received from BCM on CAN communication line        |
| WIP AUTO STOP [STOP P/ACT P]  | ×            | Indicates condition of front wiper auto stop signal                                     |
| WIP PROT [Off/BLOCK]          | ×            | Indicates condition of front wiper fail-safe operation                                  |
| IGN RLY1 -REQ [On/Off]        |              | Indicates ignition switch ON signal received from BCM on CAN communication line         |
| IGN RLY [On/Off]              | ×            | Indicates condition of ignition relay-1   |
| PUSH SW [On/Off]              |              | Indicates condition of push-button ignition switch                                      |
| INTER/NP SW [On/Off]          |              | Indicates condition of CVT shift position   |
| ST RLY CONT [On/Off]          |              | Indicates starter relay status signal received from BCM on CAN communication line       |
| IHBT RLY -REQ [On/Off]        |              | Indicates starter control relay signal received from BCM on CAN communication line      |
| ST/INH1 RLY [Off/ ST /INH1]   |              | Indicates condition of starter relay and starter control relay                          |
| DETENT SW [On/Off]            |              | Indicates condition of CVT shift selector (park position switch)                        |
| DTRL REQ [Off]                |              | Indicates daytime light request signal received from BCM on CAN communication line      |
| OIL P SW [Open/Close]         |              | Indicates condition of oil pressure switch  |
| THFT HRN REQ [On/Off]         |              | Indicates theft warning horn request signal received from BCM on CAN communication line |
| HORN CHIRP [On/Off]           |              | Indicates horn reminder signal received from BCM on CAN communication line              |

### ACTIVE TEST

| Test item      | Description  |
|----------------|--|
| HORN           | This test is able to check horn operation [On].                          |
| FRONT WIPER    | This test is able to check wiper motor operation [Hi/Lo/Off].            |
| MOTOR FAN      | This test is able to check cooling fan operation [4/3/2/1].              |
| EXTERNAL LAMPS | This test is able to check external lamp operation [Fog/Hi/Lo/Tail/Off]. |

### CAN DIAG SUPPORT MNTR

Refer to [LAN-12, "CAN Diagnostic Support Monitor"](#).

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT

#### BCM (BODY CONTROL MODULE)

#### BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000010070070

Regarding Wiring Diagram information, refer to [BCS-67, "Wiring Diagram"](#).

### 1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

| Terminal No. | Signal name          | Fuse and fusible link No. |
|--------------|----------------------|---------------------------|
| 1            | Battery power supply | H                         |
| 11           |                      | 10                        |
| 24           |                      | 7                         |

Is the fuse or fusible link blown?

- YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
- NO >> GO TO 2

### 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check voltage between BCM harness connector and ground.

| Terminals |          | Voltage<br>(Approx.) |
|-----------|----------|----------------------|
| (+)       | (-)      |                      |
| BCM       |          | Battery voltage      |
| Connector | Terminal |                      |
| M16       | 1        |                      |
| M17       | 11       |                      |
| M18       | 24       |                      |
|           |          | Ground               |

Is the measurement normal?

- YES >> GO TO 3
- NO >> Repair or replace harness.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

| BCM       |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| M17       | 13       |        | Yes        |

Does continuity exist?

- YES >> Inspection End.
- NO >> Repair or replace harness.

#### BCM (BODY CONTROL MODULE) : Special Repair Requirement

INFOID:000000010070071

### 1. REQUIRED WORK WHEN REPLACING BCM

# POWER SUPPLY AND GROUND CIRCUIT

[HALOGEN TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Initialize control unit. Refer to [BCS-5, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT \(BCM\): Work Procedure"](#).

>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:000000010070073

Regarding Wiring Diagram information, refer to [PCS-28, "Wiring Diagram"](#).

## 1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

| Terminal No. | Signal name          | Fuses and fusible link No. |
|--------------|----------------------|----------------------------|
| 1            | Battery power supply | B                          |
| 2            |                      | A, D                       |
| 36           |                      | A, E, L                    |

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

## 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connectors.
3. Check voltage between IPDM E/R harness connector and ground.

| Terminals |          | Voltage (V)<br>(Approx.) |
|-----------|----------|--------------------------|
| (+)       | (-)      |                          |
| IPDM E/R  |          | Battery voltage          |
| Connector | Terminal |                          |
| E16       | 1        |                          |
|           | 2        |                          |
| E18       | 36       |                          |

Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

## 3. CHECK GROUND CIRCUIT

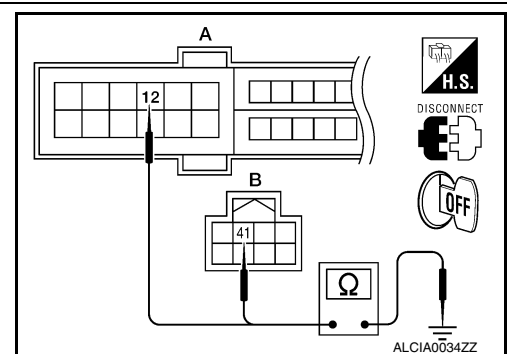
Check continuity between IPDM E/R harness connectors and ground.

| IPDM E/R  |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| A: E18    | 12       | Ground | Yes        |
| B: E17    | 41       |        |            |

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.





# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## HEADLAMP (HI) CIRCUIT

### Description

INFOID:0000000010051057

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 48 and 49, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

### Component Function Check

INFOID:0000000010051058

#### 1. CHECK HEADLAMP (HI) OPERATION

##### ⊗ WITHOUT CONSULT

1. Start IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the headlamp switches to the high beam.

##### NOTE:

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

##### Ⓜ CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the headlamp switches to the high beam.

**HI** : Headlamp switches to the high beam.

**OFF** : Headlamp OFF

Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to [EXL-201, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010051059

Regarding Wiring Diagram information, refer to [EXL-257, "Wiring Diagram"](#) (without DTRL), [EXL-263, "Wiring Diagram"](#) (With DTRL).

#### 1. CHECK HEADLAMP (HI) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

| Unit             | Location | Fuse No. | Capacity |
|------------------|----------|----------|----------|
| Headlamp HI (LH) | IPDM E/R | 48       | 10A      |
| Headlamp HI (RH) | IPDM E/R | 49       | 10A      |

Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

#### 2. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

##### Ⓜ CONSULT ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

# HEADLAMP (HI) CIRCUIT

[HALOGEN TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

- With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.

| (+)       |                     | Terminal | (-)    | Voltage         |
|-----------|---------------------|----------|--------|-----------------|
| Connector |                     |          |        |                 |
| RH        | E222 (without DTRL) | 3        | Ground | Battery voltage |
|           | E233 (with DTRL)    |          |        |                 |
| LH        | E213                |          |        |                 |

Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.

### 3. CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

| A         |          |           | B                   |   | Continuity |
|-----------|----------|-----------|---------------------|---|------------|
| Connector | Terminal | Connector | Terminal            |   |            |
| RH        | E200     | 89        | E222 (without DTRL) | 3 | Yes        |
|           |          |           | E233 (with DTRL)    |   |            |
| LH        |          | 90        | E213                |   |            |

Does continuity exist?

- YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).  
NO >> Repair the harnesses or connectors.

### 4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal and ground.

| Connector | Terminal            | — | Continuity |
|-----------|---------------------|---|------------|
| RH        | E222 (without DTRL) | 4 | Ground     |
|           | E233 (with DTRL)    |   |            |
| LH        | E213                |   |            |

Does continuity exist?

- YES >> Inspect the headlamp bulb.  
NO (Except RH with DTRL) >> Repair the harness.  
NO (RH with DTRL) >> GO TO 5.

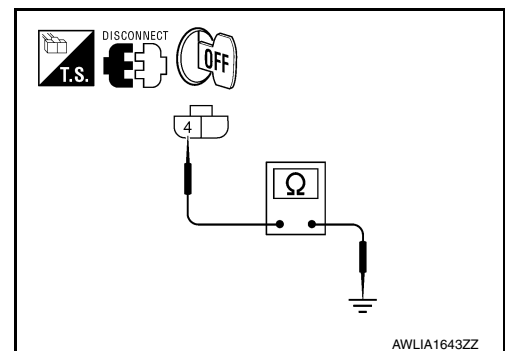
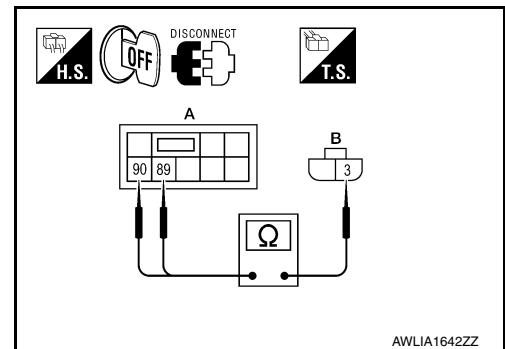
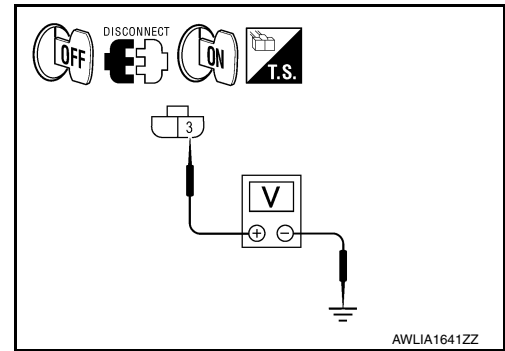
### 5. CHECK CONTINUITY BETWEEN FRONT COMBINATION LAMP RH (HI) AND DAYTIME LIGHT RELAY

- Disconnect daytime light relay connector.
- Check continuity between front combination lamp RH harness connector and daytime light relay harness connector.

| Front combination lamp RH |          | Daytime light relay |          | Continuity |
|---------------------------|----------|---------------------|----------|------------|
| Connector                 | Terminal | Connector           | Terminal |            |
| E233                      | 4        | E228                | 3        | Yes        |

Does continuity exist?

- YES >> GO TO 6.  
NO >> Repair the harness or connector.



# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## 6. CHECK DAYTIME LIGHT RELAY GROUND CIRCUIT

Check continuity between daytime light relay harness connector and ground.

| Daytime light relay |          | Ground | Continuity |
|---------------------|----------|--------|------------|
| Connector           | Terminal |        |            |
| E228                | 4        |        | Yes        |

Does continuity exist?

YES >> GO TO 7.

NO >> Repair the harness or connector.

## 7. CHECK DAYTIME LIGHT RELAY FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuse is not open.

| Unit                | Location | Fuse No. | Capacity |
|---------------------|----------|----------|----------|
| Daytime light relay | IPDM E/R | 54       | 10A      |

Is the fuse open?

YES >> Replace the fuse after repairing the affected circuit.

NO >> GO TO 8.

## 8. CHECK DAYTIME LIGHT RELAY CIRCUIT FOR OPEN

1. Disconnect IPDM E/R connector E18 and E201.
2. Check continuity between the IPDM E/R harness connector and the daytime light relay harness connector.

| IPDM E/R  |          | Daytime light relay |          | Continuity |
|-----------|----------|---------------------|----------|------------|
| Connector | Terminal | Connector           | Terminal |            |
| E18       | 6        | E228                | 1        | Yes        |
|           |          |                     | 5        |            |
| E201      | 105      |                     | 2        |            |

Does continuity exist?

YES >> GO TO 9

NO >> Repair the harnesses or connectors.

## 9. CHECK DAYTIME LIGHT RELAY

Check daytime light relay. Refer to [EXL-203, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Replace daytime light relay.

## Component Inspection

INFOID:000000010051060

### 1. CHECK DAYTIME LIGHT RELAY

1. Turn ignition switch OFF.
2. Remove daytime light relay.
3. Check the continuity between daytime light relay terminals under the following conditions.

| Terminals | Condition   | Continuity |
|-----------|---|------------|
| 3 and 5   | 12V direct current supply between terminals 1 and 2 | Yes        |
|           | No current supply                                   | No         |

# HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

| Terminals | Condition   | Continuity |
|-----------|---|------------|
| 3 and 4   | 12V direct current supply between terminals 1 and 2 | No         |
|           | No current supply                                   | Yes        |

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace daytime light relay

# HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## HEADLAMP (LO) CIRCUIT

### Description

INFOID:0000000010051061

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 51 and 52, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

### Component Function Check

INFOID:0000000010051062

#### 1. CHECK HEADLAMP (LO) OPERATION

##### ⊗ WITHOUT CONSULT

1. Start IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the headlamp is turned ON.

##### NOTE:

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

##### Ⓜ CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the headlamp is turned ON.

**LO** : Headlamp ON

**OFF** : Headlamp OFF

##### Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to [EXL-205, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010051063

Regarding Wiring Diagram information, refer to [EXL-257, "Wiring Diagram"](#).

#### 1. CHECK HEADLAMP (LO) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

| Unit             | Location | Fuse No. | Capacity |
|------------------|----------|----------|----------|
| Headlamp LO (LH) | IPDM E/R | 51       | 15A      |
| Headlamp LO (RH) | IPDM E/R | 52       | 15A      |

##### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

#### 2. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

##### Ⓜ CONSULT

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

# HEADLAMP (LO) CIRCUIT

[HALOGEN TYPE]

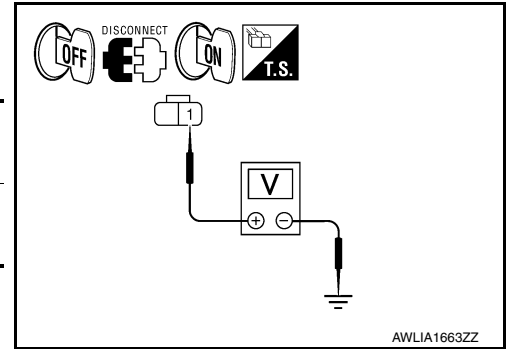
## < DTC/CIRCUIT DIAGNOSIS >

- With EXTERNAL LAMPS ON, check the voltage between the combination lamp connector and ground.

| (+)       |      | Terminal | (-)    | Voltage         |
|-----------|------|----------|--------|-----------------|
| Connector |      |          |        |                 |
| RH        | E223 | 1        | Ground | Battery voltage |
| LH        | E212 | 1        |        |                 |

Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.



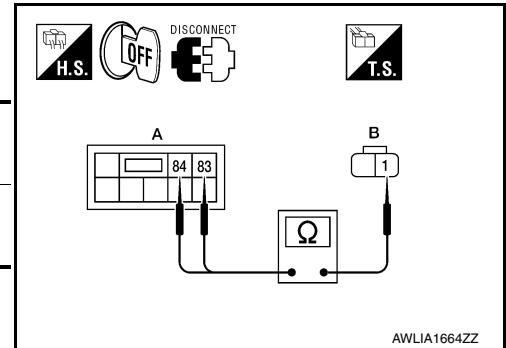
## 3. CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| RH        | E200     | 83        | E223 1   | Yes        |
| LH        |          | 84        | E212 1   |            |

Does continuity exist?

- YES >> Replace the IPDM E/R. Refer to [PCS-35. "Removal and Installation"](#).  
NO >> Repair the harnesses or connectors.



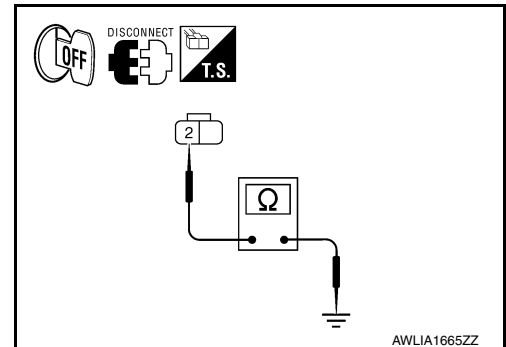
## 4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

- Disconnect the front combination lamp connector.
- Check continuity between the front combination lamp harness connector terminal and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| RH        | E223     | Ground | Yes        |
| LH        | E212     |        |            |

Does continuity exist?

- YES >> Inspect the headlamp bulb.  
NO >> Repair the harness.



# FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## FRONT FOG LAMP CIRCUIT

### Description

INFOID:000000010051064

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM over the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay in the IPDM E/R to the front fog lamps.

### Component Function Check

INFOID:000000010051065

#### 1. CHECK FRONT FOG LAMP OPERATION

##### WITHOUT CONSULT

1. Activate IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the front fog lamp is turned ON.

##### CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the front fog lamp is turned ON.

**FOG** : Front fog lamp ON

**OFF** : Front fog lamp OFF

##### Is the front fog lamp turned ON?

- YES >> Front fog lamp circuit is normal.  
NO >> Refer to [EXL-207, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010051066

Regarding Wiring Diagram information, refer to [EXL-276, "Wiring Diagram"](#).

#### 1. CHECK FRONT FOG LAMP FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuse is not open.

| Unit           | Location | Fuse No. | Capacity |
|----------------|----------|----------|----------|
| Front fog lamp | IPDM E/R | 53       | 15A      |

##### Is the fuse open?

- YES >> Repair the harness and replace the fuse.  
NO >> GO TO 2.

#### 2. CHECK FRONT FOG LAMP OUTPUT VOLTAGE

##### CONSULT

1. Turn the ignition switch OFF.
2. Disconnect the front fog lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

# FRONT FOG LAMP CIRCUIT

[HALOGEN TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

- With EXTERNAL LAMPS ON, check the voltage between the fog lamp connector and ground.

| (+)       |      | Terminal | (-)    | Voltage         |
|-----------|------|----------|--------|-----------------|
| Connector |      |          |        |                 |
| LH        | E214 | 1        | Ground | Battery voltage |
| RH        | E227 | 1        |        |                 |

Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.

### 3. CHECK FRONT FOG LAMP OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front fog lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| RH        | E200     | 86        | E227 1   | Yes        |
| LH        |          | 87        | E214 1   |            |

Does continuity exist?

- YES >> Replace the IPDM E/R. Refer to [PCS-35. "Removal and Installation"](#).  
NO >> Repair the harnesses or connectors.

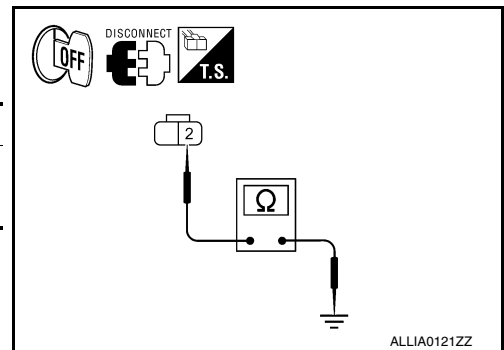
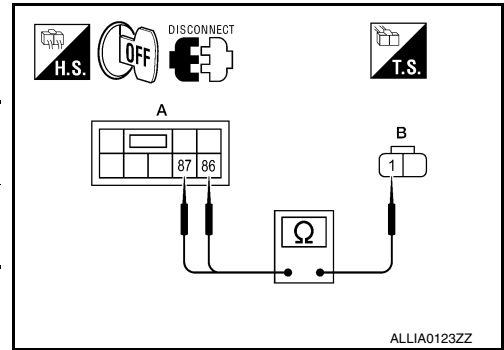
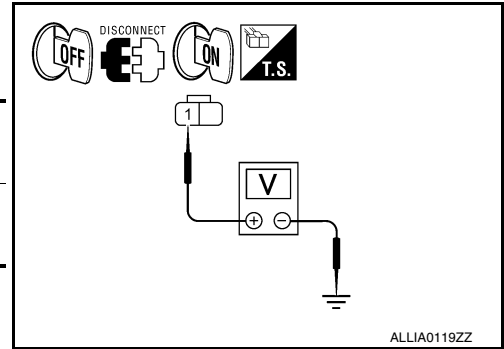
### 4. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between the front fog lamp harness connector terminal and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| RH        | E227     | Ground | Yes        |
| LH        | E214     |        |            |

Does continuity exist?

- YES >> Inspect the fog lamp bulb.  
NO >> Repair the harness.





# PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## PARKING LAMP CIRCUIT

### Description

INFOID:0000000010051067

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM over the CAN communication lines. When the tail lamp relay is energized, power flows through fuses 46 and 47, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamps.

### Component Function Check

INFOID:0000000010051068

#### 1. CHECK PARKING LAMP OPERATION

##### WITHOUT CONSULT

1. Activate IPDM E/R auto active test. Refer to [PCS-11, "Diagnosis Description"](#).
2. Check that the parking lamp is turned ON.

##### CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. While operating the test item, check that the parking lamp is turned ON.

**TAIL : Parking lamp ON**  
**OFF : Parking lamp OFF**

##### Is the parking lamp turned ON?

- YES >> Parking lamp circuit is normal.  
NO >> Refer to [EXL-209, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010051069

Regarding Wiring Diagram information, refer to [EXL-288, "Wiring Diagram"](#).

#### 1. CHECK PARKING LAMP FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

| Unit                  | Location | Fuse No. | Capacity |
|-----------------------|----------|----------|----------|
| Parking lamps (front) | IPDM E/R | 46       | 10A      |
| Parking lamps (rear)  | IPDM E/R | 47       | 10A      |

##### Is the fuse open?

- YES >> Repair the harness and replace the fuse.  
NO >> GO TO 2.

#### 2. CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

##### CONSULT

1. Turn the ignition switch OFF.
2. Disconnect the front and rear combination lamp connectors.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

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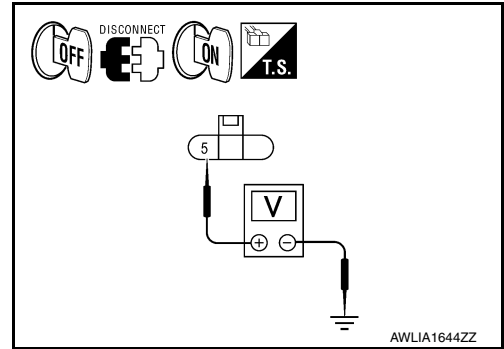
# PARKING LAMP CIRCUIT

[HALOGEN TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

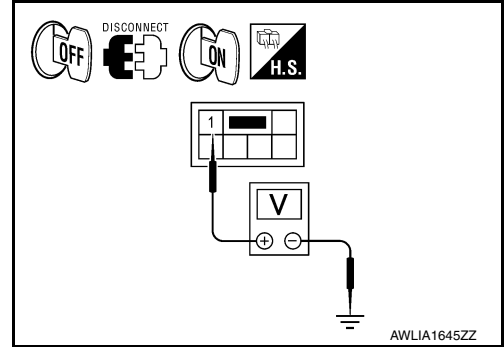
5. With EXTERNAL LAMPS ON, check the voltage between the front combination lamp connector and ground.

| (+)       |      | Terminal | (-)    | Voltage         |
|-----------|------|----------|--------|-----------------|
| Connector |      |          |        |                 |
| LH        | E217 | 5        | Ground | Battery voltage |
| RH        | E224 |          |        |                 |



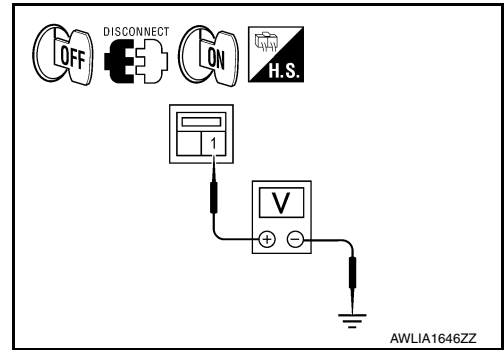
6. With EXTERNAL LAMPS ON, check the voltage between the rear combination lamp connector and ground.

| (+)       |     | Terminal | (-)    | Voltage         |
|-----------|-----|----------|--------|-----------------|
| Connector |     |          |        |                 |
| LH        | B30 | 1        | Ground | Battery voltage |
| RH        | B45 |          |        |                 |



7. With EXTERNAL LAMPS ON, check the voltage between the license plate lamp connector and ground.

| (+)       |    | Terminal | (-)    | Voltage         |
|-----------|----|----------|--------|-----------------|
| Connector |    |          |        |                 |
| LH        | T6 | 1        | Ground | Battery voltage |
| RH        | T8 |          |        |                 |



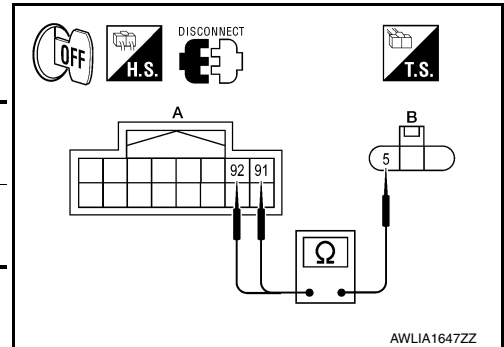
Is battery voltage present?

- YES >> GO TO 4.  
NO >> GO TO 3.

### 3. CHECK PARKING LAMP CIRCUIT (OPEN)

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E201.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | E201     | E217      | 5        | Yes        |
| RH        |          | E224      |          |            |



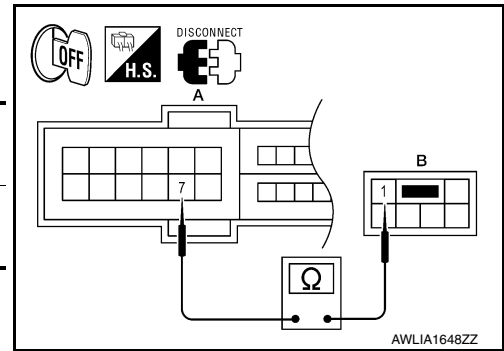
# PARKING LAMP CIRCUIT

[HALOGEN TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

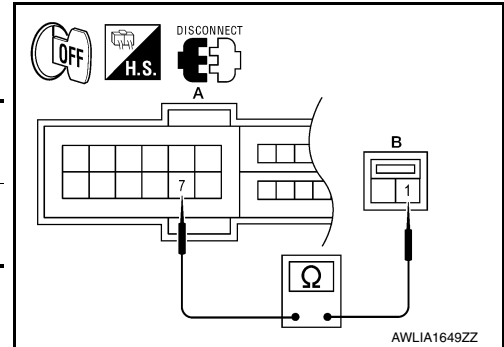
4. Check continuity between the IPDM E/R harness connector (A) and the rear combination lamp harness connector (B).

| A         |          |   | B         |          | Continuity |
|-----------|----------|---|-----------|----------|------------|
| Connector | Terminal |   | Connector | Terminal |            |
| LH        | E18      | 7 | B30       | 1        | Yes        |
| RH        |          |   | B45       |          |            |



5. Check continuity between the IPDM E/R harness connector (A) and the license plate lamp harness connector (B).

| A         |          |   | B         |          | Continuity |
|-----------|----------|---|-----------|----------|------------|
| Connector | Terminal |   | Connector | Terminal |            |
| LH        | E18      | 7 | T6        | 1        | Yes        |
| RH        |          |   | T8        |          |            |



### Does continuity exist?

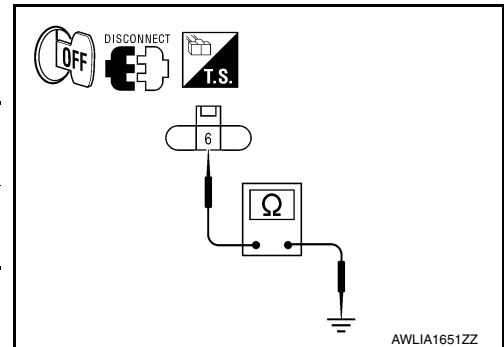
YES >> Replace the IPDM E/R. Refer to [PCS-35. "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.

## 4. CHECK PARKING LAMP GROUND CIRCUIT

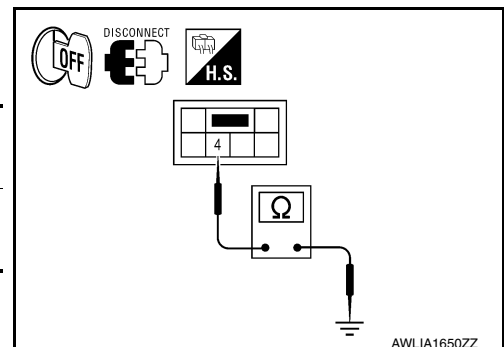
1. Check continuity between the front combination lamp harness connector terminal and ground.

| (+)       |          |   | (-)    | Continuity |
|-----------|----------|---|--------|------------|
| Connector | Terminal |   |        |            |
| LH        | E217     | 6 | Ground | Yes        |
| RH        |          |   |        |            |



2. Check continuity between the rear combination lamp harness connector terminal and ground.

| (+)       |          |   | (-)    | Continuity |
|-----------|----------|---|--------|------------|
| Connector | Terminal |   |        |            |
| LH        | B30      | 4 | Ground | Yes        |
| RH        |          |   |        |            |



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# PARKING LAMP CIRCUIT

[HALOGEN TYPE]

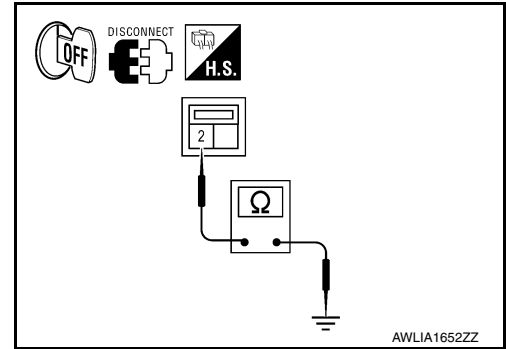
< DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between the license plate lamp harness connector terminal and ground.

| (+)       |    | Terminal | (-)    | Continuity |
|-----------|----|----------|--------|------------|
| Connector |    |          |        |            |
| LH        | T6 | 2        | Ground | Yes        |
| RH        | T8 |          |        |            |

Does continuity exist?

- YES >> Inspect the parking lamp bulb.  
NO >> Repair the harness.



# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## TURN SIGNAL LAMP CIRCUIT

### Description

INFOID:0000000010051070

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.

The BCM performs the fast flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.

#### NOTE:

Turn signal lamp blinks at normal speed when using the hazard warning lamp.

### Component Function Check

INFOID:0000000010051071

#### 1. CHECK TURN SIGNAL LAMP

##### CONSULT

1. Select "FLASHER" of BCM (FLASHER) active test item.
2. While operating the test item, check that the turn signal lamp blinks.

**LH** : Turn signal lamp LH blinking

**RH** : Turn signal lamp RH blinking

**OFF** : The turn signal lamp OFF

##### Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to [EXL-213, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000010051072

Regarding Wiring Diagram information, refer to [EXL-280, "Wiring Diagram"](#).

#### 1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

##### Is the bulb OK?

YES >> GO TO 2.

NO >> Replace the bulb.

#### 2. CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

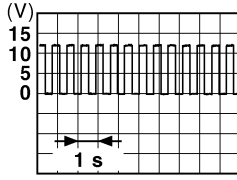
1. Turn the ignition switch OFF.
2. Disconnect front combination lamp connector, door mirror connector (if equipped with turn signal in mirror) and rear combination lamp connector.
3. Turn the ignition switch ON.
4. With turn signal switch operating, check the voltage between the front combination lamp harness connector and ground.

| (+)       |          | (-) | Voltage |
|-----------|----------|-----|---------|
| Connector | Terminal |     |         |

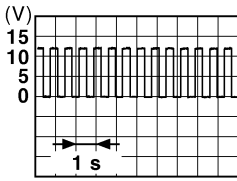
# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

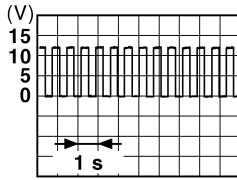
[HALOGEN TYPE]

|      |    |   |        |   |
|------|----|---|--------|---|
| E217 | LH | 7 | Ground |  <p style="text-align: right; font-size: small;">PKID0926E</p> |
| E224 | RH |   |        |   |

5. With turn signal switch operating, check the voltage between the rear combination lamp harness connector and ground.

| (+)       |          | Terminal | (-)    | Voltage   |
|-----------|----------|----------|--------|---|
| Connector | Terminal |          |        |   |
| B30       | LH       | 6        | Ground |  <p style="text-align: right; font-size: small;">PKID0926E</p> |
| B45       | RH       |          |        |   |

6. With turn signal switch operating, check the voltage between the door mirror (if equipped with turn signals in the mirrors) harness connector and ground.

| (+)       |          | Terminal | (-)    | Voltage   |
|-----------|----------|----------|--------|---|
| Connector | Terminal |          |        |   |
| D4        | LH       | 8        | Ground |  <p style="text-align: right; font-size: small;">PKID0926E</p> |
| D107      | RH       |          |        |   |

Is the measurement value normal?

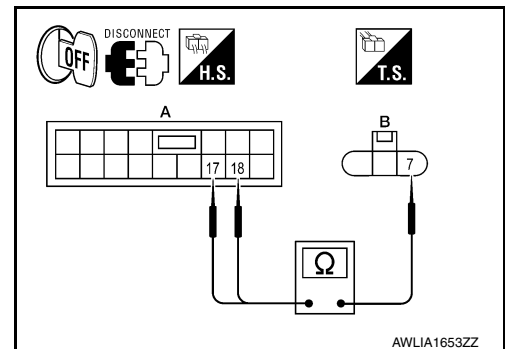
YES >> GO TO 5.

NO >> GO TO 3.

### 3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BCM connector M17.
3. Check continuity between the BCM harness connector (A) and the front combination lamp connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | M17      | E217      | 7        | Yes        |
| RH        |          | E224      |          |            |



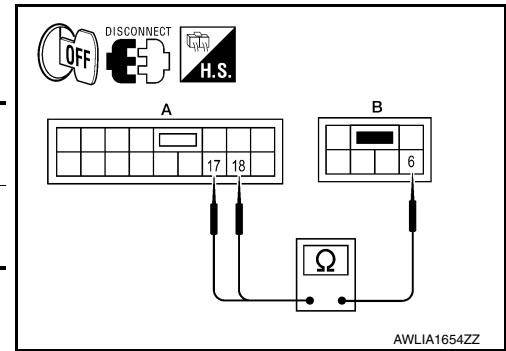
# TURN SIGNAL LAMP CIRCUIT

[HALOGEN TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

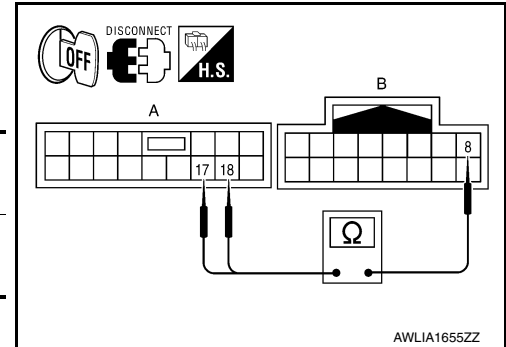
- Check continuity between the BCM harness connector (A) and the rear combination lamp harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | M17      | 18        | B30      | Yes        |
| RH        |          | 17        | B45      |            |



- Check continuity between the BCM harness connector (A) and the door mirror connector (B) (if equipped with turn signal in mirror).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| LH        | M17      | 18        | D4       | Yes        |
| RH        |          | 17        | D107     |            |



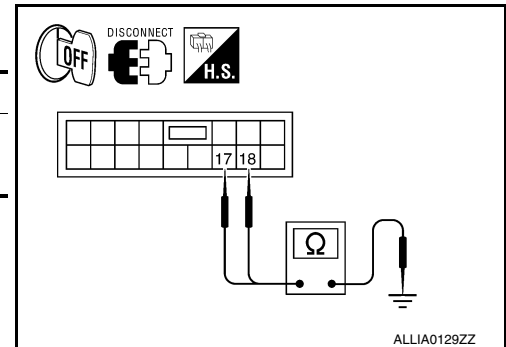
### Does continuity exist?

- YES >> GO TO 4.
- NO >> Repair the harnesses or connectors.

## 4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and ground.

| Connector | Terminal | —  | Continuity |
|-----------|----------|----|------------|
| LH        | M17      | 18 | No         |
| RH        |          | 17 |            |



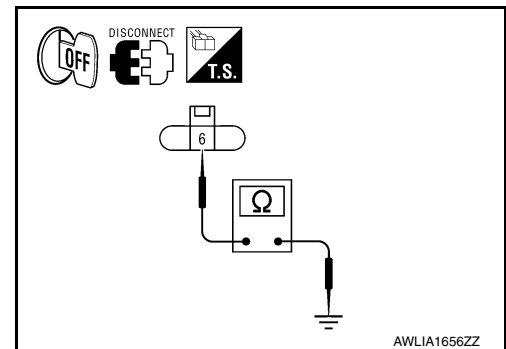
### Does continuity exist?

- YES >> Repair the harnesses or connectors.
- NO >> Replace BCM. Refer to [BCS-79. "Removal and Installation"](#).

## 5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- Turn ignition switch OFF.
- Check continuity between the front combination lamp and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| LH        | E217     | Ground | Yes        |
| RH        | E224     |        |            |



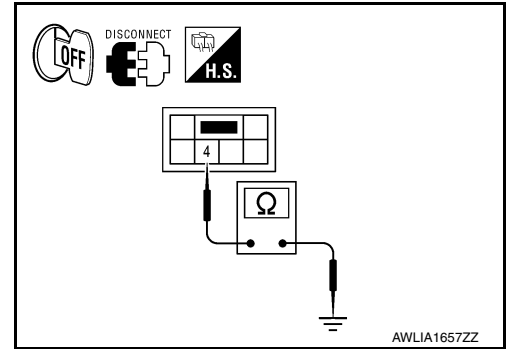
# TURN SIGNAL LAMP CIRCUIT

[HALOGEN TYPE]

< DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between the rear combination lamp and ground.

| Connector |     | Terminal | —      | Continuity |
|-----------|-----|----------|--------|------------|
| LH        | B30 | 4        | Ground | Yes        |
| RH        | B45 |          |        |            |



4. Check continuity between the door mirror and ground (if equipped with turn signal in mirror).

| Connector |      | Terminal | —      | Continuity |
|-----------|------|----------|--------|------------|
| LH        | D4   | 7        | Ground | Yes        |
| RH        | D107 |          |        |            |

Does continuity exist?

- YES >> Replace the front combination lamp. Refer to [EXL-318. "Removal and Installation"](#), the rear combination lamp. Refer to [EXL-326. "Removal and Installation"](#) or door mirror (if equipped with turn signal in mirror). Refer to [EXL-323. "Removal and Installation"](#).
- NO >> Repair the harnesses or connectors.



# OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## OPTICAL SENSOR

### Description

INFOID:000000010051073

The optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to the BCM.

### Component Function Check

INFOID:000000010051074

#### 1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

##### CONSULT

1. Turn the ignition switch ON.
2. Select "OPTICAL SENSOR" of BCM (HEAD LAMP) DATA MONITOR item.
3. Turn the lighting switch to AUTO.
4. While the auto light system is operating, check the monitor status.

| Monitor item   | Condition               | Voltage        |
|----------------|-------------------------|----------------|
| OPTICAL SENSOR | When illuminating       | 3.1V or more * |
|                | When shutting off light | 0.6V or less   |

\*: Illuminates the optical sensor. The value may be less than the standard value if brightness is weak.

##### Is the item status normal?

- YES >> Optical sensor is normal.  
 NO >> Refer to [EXL-217, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000010051075

Regarding Wiring Diagram information, refer to [EXL-270, "Wiring Diagram"](#).

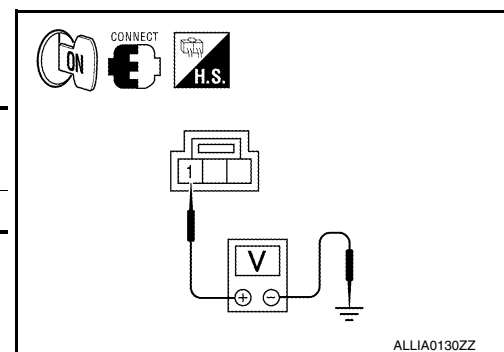
#### 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn the ignition switch ON.
2. Turn the lighting switch to AUTO.
3. Check the voltage between the optical sensor harness connector and ground.

| (+)       |          | (-)    | Voltage |
|-----------|----------|--------|---------|
| Connector | Terminal |        |         |
| M66       | 1        | Ground | 5V      |

##### Is the voltage reading as specified?

- YES >> GO TO 2.  
 NO >> GO TO 4.



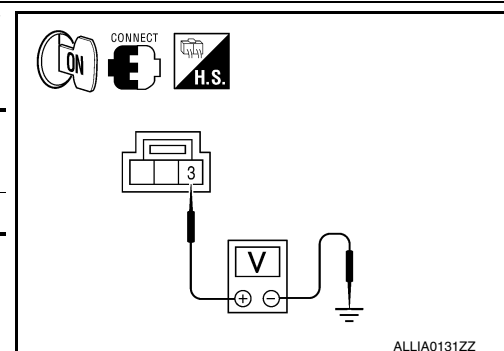
#### 2. CHECK OPTICAL SENSOR GROUND INPUT

Check the voltage between the optical sensor harness connector and ground.

| (+)       |          | (-)    | Voltage        |
|-----------|----------|--------|----------------|
| Connector | Terminal |        |                |
| M66       | 3        | Ground | Less than 0.2V |

##### Is the voltage reading as specified?

- YES >> GO TO 3.  
 NO >> GO TO 6.



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EXL

# OPTICAL SENSOR

[HALOGEN TYPE]

## < DTC/CIRCUIT DIAGNOSIS >

### 3. CHECK OPTICAL SENSOR SIGNAL OUTPUT

With the auto light system operating, check voltage between the optical sensor harness connector and ground.

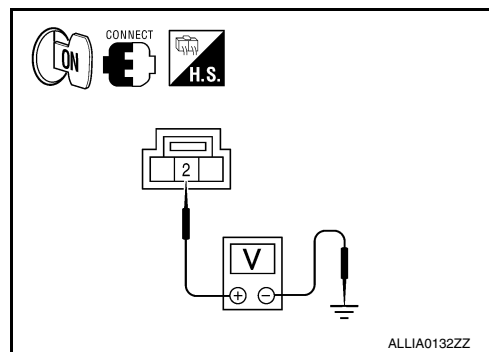
| (+)       |          | (-)    | Condition               | Voltage        |
|-----------|----------|--------|-------------------------|----------------|
| Connector | Terminal |        |                         |                |
| M66       | 2        | Ground | When illuminating       | 3.1V or more * |
|           |          |        | When shutting off light | 0.6V or less   |

\*: Illuminate the optical sensor. The value may be less than the standard if brightness is weak.

Is the voltage reading as specified?

YES >> GO TO 7.

NO >> Replace the optical sensor. Refer to [EXL-322, "Removal and Installation"](#).



ALLIA0132ZZ

### 4. CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

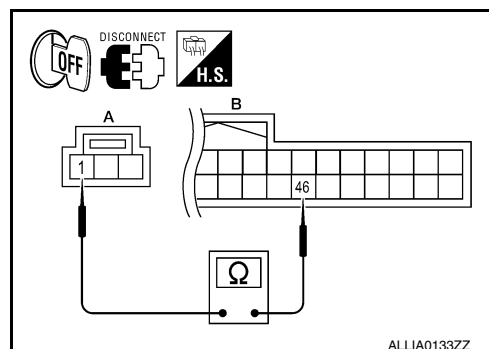
1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector M18.
3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| M66       | 1        | M18       | 46       | Yes        |

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.



ALLIA0133ZZ

### 5. CHECK OPTICAL SENSOR POWER SUPPLY FOR SHORT CIRCUIT

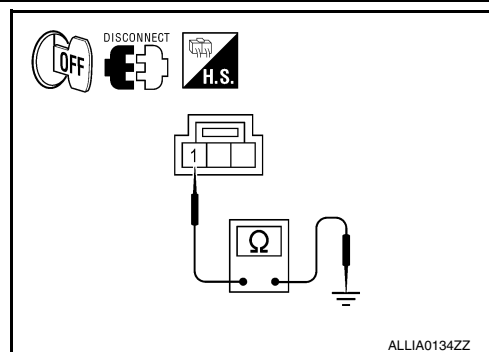
Check the continuity between the optical sensor harness connector and the ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| M66       | 1        | Ground | No         |

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).



ALLIA0134ZZ

### 6. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

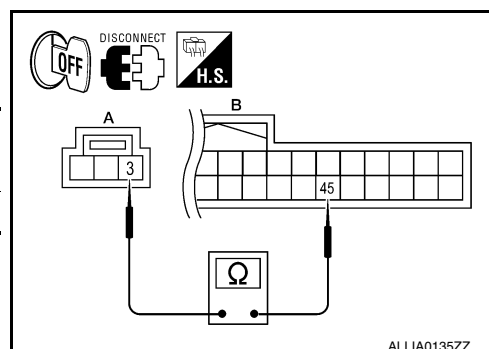
1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector M18.
3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| M66       | 3        | M18       | 45       | Yes        |

Does continuity exist?

YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.



ALLIA0135ZZ

# OPTICAL SENSOR

[HALOGEN TYPE]

< DTC/CIRCUIT DIAGNOSIS >

## 7. CHECK OPTICAL SENSOR SIGNAL FOR OPEN CIRCUIT

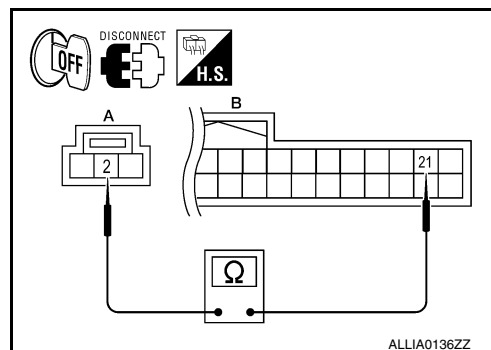
1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector M18.
3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

| A         |          | B         |          | Continuity |
|-----------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal |            |
| M66       | 2        | M18       | 21       | Yes        |

Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.



## 8. CHECK OPTICAL SENSOR SIGNAL FOR SHORT CIRCUIT

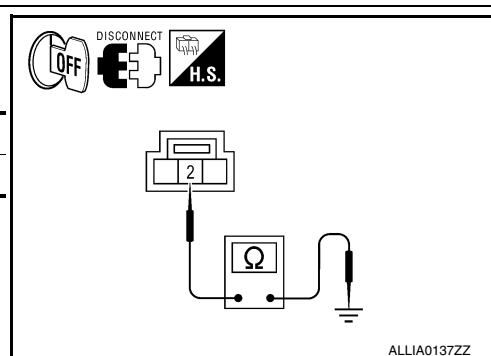
Check the continuity between the optical sensor harness connector and ground.

| Connector | Terminal | —      | Continuity |
|-----------|----------|--------|------------|
| M66       | 2        | Ground | No         |

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to [BCS-79. "Removal and Installation"](#).



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# HAZARD SWITCH

[HALOGEN TYPE]

< DTC/CIRCUIT DIAGNOSIS >

## HAZARD SWITCH

### Component Function Check

INFOID:0000000010051076

#### 1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

##### CONSULT DATA MONITOR

1. Turn ignition switch ON.
2. Select "HAZARD SW" of BCM (FLASHER) DATA MONITOR item.
3. With operating the hazard switch, check the monitor status.

| Monitor item | Condition     |     | Monitor status |
|--------------|---------------|-----|----------------|
| HAZARD SW    | Hazard switch | ON  | On             |
|              |               | OFF | Off            |

Is the measurement normal?

- YES >> Hazard switch circuit is normal.  
 NO >> Refer to [EXL-220, "Diagnosis Procedure"](#).

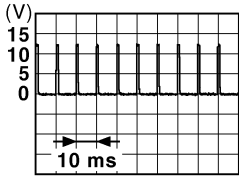
### Diagnosis Procedure

INFOID:0000000010051077

Regarding Wiring Diagram information, refer to [EXL-280, "Wiring Diagram"](#).

#### 1. CHECK HAZARD SWITCH SIGNAL INPUT

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Turn ignition switch ON.
4. Check voltage between hazard switch harness connector and ground.

| (+)           |          | (-)    | Voltage (Approx.)   |
|---------------|----------|--------|---|
| Hazard switch |          |        |   |
| Connector     | Terminal |        |   |
| M54           | 2        | Ground |  <p style="text-align: right; font-size: small;">JPMIA0012GB</p> |

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> GO TO 2.

#### 2. CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19.
3. Check continuity between hazard harness connector and BCM harness connector.

| Hazard switch |          | BCM       |          | Continuity |
|---------------|----------|-----------|----------|------------|
| Connector     | Terminal | Connector | Terminal |            |
| M54           | 2        | M19       | 98       | Yes        |

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Repair or replace harness.

# HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## 3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

| Hazard switch |          | Ground | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| M54           | 2        |        | No         |

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

| Hazard switch |          | Ground | Continuity |
|---------------|----------|--------|------------|
| Connector     | Terminal |        |            |
| M54           | 1        |        | Yes        |

Is the inspection result normal?

YES >> Replace hazard switch. Refer to [EXL-325, "Removal and Installation"](#).

NO >> Repair or replace harness.

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EXL

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

## ECU DIAGNOSIS INFORMATION

### BCM (BODY CONTROL MODULE)

#### Reference Value

INFOID:000000010070058

#### NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

#### VALUES ON THE DIAGNOSIS TOOL

| Monitor Item   | Condition   | Value/Status                     |
|----------------|---|----------------------------------|
| FR WIPER HI    | Other than front wiper switch HI                    | OFF                              |
|                | Front wiper switch HI                               | ON                               |
| FR WIPER LOW   | Other than front wiper switch LO                    | OFF                              |
|                | Front wiper switch LO                               | ON                               |
| FR WASHER SW   | Front washer switch OFF                             | OFF                              |
|                | Front washer switch ON                              | ON                               |
| FR WIPER INT   | Other than front wiper switch INT                   | OFF                              |
|                | Front wiper switch INT                              | ON                               |
| FR WIPER STOP  | Front wiper is not in STOP position                 | OFF                              |
|                | Front wiper is in STOP position                     | ON                               |
| INT VOLUME     | Wiper intermittent dial is in a dial position 1 - 7 | Wiper intermittent dial position |
| TURN SIGNAL R  | Other than turn signal switch RH                    | OFF                              |
|                | Turn signal switch RH                               | ON                               |
| TURN SIGNAL L  | Other than turn signal switch LH                    | OFF                              |
|                | Turn signal switch LH                               | ON                               |
| TAIL LAMP SW   | Other than lighting switch 1ST and 2ND              | OFF                              |
|                | Lighting switch 1ST or 2ND                          | ON                               |
| HI BEAM SW     | Other than lighting switch HI                       | OFF                              |
|                | Lighting switch HI                                  | ON                               |
| HEAD LAMP SW 1 | Other than lighting switch 2ND                      | OFF                              |
|                | Lighting switch 2ND                                 | ON                               |
| HEAD LAMP SW 2 | Other than lighting switch 2ND                      | OFF                              |
|                | Lighting switch 2ND                                 | ON                               |
| PASSING SW     | Other than lighting switch PASS                     | OFF                              |
|                | Lighting switch PASS                                | ON                               |
| AUTO LIGHT SW  | Other than lighting switch AUTO                     | OFF                              |
|                | Lighting switch AUTO                                | ON                               |
| FR FOG SW      | Front fog lamp switch OFF                           | OFF                              |
|                | Front fog lamp switch ON                            | ON                               |
| DOOR SW-DR     | Driver door closed                                  | OFF                              |
|                | Driver door opened                                  | ON                               |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Monitor Item   | Condition   | Value/Status |     |
|----------------|---|--------------|-----|
| DOOR SW-AS     | Passenger door closed   | OFF          | A   |
|                | Passenger door opened   | ON           |     |
| DOOR SW-RR     | Rear door RH closed   | OFF          | B   |
|                | Rear door RH opened   | ON           |     |
| DOOR SW-RL     | Rear door LH closed   | OFF          | C   |
|                | Rear door LH opened   | ON           |     |
| DOOR SW-BK     | Trunk door closed   | OFF          | D   |
|                | Trunk door opened   | ON           |     |
| CDL LOCK SW    | Other than power door lock switch LOCK  | OFF          | E   |
|                | Power door lock switch LOCK   | ON           |     |
| CDL UNLOCK SW  | Other than power door lock switch UNLOCK  | OFF          | E   |
|                | Power door lock switch UNLOCK   | ON           |     |
| KEY CYL LK-SW  | Other than driver door key cylinder LOCK position                                 | OFF          | F   |
|                | Driver door key cylinder LOCK position  | ON           |     |
| KEY CYL UN-SW  | Other than driver door key cylinder UNLOCK position                               | OFF          | G   |
|                | Driver door key cylinder UNLOCK position  | ON           |     |
| HAZARD SW      | When hazard switch is not pressed   | OFF          | H   |
|                | When hazard switch is pressed   | ON           |     |
| REAR DEF SW    | When rear window defogger switch is pressed                                       | ON           | H   |
| TR CANCEL SW   | Trunk lid opener cancel switch OFF  | OFF          | I   |
|                | Trunk lid opener cancel switch ON   | ON           |     |
| TR/BD OPEN SW  | Trunk lid opener switch OFF   | OFF          | J   |
|                | While the trunk lid opener switch is turned ON                                    | ON           |     |
| TRNK/HAT MNTR  | Trunk lid closed  | OFF          | J   |
|                | Trunk lid opened  | ON           |     |
| RKE-LOCK       | When LOCK button of Intelligent Key is not pressed                                | OFF          | K   |
|                | When LOCK button of Intelligent Key is pressed                                    | ON           |     |
| RKE-UNLOCK     | When UNLOCK button of Intelligent Key is not pressed                              | OFF          | EXL |
|                | When UNLOCK button of Intelligent Key is pressed                                  | ON           |     |
| RKE-TR/BD      | When TRUNK OPEN button of Intelligent Key is not pressed                          | OFF          | M   |
|                | When TRUNK OPEN button of Intelligent Key is pressed                              | ON           |     |
| RKE-PANIC      | When PANIC button of Intelligent Key is not pressed                               | OFF          | N   |
|                | When PANIC button of Intelligent Key is pressed                                   | ON           |     |
| RKE-P/W OPEN   | When UNLOCK button of Intelligent Key is not pressed and held                     | OFF          | O   |
|                | When UNLOCK button of Intelligent Key is pressed and held                         | ON           |     |
| RKE-MODE CHG   | When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously | OFF          | P   |
|                | When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously     | ON           |     |
| OPTICAL SENSOR | When outside of the vehicle is bright   | Close to 5 V | P   |
|                | When outside of the vehicle is dark   | Close to 0 V |     |
| REQ SW -DR     | When front door request switch is not pressed (driver side)                       | OFF          |     |
|                | When front door request switch is pressed (driver side)                           | ON           |     |
| REQ SW -AS     | When front door request switch is not pressed (passenger side)                    | OFF          |     |
|                | When front door request switch is pressed (passenger side)                        | ON           |     |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Monitor Item  | Condition   | Value/Status                      |
|---------------|---|-----------------------------------|
| REQ SW -RL    | When rear door request switch is not pressed (driver side)    | OFF                               |
|               | When rear door request switch is pressed (driver side)        | ON                                |
| REQ SW -RR    | When rear door request switch is not pressed (passenger side) | OFF                               |
|               | When rear door request switch is pressed (passenger side)     | ON                                |
| REQ SW -BD/TR | When trunk opener request switch is not pressed               | OFF                               |
|               | When trunk opener request switch is pressed                   | ON                                |
| PUSH SW       | When engine switch (push switch) is not pressed               | OFF                               |
|               | When engine switch (push switch) is pressed                   | ON                                |
| IGN RLY2 -F/B | Ignition switch OFF or ACC                                    | OFF                               |
|               | Ignition switch ON  | ON                                |
| ACC RLY -F/B  | Ignition switch OFF   | OFF                               |
|               | Ignition switch ACC or ON                                     | ON                                |
| BRAKE SW 1    | When the brake pedal is not depressed                         | ON                                |
|               | When the brake pedal is depressed                             | OFF                               |
| DETE/CANCL SW | When selector lever is in P position                          | OFF                               |
|               | When selector lever is in any position other than P           | ON                                |
| SFT PN/N SW   | When selector lever is in any position other than P or N      | OFF                               |
|               | When selector lever is in P or N position                     | ON                                |
| UNLK SEN -DR  | Driver door UNLOCK status                                     | OFF                               |
|               | Driver door LOCK status                                       | ON                                |
| PUSH SW -IPDM | When engine switch (push switch) is not pressed               | OFF                               |
|               | When engine switch (push switch) is pressed                   | ON                                |
| IGN RLY1 -F/B | Ignition switch OFF or ACC                                    | OFF                               |
|               | Ignition switch ON  | ON                                |
| DETE SW -IPDM | When selector lever is in P position                          | OFF                               |
|               | When selector lever is in any position other than P           | ON                                |
| SFT PN -IPDM  | When selector lever is in any position other than P or N      | OFF                               |
|               | When selector lever is in P or N position                     | ON                                |
| SFT P -MET    | When selector lever is in any position other than P           | OFF                               |
|               | When selector lever is in P position                          | ON                                |
| SFT N -MET    | When selector lever is in any position other than N           | OFF                               |
|               | When selector lever is in N position                          | ON                                |
| ENGINE STATE  | Engine stopped  | STOP                              |
|               | While the engine stalls                                       | STALL                             |
|               | At engine cranking  | CRANK                             |
|               | Engine running  | RUN                               |
| VEH SPEED 1   | While driving   | Equivalent to speedometer reading |
| VEH SPEED 2   | While driving   | Equivalent to speedometer reading |
| DOOR STAT-DR  | Driver door LOCK status                                       | LOCK                              |
|               | Wait with selective UNLOCK operation (5 seconds)              | READY                             |
|               | Driver door UNLOCK status                                     | UNLK                              |
| DOOR STAT-AS  | Passenger door LOCK status                                    | LOCK                              |
|               | Wait with selective UNLOCK operation (5 seconds)              | READY                             |
|               | Passenger door UNLOCK status                                  | UNLK                              |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Monitor Item   | Condition   | Value/Status                           |     |
|----------------|---|--|-----|
| ID OK FLAG     | Ignition switch ACC or ON   | RESET                                  | A   |
|                | Ignition switch OFF   | SET                                    |     |
| PRMT ENG STRT  | When the engine start is prohibited   | RESET                                  | B   |
|                | When the engine start is permitted  | SET                                    |     |
| KEY SW -SLOT   | When Intelligent Key is not inserted into key slot  | OFF                                    | C   |
|                | When Intelligent Key is inserted into key slot  | ON                                     |     |
| RKE OPE COUN1  | During the operation of Intelligent Key   | Operation frequency of Intelligent Key |     |
| CONFIRM ID ALL | The key ID that the key slot receives does not accord with any key ID registered to BCM.        | YET                                    | D   |
|                | The key ID that the key slot receives accords with any key ID registered to BCM.                | DONE                                   |     |
| CONFIRM ID4    | The key ID that the key slot receives does not accord with the fourth key ID registered to BCM. | YET                                    | E   |
|                | The key ID that the key slot receives accords with the fourth key ID registered to BCM.         | DONE                                   | F   |
| CONFIRM ID3    | The key ID that the key slot receives does not accord with the third key ID registered to BCM.  | YET                                    | G   |
|                | The key ID that the key slot receives accords with the third key ID registered to BCM.          | DONE                                   |     |
| CONFIRM ID2    | The key ID that the key slot receives does not accord with the second key ID registered to BCM. | YET                                    | H   |
|                | The key ID that the key slot receives accords with the second key ID registered to BCM.         | DONE                                   |     |
| CONFIRM ID1    | The key ID that the key slot receives does not accord with the first key ID registered to BCM.  | YET                                    | I   |
|                | The key ID that the key slot receives accords with the first key ID registered to BCM.          | DONE                                   | J   |
| TP 4           | The ID of fourth key is not registered to BCM   | YET                                    |     |
|                | The ID of fourth key is registered to BCM   | DONE                                   | K   |
| TP 3           | The ID of third key is not registered to BCM  | YET                                    |     |
|                | The ID of third key is registered to BCM  | DONE                                   |     |
| TP 2           | The ID of second key is not registered to BCM   | YET                                    | EXL |
|                | The ID of second key is registered to BCM   | DONE                                   |     |
| TP 1           | The ID of first key is not registered to BCM  | YET                                    |     |
|                | The ID of first key is registered to BCM  | DONE                                   | M   |
| AIR PRESS FL   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of front LH tire          |     |
| AIR PRESS FR   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of front RH tire          | N   |
| AIR PRESS RR   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of rear RH tire           | O   |
| AIR PRESS RL   | Ignition switch ON (only when the signal from the transmitter is received)                      | Air pressure of rear LH tire           |     |
| ID REGST FL1   | When ID of front LH tire transmitter is registered  | DONE                                   | P   |
|                | When ID of front LH tire transmitter is not registered  | YET                                    |     |
| ID REGST FR1   | When ID of front RH tire transmitter is registered  | DONE                                   |     |
|                | When ID of front RH tire transmitter is not registered  | YET                                    |     |
| ID REGST RR1   | When ID of rear RH tire transmitter is registered   | DONE                                   |     |
|                | When ID of rear RH tire transmitter is not registered   | YET                                    |     |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Monitor Item | Condition   | Value/Status |
|--------------|---|--------------|
| ID REGST RL1 | When ID of rear LH tire transmitter is registered     | DONE         |
|              | When ID of rear LH tire transmitter is not registered | YET          |
| WARNING LAMP | Tire pressure indicator OFF                           | OFF          |
|              | Tire pressure indicator ON                            | ON           |
| BUZZER       | Tire pressure warning alarm is not sounding           | OFF          |
|              | Tire pressure warning alarm is sounding               | ON           |

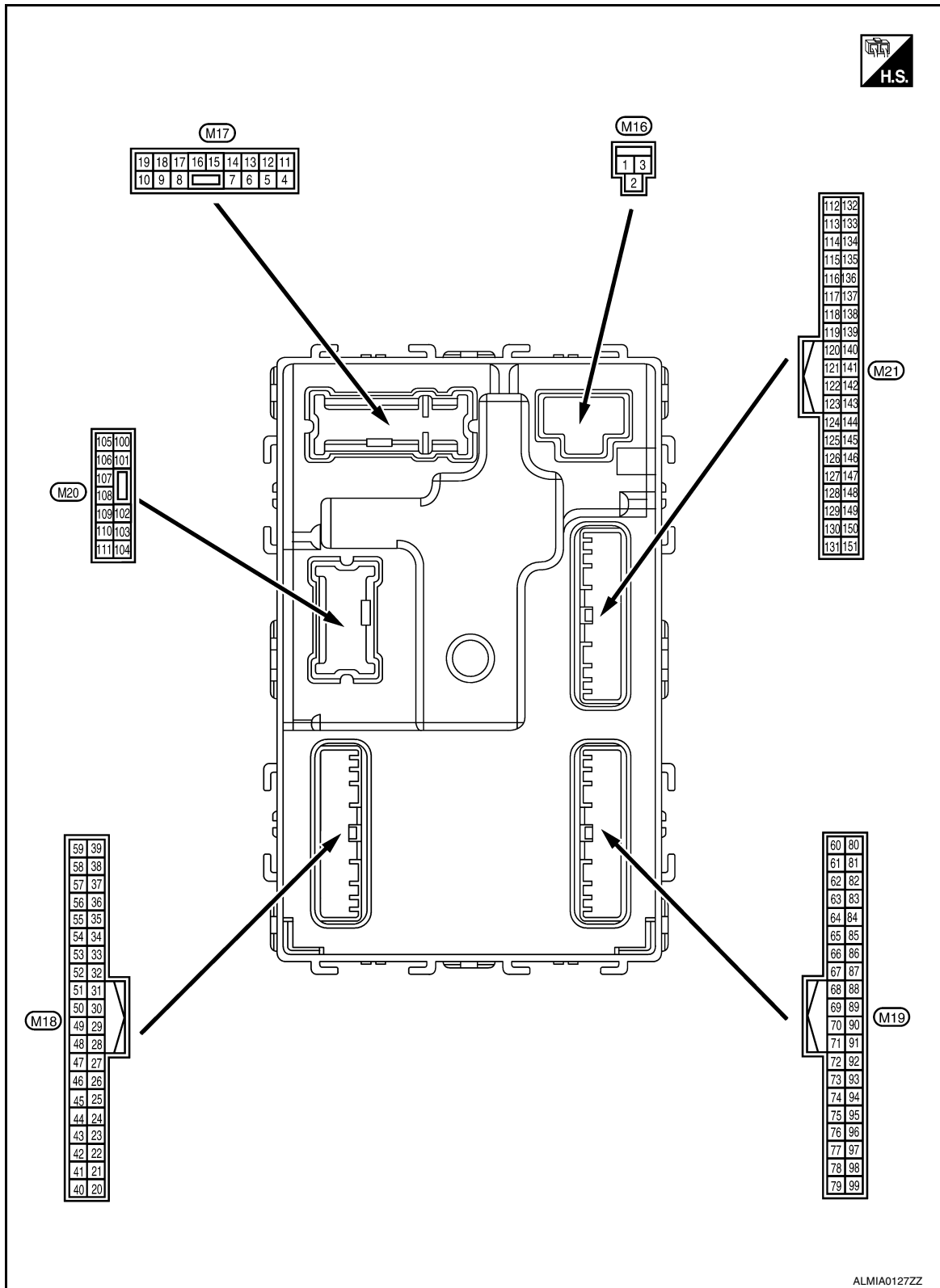
# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

## Terminal Layout

INFOID:000000010070059



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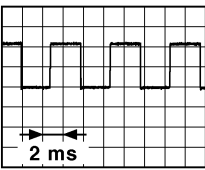
## Physical Values

INFOID:000000010070060

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

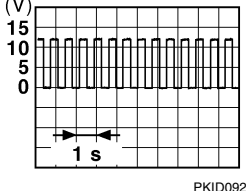
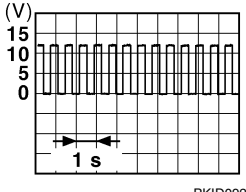
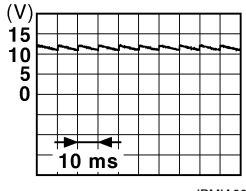
[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                                     |                  | Condition  |   | Value<br>(Approx.)   |
|------------------------------|--------|---|------------------|--|---|--|
|                              |        | Signal name                                     | Input/<br>Output |  |   |  |
| (+)                          | (-)    |   |                  |  |   |  |
| 1<br>(W/B)                   | Ground | Battery power supply                            | Input            | Ignition switch OFF  |   | Battery voltage  |
| 2<br>(R/Y)                   | Ground | Battery power supply output                     | Output           | Ignition switch OFF  |   | Battery voltage  |
| 3<br>(L/W)                   | Ground | Ignition power supply output                    | Output           | Ignition switch ON   |   | Battery voltage  |
| 4<br>(P/W)                   | Ground | Interior room lamp power supply                 | Output           | After passing the interior room lamp battery saver operation time                |   | 0V   |
|                              |        |   |                  | Any other time after passing the interior room lamp battery saver operation time |   | Battery voltage  |
| 5<br>(G)                     | Ground | Front door RH UNLOCK                            | Output           | Front door RH  | UNLOCK (actuator is activated)                | Battery voltage  |
|                              |        |   |                  |  | Other than UNLOCK (actuator is not activated) | 0V   |
| 7<br>(R/W)                   | Ground | Step lamp                                       | Output           | Step lamp  | ON  | 0V   |
|                              |        |   |                  |  | OFF   | Battery voltage  |
| 8<br>(V)                     | Ground | All doors LOCK                                  | Output           | All doors  | LOCK (actuator is activated)                  | Battery voltage  |
|                              |        |   |                  |  | Other than LOCK (actuator is not activated)   | 0V   |
| 9<br>(L)                     | Ground | Front door LH UNLOCK                            | Output           | Front door LH  | UNLOCK (actuator is activated)                | Battery voltage  |
|                              |        |   |                  |  | Other than UNLOCK (actuator is not activated) | 0V   |
| 10<br>(G)                    | Ground | Rear door RH and rear door LH UNLOCK            | Output           | Rear door RH and rear door LH  | UNLOCK (actuator is activated)                | Battery voltage  |
|                              |        |   |                  |  | Other than UNLOCK (actuator is not activated) | 0V   |
| 11<br>(Y/R)                  | Ground | Battery power supply                            | Input            | Ignition switch OFF  |   | Battery voltage  |
| 13<br>(B)                    | Ground | Ground  | —                | Ignition switch ON   |   | 0V   |
| 14<br>(GR/W)                 | Ground | Engine switch (push switch) illumination ground | Input            | Tail lamp  | OFF   | 0V   |
|                              |        |   |                  |  | ON  | <p><b>NOTE:</b><br/>When the illumination brightening/dimming level is in the neutral position</p>  <p style="text-align: right; font-size: small;">JSNIA0010GB</p> |
| 15<br>(Y/L)                  | Ground | ACC indicator lamp                              | Output           | Ignition switch  | OFF   | Battery voltage  |
|                              |        |   |                  |  | ACC or ON                                     | 0V   |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

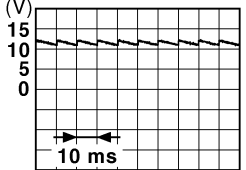
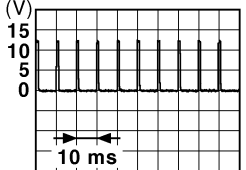

| Terminal No.<br>(Wire color) |        | Description   |                  | Condition  |  | Value<br>(Approx.)   |
|------------------------------|--------|---|------------------|--|--|--|
| (+)                          | (-)    | Signal name   | Input/<br>Output |  |  |  |
| 17<br>(G/B)                  | Ground | Turn signal (RH)                                    | Output           | Ignition switch<br>ON                              | Turn signal switch OFF                     | 0V   |
|                              |        |   |                  |  | Turn signal switch RH                      |  <p style="text-align: center;">6.5 V</p>   |
| 18<br>(G/Y)                  | Ground | Turn signal (LH)                                    | Output           | Ignition switch<br>ON                              | Turn signal switch OFF                     | 0V   |
|                              |        |   |                  |  | Turn signal switch LH                      |  <p style="text-align: center;">6.5 V</p>   |
| 19<br>(Y)                    | Ground | Room lamp timer<br>control                          | Output           | Interior room<br>lamp                              | OFF  | Battery voltage  |
|                              |        |   |                  |  | ON   | 0V   |
| 21<br>(P/B)                  | Ground | Optical sensor signal                               | Input            | Ignition switch<br>ON                              | When outside of the vehi-<br>cle is bright | Close to 5V  |
|                              |        |   |                  |  | When outside of the vehi-<br>cle is dark   | Close to 0V  |
| 24<br>(R/W)                  | Ground | Stop lamp switch 1                                  | Input            | —  | —  | Battery voltage  |
| 26<br>(O/L)                  | Ground | Stop lamp switch 2                                  | Input            | Stop lamp switch                                   | OFF (brake pedal is re-<br>leased)         | 0V   |
|                              |        |   |                  |  | ON (brake pedal is de-<br>pressed)         | Battery voltage  |
| 27<br>(O)                    | Ground | Front door lock as-<br>sembly LH (unlock<br>sensor) | Input            | Front door LH                                      | LOCK status                                |  <p style="text-align: center;">11.8V</p> |
|                              |        |   |                  |  | UNLOCK status                              | 0V   |
| 29<br>(Y)                    | Ground | Key slot switch                                     | Input            | When Intelligent Key is inserted into key slot     | —  | Battery voltage  |
|                              |        |   |                  | When Intelligent Key is not inserted into key slot | —  | 0V   |
| 31<br>(G)                    | Ground | Rear window defog-<br>ger feedback signal           | Input            | Rear window de-<br>fogger switch                   | OFF  | 0V   |
|                              |        |   |                  |  | ON   | Battery voltage  |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

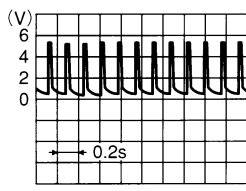
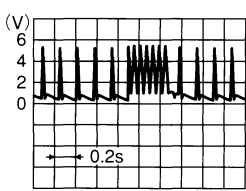
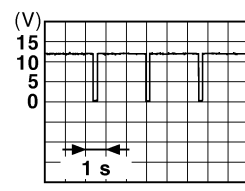
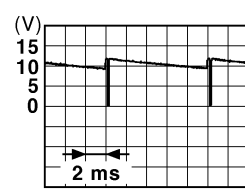
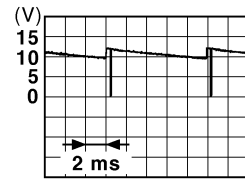
[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                              |                  | Condition                                |                                 | Value<br>(Approx.)  |
|------------------------------|--------|--|------------------|--|---------------------------------|---|
| (+)                          | (-)    | Signal name                              | Input/<br>Output |  |                                 |   |
| 32<br>(R/B)                  | Ground | Front door RH switch                     | Input            | Front door RH switch                     | OFF (when front door RH closes) |  <p style="text-align: right; font-size: small;">JPMA0011GB</p> <p style="text-align: center;">11.8 V</p>  |
|                              |        |  |                  |  | ON (when front door RH opens)   | 0V  |
| 37<br>(O)                    | Ground | Trunk lid opener cancel switch           | Input            | Trunk lid opener cancel switch           | CANCEL                          |  <p style="text-align: right; font-size: small;">JPMA0012GB</p> <p style="text-align: center;">1.1V</p>    |
|                              |        |  |                  |  | ON                              | 0V  |
| 38<br>(GR/W)                 | Ground | Rear window defogger ON signal           | Input            | Rear window defogger switch              | OFF                             | 5V  |
|                              |        |  |                  |  | ON                              | 0V  |
| 40<br>(Y/G)                  | Ground | Power window serial link                 | Input/<br>Output | Ignition switch ON                       | Ignition switch ON              |  <p style="text-align: right; font-size: small;">JPMA0013GB</p> <p style="text-align: center;">10.2V</p> |
|                              |        |  |                  |  | Ignition switch OFF or ACC      | 0V  |
| 41<br>(W)                    | Ground | Engine switch (push switch) illumination | Output           | Engine switch (push switch) illumination | ON                              | 5.5V  |
|                              |        |  |                  |  | OFF                             | 0V  |
| 42<br>(R)                    | Ground | LOCK indicator lamp                      | Output           | LOCK indicator lamp                      | ON                              | 0V  |
|                              |        |  |                  |  | OFF                             | Battery voltage   |
| 45<br>(P)                    | Ground | Receiver & sensor ground                 | Input            | Ignition switch ON                       | 0V                              |   |
| 46<br>(V/W)                  | Ground | Receiver & sensor power supply output    | Output           | Ignition switch                          | OFF                             | 0V  |
|                              |        |  |                  |  | ACC or ON                       | 5.0V  |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

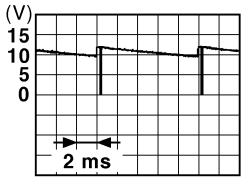
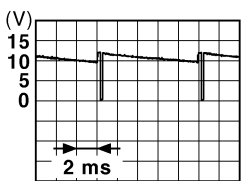
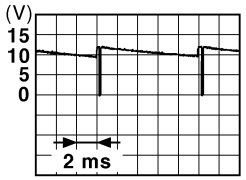
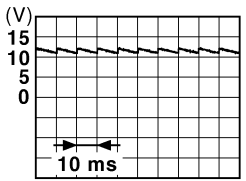
| Terminal No.<br>(Wire color) |                       | Description                                     |                  | Condition   | Value<br>(Approx.)   |
|------------------------------|-----------------------|---|------------------|---|--|
| (+)                          | (-)                   | Signal name                                     | Input/<br>Output |   |  |
| 47<br>(G/O)                  | Ground                | Tire pressure receiver signal                   | Input/<br>Output | Ignition switch ON  | Standby state<br><br>OCC3881D |
|                              |                       |   |                  | When receiving the signal from the transmitter<br><br>OCC3880D   |  |
| 48<br>(R/G)                  | Ground                | Selector lever transmission range switch signal | Input            | Selector lever  | P or N position<br>12.0V   |
|                              |                       |   |                  | Except P and N positions<br>0V  |  |
| 49<br>(L/O)                  | Ground                | Security indicator signal                       | Output           | Security indicator  | ON<br>0V   |
|                              |                       |   |                  | Blinking<br><br>11.3V<br>JPMA0014GB   |  |
| 50<br>(LG/B)                 | Ground                | Combination switch OUTPUT 5                     | Input            | Combination switch (Wiper intermittent dial 4)  | All switch OFF<br>0V   |
|                              |                       |   |                  | Lighting switch 1ST   | <br>10.7V<br>JPMA0031GB     |
|                              |                       |   |                  | Lighting switch high-beam   |  |
|                              |                       |   |                  | Lighting switch 2ND   |  |
| Turn signal switch RH        | Turn signal switch RH |   |                  |   |  |
| 51<br>(L/W)                  | Ground                | Combination switch OUTPUT 1                     | Input            | Combination switch  | All switch OFF (Wiper intermittent dial 4)<br>0V   |
|                              |                       |   |                  | Front wiper switch HI (Wiper intermittent dial 4)<br>Any of the conditions below with all switch OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 3<br>• Wiper intermittent dial 6<br>• Wiper intermittent dial 7<br><br>10.7V<br>JPMA0032GB |  |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

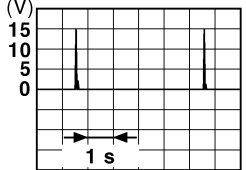
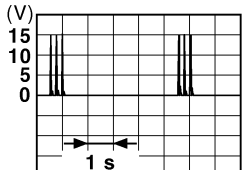
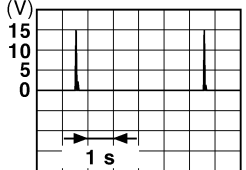
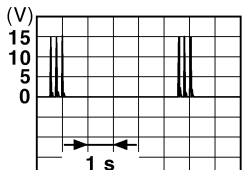
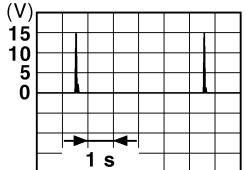
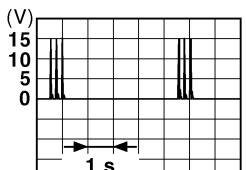
| Terminal No.<br>(Wire color) |        | Description                             |                  | Condition   |   | Value<br>(Approx.)   |
|------------------------------|--------|---|------------------|---|---|--|
| (+)                          | (-)    | Signal name                             | Input/<br>Output |   |   |  |
| 52<br>(G/B)                  | Ground | Combination switch<br>OUTPUT 2          | Input            | Combination<br>switch                                     | All switch OFF<br>(Wiper intermittent dial 4)   | 0V   |
|                              |        |   |                  |   | Front washer switch ON<br>(Wiper intermittent dial 4)   |  <p style="text-align: center;">10.7V</p>   |
|                              |        |   |                  |   | Any of the conditions below<br>with all switch OFF  |  |
|                              |        |   |                  |   | <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul> |  |
| 53<br>(LG/<br>R)             | Ground | Combination switch<br>OUTPUT 3          | Input            | Combination<br>switch<br>(Wiper intermit-<br>tent dial 4) | All switch OFF  | 0V   |
|                              |        |   |                  |   | Front wiper switch INT  |  <p style="text-align: center;">10.7V</p>   |
|                              |        |   |                  |   | Front wiper switch LO   |  |
|                              |        |   |                  |   | Lighting switch AUTO  |  |
| 54<br>(G/Y)                  | Ground | Combination switch<br>OUTPUT 4          | Input            | Combination<br>switch<br>(Wiper intermit-<br>tent dial 4) | All switch OFF  | 0V   |
|                              |        |   |                  |   | Front fog lamp switch ON  |  <p style="text-align: center;">10.7V</p> |
|                              |        |   |                  |   | Lighting switch 2ND   |  |
|                              |        |   |                  |   | Lighting switch flash-to-<br>pass   |  |
|                              |        |   |                  |   | Turn signal switch LH   |  |
| 57<br>(W)                    | Ground | Tire pressure warn-<br>ing check switch | Input            | —   | —   | 5V   |
| 58<br>(SB)                   | Ground | Front door LH switch                    | Input            | Front door LH<br>switch                                   | OFF (front door LH<br>CLOSE)  |  <p style="text-align: center;">11.8V</p> |
|                              |        |   |                  |   | ON (front door LH OPEN)   | 0V   |
| 59<br>(G/R)                  | Ground | Rear window defog-<br>ger relay         | Output           | Rear window de-<br>fogger                                 | Active  | Battery voltage  |
|                              |        |   |                  |   | Not activated   | 0V   |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                         |                  | Condition  | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------------|------------------|--|---|
| (+)                          | (-)    | Signal name                         | Input/<br>Output |  |   |
| 60<br>(B/R)                  | Ground | Front console antenna 2 (-)         | Output           | Ignition switch OFF  |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p>   |
|                              |        |                                     |                  | When Intelligent Key is not in the passenger compartment                   |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p>   |
| 61<br>(W/R)                  | Ground | Center console antenna 2 (+)        | Output           | Ignition switch OFF  |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p>  |
|                              |        |                                     |                  | When Intelligent Key is not in the passenger compartment                   |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p> |
| 62<br>(V)                    | Ground | Front outside handle RH antenna (-) | Output           | When the front door RH request switch is operated with ignition switch OFF |  <p style="text-align: right; font-size: small;">JMKIA0062GB</p> |
|                              |        |                                     |                  | When Intelligent Key is not in the antenna detection area                  |  <p style="text-align: right; font-size: small;">JMKIA0063GB</p> |

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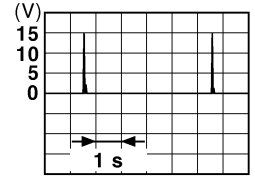
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# BCM (BODY CONTROL MODULE)

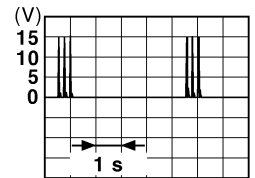
< ECU DIAGNOSIS INFORMATION >

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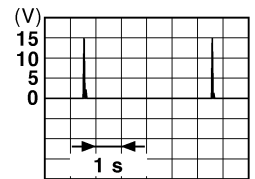
| Terminal No.<br>(Wire color) |        | Description                            |                  | Condition  | Value<br>(Approx.)  |
|------------------------------|--------|--|------------------|--|---|
| (+)                          | (-)    | Signal name                            | Input/<br>Output |  |   |
| 63<br>(P)                    | Ground | Front outside handle<br>RH antenna (+) | Output           | When the front<br>door RH request<br>switch is operat-<br>ed with ignition<br>switch OFF | When Intelligent Key is in<br>the antenna detection<br>area     |
|                              |        |  |                  | When Intelligent Key is not<br>in the antenna detection<br>area                          | When Intelligent Key is not<br>in the antenna detection<br>area |
| 64<br>(V)                    | Ground | Front outside handle<br>LH antenna (-) | Output           | When the front<br>door LH request<br>switch is operat-<br>ed with ignition<br>switch OFF | When Intelligent Key is in<br>the antenna detection<br>area     |
|                              |        |  |                  | When Intelligent Key is not<br>in the antenna detection<br>area                          | When Intelligent Key is not<br>in the antenna detection<br>area |
| 65<br>(P)                    | Ground | Front outside handle<br>LH antenna (+) | Output           | When the front<br>door LH request<br>switch is operat-<br>ed with ignition<br>switch OFF | When Intelligent Key is in<br>the antenna detection<br>area     |
|                              |        |  |                  | When Intelligent Key is not<br>in the antenna detection<br>area                          | When Intelligent Key is not<br>in the antenna detection<br>area |



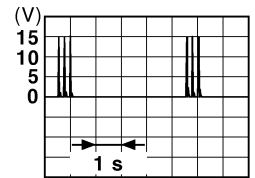
JMKIA0062GB



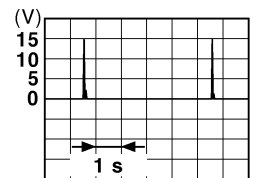
JMKIA0063GB



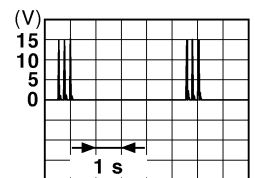
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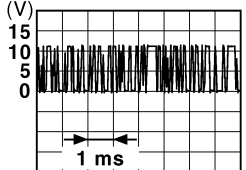
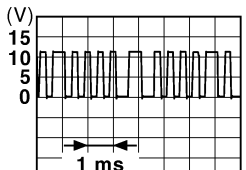
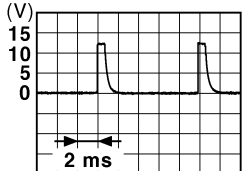

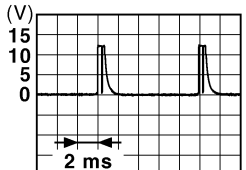


JMKIA0063GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                             |                  | Condition                                       |  | Value<br>(Approx.)  |
|------------------------------|--------|---|------------------|---|--|---|
|                              |        | Signal name                             | Input/<br>Output |   |  |   |
| (+)                          | (-)    |   |                  |   |  |   |
| 68<br>(G/O)                  | Ground | NATS antenna amp<br>(built in key slot) | Input/<br>Output | During waiting                                  | Ignition switch is pressed<br>while inserting the Intelli-<br>gent Key into the key slot.  | Just after pressing ignition<br>switch. Pointer of tester should<br>move.   |
| 69<br>(O)                    | Ground | NATS antenna amp<br>(built in key slot) | Input/<br>Output | During waiting                                  | Ignition switch is pressed<br>while inserting the Intelli-<br>gent Key into the key slot.  | Just after pressing ignition<br>switch. Pointer of tester should<br>move.   |
| 70<br>(R/B)                  | Ground | Ignition relay-2 con-<br>trol           | Output           | Ignition switch                                 | OFF or ACC   | 0V  |
|                              |        |   |                  |   | ON   | Battery voltage   |
| 71<br>(L/O)                  | Ground | Remote keyless entry<br>receiver signal | Input/<br>Output | During waiting                                  |  |  <p style="text-align: right; font-size: small;">JMKIA0064GB</p>   |
|                              |        |   |                  | When operating either button on Intelligent Key |  |  <p style="text-align: right; font-size: small;">JMKIA0065GB</p>  |
| 75<br>(R/Y)                  | Ground | Combination switch<br>INPUT 5           | Output           | Combination<br>switch                           | All switch OFF<br>(Wiper intermittent dial 4)  |  <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4V</p> |
|                              |        |   |                  |   | Front fog lamp switch ON<br>(Wiper intermittent dial 4)  |  <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3V</p> |
|                              |        |   |                  |   | Any of the conditions below<br>with all switch OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 6<br>• Wiper intermittent dial 7 |  <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3V</p> |

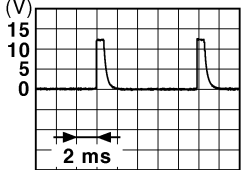
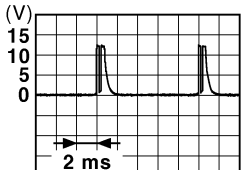

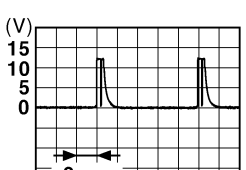
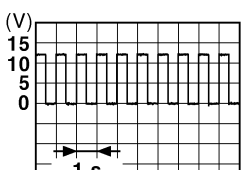
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

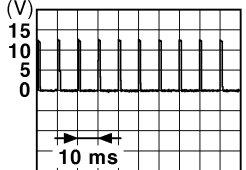
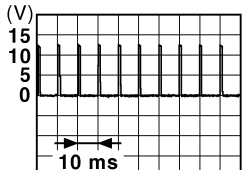
[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                   |                  | Condition                  | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------|------------------|----------------------------|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output |                            |   |
| 76<br>(R/G)                  | Ground | Combination switch<br>INPUT 3 | Output           | Combination<br>switch      | All switch OFF<br>(Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0041GB<br/>1.4V</p> </div>  |
|                              |        |                               |                  |                            | Lighting switch high-beam<br>(Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0036GB<br/>1.3V</p> </div>   |
|                              |        |                               |                  |                            | Lighting switch 2ND<br>(Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0037GB<br/>1.3V</p> </div>  |
|                              |        |                               |                  |                            | Any of the conditions below<br>with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 3</li> </ul> <div style="text-align: right;">  <p style="text-align: right; font-size: small;">JPMIA0040GB<br/>1.3V</p> </div> |
| 78<br>(P)                    | Ground | CAN-L                         | Input/<br>Output | —                          | —   |
| 79<br>(L)                    | Ground | CAN-H                         | Input/<br>Output | —                          | —   |
| 80<br>(R/L)                  | Ground | Key slot illumination         | Output           | Key slot illumina-<br>tion | OFF <div style="text-align: right;"> <p style="text-align: center;">Battery voltage</p>  <p style="text-align: right; font-size: small;">JPMIA0015GB<br/>6.5V</p> </div>   |
|                              |        |                               |                  |                            | Blinking <div style="text-align: right;"> <p style="text-align: center;">0V</p> </div>  |
| 81<br>(LG)                   | Ground | ON indicator lamp             | Output           | Ignition switch            | OFF or ACC <div style="text-align: right;"> <p style="text-align: center;">0V</p> </div>  |
|                              |        |                               |                  |                            | ON <div style="text-align: right;"> <p style="text-align: center;">Battery voltage</p> </div>   |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                                |                  | Condition                    |                           | Value<br>(Approx.)   |
|------------------------------|--------|--|------------------|------------------------------|---------------------------|--|
|                              |        | Signal name                                | Input/<br>Output |                              |                           |  |
| (+)                          | (-)    |  |                  |                              |                           |  |
| 83<br>(L)                    | Ground | ACC relay control                          | Output           | Ignition switch              | OFF                       | 0V   |
|                              |        |  |                  |                              | ACC or ON                 | Battery voltage  |
| 84<br>(Y/R)                  | Ground | CVT shift selector                         | Output           | —                            |                           | Battery voltage  |
| 87<br>(G/B)                  | Ground | Selector lever P position switch           | Input            | Selector lever               | P position                | 0V   |
|                              |        |  |                  |                              | Any position other than P | Battery voltage  |
| 88<br>(R)                    | Ground | Front door RH request switch               | Input            | Front door RH request switch | ON (pressed)              | 0V   |
|                              |        |  |                  |                              | OFF (not pressed)         |  <p style="text-align: center;">1.0V</p>  |
| 89<br>(R)                    | Ground | Front door LH request switch               | Input            | Front door LH request switch | ON (pressed)              | 0V   |
|                              |        |  |                  |                              | OFF (not pressed)         |  <p style="text-align: center;">1.0V</p> |
| 90<br>(Y)                    | Ground | Blower fan motor relay control             | Output           | Ignition switch              | OFF or ACC                | 0V   |
|                              |        |  |                  |                              | ON                        | Battery voltage  |
| 91<br>(L/R)                  | Ground | Remote keyless entry receiver power supply | Output           | Ignition switch OFF          |                           | Battery voltage  |

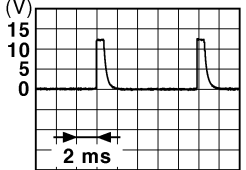

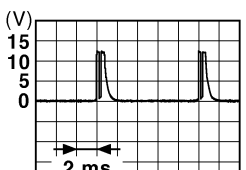
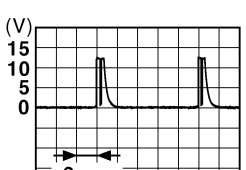
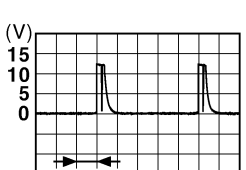
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EXL

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

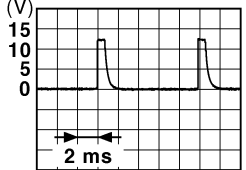
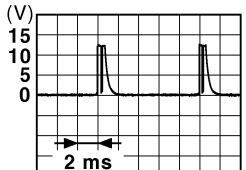
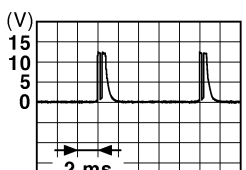
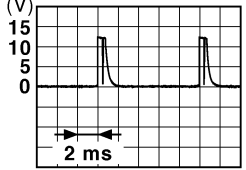
[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                   |                  | Condition              | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------|------------------|------------------------|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output |                        |   |
| 95<br>(R/W)                  | Ground | Combination switch<br>INPUT 1 | Output           | All switch OFF         | <br><small>JPMIA0041GB</small><br>1.4V   |
|                              |        |                               |                  | Turn signal switch LH  | <br><small>JPMIA0037GB</small><br>1.3V   |
|                              |        |                               |                  | Turn signal switch RH  | <br><small>JPMIA0036GB</small><br>1.3V  |
|                              |        |                               |                  | Front wiper switch LO  | <br><small>JPMIA0038GB</small><br>1.3V |
|                              |        |                               |                  | Front washer switch ON | <br><small>JPMIA0039GB</small><br>1.3V |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

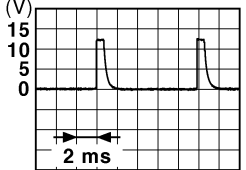

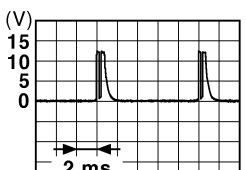
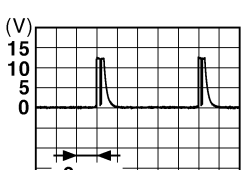
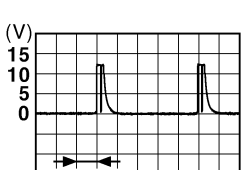
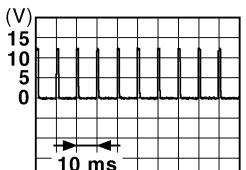
| Terminal No.<br>(Wire color) |        | Description                   |                                 | Condition   | Value<br>(Approx.)  |
|------------------------------|--------|-------------------------------|---------------------------------|---|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output                |   |   |
| 96<br>(P/B)                  | Ground | Combination switch<br>INPUT 4 | Output<br>Combination<br>switch | All switch OFF<br>(Wiper intermittent dial 4)       |  <p>1.4V</p>   |
|                              |        |                               |                                 | Lighting switch AUTO<br>(Wiper intermittent dial 4) |  <p>1.3V</p>   |
|                              |        |                               |                                 | Lighting switch 1ST<br>(Wiper intermittent dial 4)  |  <p>1.3V</p>  |
|                              |        |                               |                                 | Any of the conditions below<br>with all switch OFF  | <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>  <p>1.3V</p> |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                   |                  | Condition  | Value<br>(Approx.)            |   |
|------------------------------|--------|-------------------------------|------------------|--|-------------------------------|---|
| (+)                          | (-)    | Signal name                   | Input/<br>Output |  |                               |   |
| 97<br>(R/B)                  | Ground | Combination switch<br>INPUT 2 | Output           | Combination<br>switch<br>(Wiper intermittent dial 4) | All switch OFF                | <br><small>JPMIA0041GB</small><br>1.4V   |
|                              |        |                               |                  |  | Lighting switch flash-to-pass | <br><small>JPMIA0037GB</small><br>1.3V   |
|                              |        |                               |                  |  | Lighting switch 2ND           | <br><small>JPMIA0036GB</small><br>1.3V  |
|                              |        |                               |                  |  | Front wiper switch INT        | <br><small>JPMIA0038GB</small><br>1.3V |
|                              |        |                               |                  |  | Front wiper switch HI         | <br><small>JPMIA0040GB</small><br>1.3V |
|                              |        |                               |                  |  | Pressed                       | 0 V   |
| 98<br>(G/O)                  | Ground | Hazard switch                 | Input            | Hazard switch  | Not pressed                   | <br><small>JPMIA0012GB</small><br>1.1V |



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

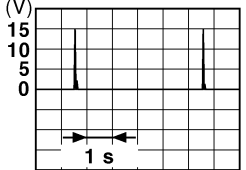
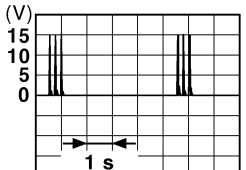
| Terminal No.<br>(Wire color) |        | Description              |                  | Condition           | Value<br>(Approx.)                                       |                 |
|------------------------------|--------|--------------------------|------------------|---------------------|--|-----------------|
|                              |        | Signal name              | Input/<br>Output |                     |  |                 |
| (+)                          | (-)    |                          |                  |                     |  |                 |
| 103<br>(V)                   | Ground | Trunk lid opening.       | Output           | Trunk lid           | Open (trunk lid opener actuator is activated)            | Battery voltage |
|                              |        |                          |                  |                     | Close (trunk lid opener actuator is not activated)       | 0V              |
| 110<br>(V/W)                 | Ground | Trunk room lamp          | Output           | Trunk room lamp     | ON   | 0V              |
|                              |        |                          |                  |                     | OFF  | Battery voltage |
| 114<br>(B)                   | Ground | Trunk room antenna 1 (-) | Output           | Ignition switch OFF | When Intelligent Key is in the passenger compartment     |                 |
|                              |        |                          |                  |                     | When Intelligent Key is not in the passenger compartment |                 |
| 115<br>(W)                   | Ground | Trunk room antenna 1 (+) | Output           | Ignition switch OFF | When Intelligent Key is in the passenger compartment     |                 |
|                              |        |                          |                  |                     | When Intelligent Key is not in the passenger compartment |                 |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                       |                  | Condition  | Value<br>(Approx.)  |
|------------------------------|--------|-----------------------------------|------------------|--|---|
| (+)                          | (-)    | Signal name                       | Input/<br>Output |  |   |
| 118<br>(L/O)                 | Ground | Rear bumper antenna (-)           | Output           | When the trunk lid request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area                               |
|                              |        |                                   |                  | When Intelligent Key is not in the antenna detection area              |  |
| 119<br>(BR/W)                | Ground | Rear bumper antenna (+)           | Output           | When the trunk lid request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area                               |
|                              |        |                                   |                  | When Intelligent Key is not in the antenna detection area              |  |
| 127<br>(BR/W)                | Ground | Ignition relay (IPDM E/R) control | Output           | Ignition switch  | OFF or ACC  |
|                              |        |                                   |                  |  | ON  |
| 130<br>(W)                   | Ground | Trunk room lamp switch            | Input            | Trunk room lamp switch   | OFF (trunk is closed)   |
|                              |        |                                   |                  |  | ON (trunk is open)  |
| 132<br>(R)                   | Ground | Starter motor relay control       | Output           | Ignition switch ON   | When selector lever is in P or N position and the brake is depressed                |
|                              |        |                                   |                  |  | When selector lever is in P or N position and the brake is not depressed            |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                 |                  | Condition                   | Value<br>(Approx.)     |                             |
|------------------------------|--------|-----------------------------|------------------|-----------------------------|------------------------|-----------------------------|
|                              |        | Signal name                 | Input/<br>Output |                             |                        |                             |
| (+)                          | (-)    |                             |                  |                             |                        |                             |
| 140<br>(BR)                  | Ground | Engine switch (push switch) | Input            | Engine switch (push switch) | Pressed<br>Not pressed | 0V<br>Battery voltage       |
|                              |        |                             |                  | 141<br>(BR)                 | Ground                 | Trunk opener request switch |
| 144<br>(GR)                  | Ground | Request switch buzzer       | Output           |                             |                        |                             |
| 147<br>(L/R)                 | Ground | Trunk lid opener switch     | Input            | Trunk lid opener switch     | Pressed<br>Not pressed | 0V<br>Battery voltage       |
|                              |        |                             |                  | 148<br>(R/W)                | Ground                 | Rear door RH switch         |
| 149<br>(R/B)                 | Ground | Rear door LH switch         | Input            |                             |                        |                             |

## Fail Safe

INFOID:000000010070061

| Display contents of CONSULT | Fail-safe               | Cancellation   |
|-----------------------------|-------------------------|--|
| B2190: NATS ANTENNA AMP     | Inhibit engine cranking | Erase DTC  |
| B2191: DIFFERENCE OF KEY    | Inhibit engine cranking | Erase DTC  |
| B2192: ID DISCORD BCM-ECM   | Inhibit engine cranking | Erase DTC  |
| B2193: CHAIN OF BCM-ECM     | Inhibit engine cranking | Erase DTC  |
| B2195: ANTI-SCANNING        | Inhibit engine cranking | Erase DTC  |
| B2560: STARTER CONT RELAY   | Inhibit engine cranking | 500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Starter control relay signal</li> <li>• Starter relay status signal</li> </ul> |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Display contents of CONSULT | Fail-safe   | Cancellation  |
|-----------------------------|---|---|
| B2562: LO VOLTAGE           | Inhibit engine cranking   | 100 ms after the power supply voltage increases to more than 8.8 V  |
| B2608: STARTER RELAY        | Inhibit engine cranking   | 500 ms after the following signal communication status becomes consistent<br><ul style="list-style-type: none"> <li>• Starter motor relay control signal</li> <li>• Starter relay status signal (CAN)</li> </ul>  |
| B260A: IGNITION RELAY       | Inhibit engine cranking   | 500 ms after the following conditions are fulfilled<br><ul style="list-style-type: none"> <li>• IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>• Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>• Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul> |
| B260F: ENG STATE SIG LOST   | Maintains the power supply position attained at the time of DTC detection | When any of the following conditions is fulfilled<br><ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives engine status signal (CAN)</li> </ul>   |
| B2617: STARTER RELAY CIRC   | Inhibit engine cranking   | 1 second after the starter motor relay control inside BCM becomes normal  |
| B2618: BCM                  | Inhibit engine cranking   | 1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal  |
| B26E1: ENG STATE NO RECIV   | Inhibit engine cranking   | When any of the following conditions are fulfilled<br><ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives engine status signal (CAN)</li> </ul>  |

## DTC Inspection Priority Chart

INFOID:0000000010070062

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

| Priority | DTC   |
|----------|---|
| 1        | <ul style="list-style-type: none"> <li>• B2562: LO VOLTAGE</li> </ul>   |
| 2        | <ul style="list-style-type: none"> <li>• U1000: CAN COMM CIRCUIT</li> <li>• U1010: CONTROL UNIT (CAN)</li> </ul>  |
| 3        | <ul style="list-style-type: none"> <li>• B2190: NATS ANTENNA AMP</li> <li>• B2191: DIFFERENCE OF KEY</li> <li>• B2192: ID DISCORD BCM-ECM</li> <li>• B2193: CHAIN OF BCM-ECM</li> </ul>   |
| 4        | <ul style="list-style-type: none"> <li>• B2553: IGNITION RELAY</li> <li>• B2555: STOP LAMP</li> <li>• B2556: PUSH-BTN IGN SW</li> <li>• B2557: VEHICLE SPEED</li> <li>• B2560: STARTER CONT RELAY</li> <li>• B2601: SHIFT POSITION</li> <li>• B2602: SHIFT POSITION</li> <li>• B2603: SHIFT POSI STATUS</li> <li>• B2604: PNP SWITCH</li> <li>• B2605: PNP SWITCH</li> <li>• B2608: STARTER RELAY</li> <li>• B260A: IGNITION RELAY</li> <li>• B260F: ENG STATE SIG LOST</li> <li>• B2614: ACC RELAY CIRC</li> <li>• B2615: BLOWER RELAY CIRC</li> <li>• B2616: IGN RELAY CIRC</li> <li>• B2617: STARTER RELAY CIRC</li> <li>• B2618: BCM</li> <li>• B261A: PUSH-BTN IGN SW</li> <li>• B26E1: ENG STATE NO RECIV</li> <li>• C1729: VHCL SPEED SIG ERR</li> <li>• U0415: VEHICLE SPEED SIG</li> </ul> |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Priority | DTC   |
|----------|---|
| 5        | <ul style="list-style-type: none"> <li>• C1704: LOW PRESSURE FL</li> <li>• C1705: LOW PRESSURE FR</li> <li>• C1706: LOW PRESSURE RR</li> <li>• C1707: LOW PRESSURE RL</li> <li>• C1708: [NO DATA] FL</li> <li>• C1709: [NO DATA] FR</li> <li>• C1710: [NO DATA] RR</li> <li>• C1711: [NO DATA] RL</li> <li>• C1712: [CHECKSUM ERR] FL</li> <li>• C1713: [CHECKSUM ERR] FR</li> <li>• C1714: [CHECKSUM ERR] RR</li> <li>• C1715: [CHECKSUM ERR] RL</li> <li>• C1716: [PRESSDATA ERR] FL</li> <li>• C1717: [PRESSDATA ERR] FR</li> <li>• C1718: [PRESSDATA ERR] RR</li> <li>• C1719: [PRESSDATA ERR] RL</li> <li>• C1720: [CODE ERR] FL</li> <li>• C1721: [CODE ERR] FR</li> <li>• C1722: [CODE ERR] RR</li> <li>• C1723: [CODE ERR] RL</li> <li>• C1724: [BATT VOLT LOW] FL</li> <li>• C1725: [BATT VOLT LOW] FR</li> <li>• C1726: [BATT VOLT LOW] RR</li> <li>• C1727: [BATT VOLT LOW] RL</li> <li>• C1734: CONTROL UNIT</li> </ul> |
| 6        | <ul style="list-style-type: none"> <li>• B2622: INSIDE ANTENNA</li> <li>• B2623: INSIDE ANTENNA</li> </ul>  |

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## DTC Index

INFOID:0000000010070063

### NOTE:

- Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

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| CONSULT display                                      | Fail-safe | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page         |
|--|-----------|---------------------------------|---------------------------------------|------------------------|
| No DTC is detected. further testing may be required. | —         | —                               | —                                     | —                      |
| U1000: CAN COMM CIRCUIT                              | —         | —                               | —                                     | <a href="#">BCS-32</a> |
| U1010: CONTROL UNIT (CAN)                            | —         | —                               | —                                     | <a href="#">BCS-33</a> |
| U0415: VEHICLE SPEED SIG                             | —         | —                               | —                                     | <a href="#">BCS-34</a> |
| B2190: NATS ANTENNA AMP                              | ×         | —                               | —                                     | <a href="#">SEC-37</a> |
| B2191: DIFFERENCE OF KEY                             | ×         | —                               | —                                     | <a href="#">SEC-40</a> |
| B2192: ID DISCORD BCM-ECM                            | ×         | —                               | —                                     | <a href="#">SEC-41</a> |
| B2193: CHAIN OF BCM-ECM                              | ×         | —                               | —                                     | <a href="#">SEC-42</a> |
| B2553: IGNITION RELAY                                | —         | —                               | —                                     | <a href="#">PCS-46</a> |
| B2555: STOP LAMP                                     | —         | —                               | —                                     | <a href="#">SEC-43</a> |
| B2556: PUSH-BTN IGN SW                               | —         | ×                               | —                                     | <a href="#">SEC-46</a> |
| B2557: VEHICLE SPEED                                 | ×         | ×                               | —                                     | <a href="#">SEC-48</a> |
| B2560: STARTER CONT RELAY                            | ×         | ×                               | —                                     | <a href="#">SEC-49</a> |

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| CONSULT display           | Fail-safe | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page         |
|---------------------------|-----------|---------------------------------|---------------------------------------|------------------------|
| B2562: LOW VOLTAGE        | —         | —                               | —                                     | <a href="#">BCS-35</a> |
| B2601: SHIFT POSITION     | ×         | ×                               | —                                     | <a href="#">SEC-50</a> |
| B2602: SHIFT POSITION     | ×         | ×                               | —                                     | <a href="#">SEC-53</a> |
| B2603: SHIFT POSI STATUS  | ×         | ×                               | —                                     | <a href="#">SEC-56</a> |
| B2604: PNP SWITCH         | ×         | ×                               | —                                     | <a href="#">SEC-59</a> |
| B2605: PNP SWITCH         | ×         | ×                               | —                                     | <a href="#">SEC-61</a> |
| B2608: STARTER RELAY      | ×         | ×                               | —                                     | <a href="#">SEC-63</a> |
| B260A: IGNITION RELAY     | ×         | ×                               | —                                     | <a href="#">PCS-48</a> |
| B260F: ENG STATE SIG LOST | ×         | ×                               | —                                     | <a href="#">SEC-65</a> |
| B2614: ACC RELAY CIRC     | —         | ×                               | —                                     | <a href="#">PCS-50</a> |
| B2615: BLOWER RELAY CIRC  | —         | ×                               | —                                     | <a href="#">PCS-53</a> |
| B2616: IGN RELAY CIRC     | —         | ×                               | —                                     | <a href="#">PCS-56</a> |
| B2617: STARTER RELAY CIRC | ×         | ×                               | —                                     | <a href="#">SEC-67</a> |
| B2618: BCM                | ×         | ×                               | —                                     | <a href="#">PCS-59</a> |
| B261A: PUSH-BTN IGN SW    | —         | ×                               | —                                     | <a href="#">PCS-60</a> |
| B2622: INSIDE ANTENNA     | —         | —                               | —                                     | <a href="#">DLK-60</a> |
| B2623: INSIDE ANTENNA     | —         | —                               | —                                     | <a href="#">DLK-63</a> |
| B26E1: ENG STATE NO RES   | ×         | ×                               | —                                     | <a href="#">SEC-66</a> |
| C1704: LOW PRESSURE FL    | —         | —                               | ×                                     | <a href="#">WT-43</a>  |
| C1705: LOW PRESSURE FR    | —         | —                               | ×                                     | <a href="#">WT-43</a>  |
| C1706: LOW PRESSURE RR    | —         | —                               | ×                                     | <a href="#">WT-43</a>  |
| C1707: LOW PRESSURE RL    | —         | —                               | ×                                     | <a href="#">WT-43</a>  |
| C1708: [NO DATA] FL       | —         | —                               | ×                                     | <a href="#">WT-13</a>  |
| C1709: [NO DATA] FR       | —         | —                               | ×                                     | <a href="#">WT-13</a>  |
| C1710: [NO DATA] RR       | —         | —                               | ×                                     | <a href="#">WT-13</a>  |
| C1711: [NO DATA] RL       | —         | —                               | ×                                     | <a href="#">WT-13</a>  |
| C1712: [CHECKSUM ERR] FL  | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1713: [CHECKSUM ERR] FR  | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1714: [CHECKSUM ERR] RR  | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1715: [CHECKSUM ERR] RL  | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1716: [PRESSDATA ERR] FL | —         | —                               | ×                                     | <a href="#">WT-17</a>  |
| C1717: [PRESSDATA ERR] FR | —         | —                               | ×                                     | <a href="#">WT-17</a>  |
| C1718: [PRESSDATA ERR] RR | —         | —                               | ×                                     | <a href="#">WT-17</a>  |
| C1719: [PRESSDATA ERR] RL | —         | —                               | ×                                     | <a href="#">WT-17</a>  |
| C1720: [CODE ERR] FL      | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1721: [CODE ERR] FR      | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1722: [CODE ERR] RR      | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1723: [CODE ERR] RL      | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1724: [BATT VOLT LOW] FL | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1725: [BATT VOLT LOW] FR | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1726: [BATT VOLT LOW] RR | —         | —                               | ×                                     | <a href="#">WT-15</a>  |
| C1727: [BATT VOLT LOW] RL | —         | —                               | ×                                     | <a href="#">WT-15</a>  |

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| CONSULT display           | Fail-safe | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page        |
|---------------------------|-----------|---------------------------------|---------------------------------------|-----------------------|
| C1729: VHCL SPEED SIG ERR | —         | —                               | ×                                     | <a href="#">WT-19</a> |
| C1734: CONTROL UNIT       | —         | —                               | ×                                     | <a href="#">WT-20</a> |

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# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

## IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000010070064

### VALUES ON THE DIAGNOSIS TOOL

| Monitor Item  | Condition   |  | Value/Status |
|---------------|---|--|--------------|
| MOTOR FAN REQ | Engine idle speed   | Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.   | 1,2,3,4      |
| AC COMP REQ   | Engine running  | A/C switch OFF   | Off          |
|               |   | A/C switch ON (Compressor is operating)  | On           |
| TAIL&CLR REQ  | Lighting switch OFF   |  | Off          |
|               | Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated) |  | On           |
| HL LO REQ     | Lighting switch OFF   |  | Off          |
|               | Lighting switch 2ND HI or AUTO (Light is illuminated)       |  | On           |
| HL HI REQ     | Lighting switch OFF   |  | Off          |
|               | Lighting switch HI  |  | On           |
| FR FOG REQ    | Lighting switch 2ND or AUTO (Light is illuminated)          | Front fog lamp switch OFF  | Off          |
|               |   | <ul style="list-style-type: none"> <li>• Front fog lamp switch ON</li> <li>• Daytime running light activated (Only for Canada models)</li> </ul> | On           |
| FR WIP REQ    | Ignition switch ON  | Front wiper switch OFF   | STOP         |
|               |   | Front wiper switch INT   | 1LOW         |
|               |   | Front wiper switch LO  | Low          |
|               |   | Front wiper switch HI  | Hi           |
| WIP AUTO STOP | Ignition switch ON  | Front wiper stop position  | STOP P       |
|               |   | Any position other than front wiper stop position  | ACT P        |
| WIP PROT      | Ignition switch ON  | Front wiper operates normally  | Off          |
|               |   | Front wiper stops at fail-safe operation   | BLOCK        |
| IGN RLY1 -REQ | Ignition switch OFF or ACC                                  |  | Off          |
|               | Ignition switch ON  |  | On           |
| IGN RLY       | Ignition switch OFF or ACC                                  |  | Off          |
|               | Ignition switch ON  |  | On           |
| PUSH SW       | Release the push-button ignition switch                     |  | Off          |
|               | Press the push-button ignition switch                       |  | On           |
| INTER/NP SW   | Ignition switch ON  | CVT selector lever in any position other than P or N   | Off          |
|               | Ignition switch ON  | CVT selector lever in P or N position  | On           |
| ST RLY CONT   | Ignition switch ON  |  | Off          |
|               | At engine cranking  |  | On           |
| IHBT RLY -REQ | Ignition switch ON  |  | Off          |
|               | At engine cranking  |  | On           |



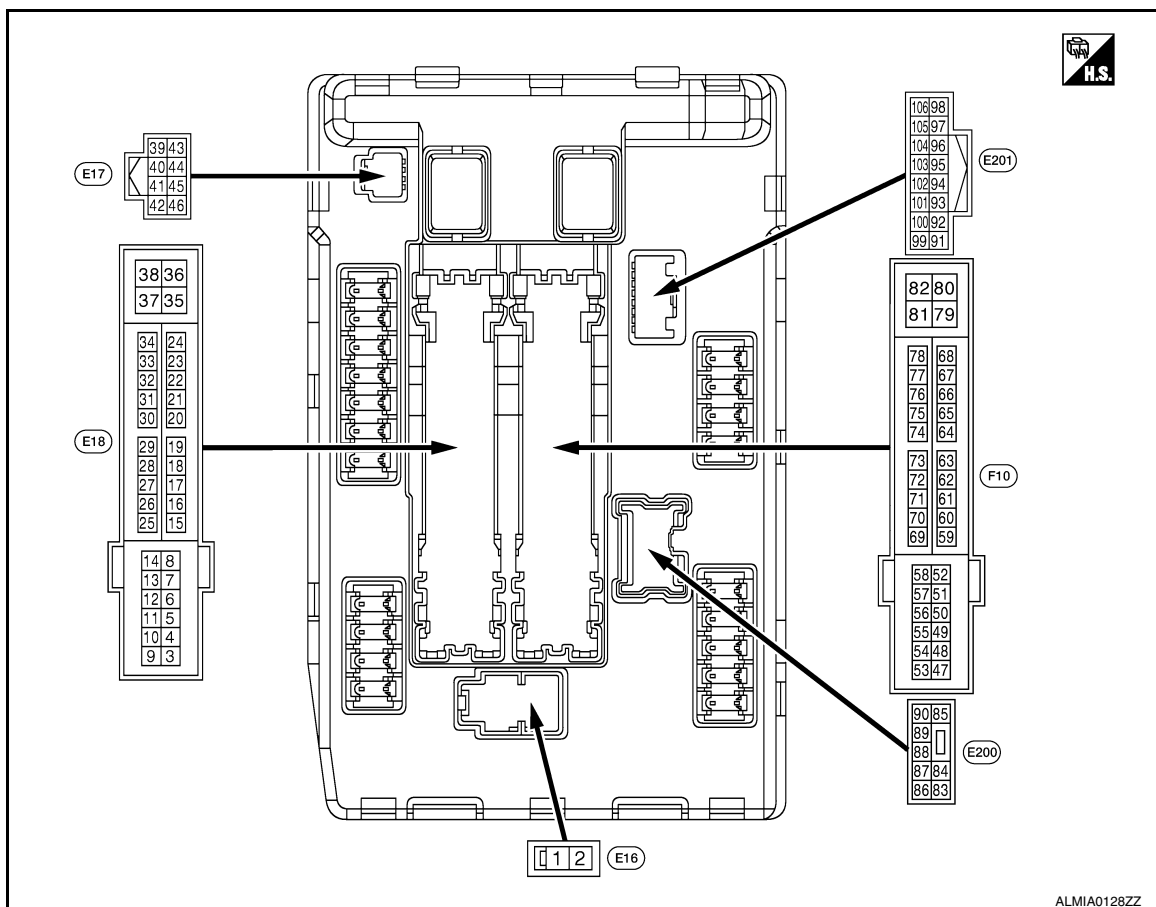
# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Monitor Item | Condition   | Value/Status |
|--------------|---|--------------|
| ST/INHI RLY  | Ignition switch ON  | Off          |
|              | At engine cranking  | ST → INHI    |
|              | The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF              | UNKWN        |
| DETENT SW    | Ignition switch ON <ul style="list-style-type: none"> <li>• Press the selector button with CVT selector lever in P position</li> <li>• CVT selector lever in any position other than P</li> </ul> | Off          |
|              | Release the CVT selector button with CVT selector lever in P position   | On           |
| DTRL -REQ    | DTRL ON   | On           |
|              | DTRL OFF  | Off          |
| OIL P SW     | Ignition switch OFF, ACC or engine running  | Open         |
|              | Ignition switch ON  | Close        |
| THFT HRN REQ | Not operated  | Off          |
|              | <ul style="list-style-type: none"> <li>• Panic alarm is activated</li> <li>• Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM</li> </ul>  | On           |
| HORN CHIRP   | Not operated  | Off          |
|              | Door locking with Intelligent Key (horn chirp mode)   | On           |

## TERMINAL LAYOUT



## PHYSICAL VALUES

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description   |                  | Condition   |                           | Value<br>(Approx.)                                |
|------------------------------|--------|---|------------------|---|---------------------------|---|
| +                            | -      | Signal name   | Input/<br>Output |   |                           |   |
| 1<br>(R)                     | Ground | Battery power supply                                  | Input            | Ignition switch OFF   |                           | Battery voltage                                   |
| 2<br>(L)                     | Ground | Battery power supply                                  | Input            | Ignition switch OFF   |                           | Battery voltage                                   |
| 4<br>(LG)                    | Ground | Front wiper LO  | Output           | Ignition switch ON  | Front wiper switch OFF    | 0 V   |
|                              |        |   |                  |   | Front wiper switch LO     | Battery voltage                                   |
| 5<br>(Y)                     | Ground | Front wiper HI  | Output           | Ignition switch ON  | Front wiper switch OFF    | 0 V   |
|                              |        |   |                  |   |                           | Front wiper switch HI                             |
| 6<br>(L)                     | Ground | Daytime light relay power supply (Canada models only) | Output           | Ignition switch OFF   |                           | Battery voltage                                   |
| 7<br>(GR)                    | Ground | Tail, license plate lamps & interior lamps            | Output           | Ignition switch ON  | Lighting switch OFF       | 0 V   |
|                              |        |   |                  |   |                           | Lighting switch 1ST                               |
| 10<br>(BR)                   | Ground | ECM relay power supply                                | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |                           | 0 V   |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |                           | Battery voltage                                   |
| 12<br>(B)                    | Ground | Ground  | —                | Ignition switch ON  |                           | 0 V   |
| 13<br>(SB)                   | Ground | Fuel pump power supply                                | Output           | Approximately 1 second or more after turning the ignition switch ON   |                           | 0 V   |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Approximately 1 second after turning the ignition switch ON</li> <li>• Engine running</li> </ul>                             |                           | Battery voltage                                   |
| 15<br>(W)                    | Ground | Ignition relay-1 power supply                         | Output           | Ignition switch OFF   |                           | 0 V   |
|                              |        |   |                  | Ignition switch ON  |                           | Battery voltage                                   |
| 16<br>(R)                    | Ground | Front wiper auto stop                                 | Input            | Ignition switch ON  | Front wiper stop position | 0 V   |
|                              |        |   |                  |   |                           | Any position other than front wiper stop position |
| 19<br>(Y)                    | Ground | Ignition relay-1 power supply                         | Output           | Ignition switch OFF   |                           | 0 V   |
|                              |        |   |                  | Ignition switch ON  |                           | Battery voltage                                   |
| 20<br>(L)                    | Ground | Ambient sensor ground                                 | —                | Ignition switch ON  |                           | 0V  |
| 21<br>(LG)                   | Ground | Ambient sensor  | —                | Ignition switch ON  |                           | 5V  |
| 22<br>(SB)                   | Ground | Refrigerant pressure sensor ground                    | —                | Ignition switch ON  |                           | 0V  |
| 23<br>(GR)                   | Ground | Refrigerant pressure sensor                           | —                | <ul style="list-style-type: none"> <li>• Ignition switch ON (READY)</li> <li>• Both A/C switch and blower motor switch ON (electric compressor operates)</li> </ul>   |                           | 1.0 - 4.0V  |
| 24<br>(G)                    | Ground | Refrigerant pressure sensor power supply              | —                | Ignition switch ON  |                           | 5V  |
| 25<br>(GR)                   | Ground | Ignition relay-1 power supply                         | Output           | Ignition switch OFF   |                           | 0 V   |
|                              |        |   |                  | Ignition switch ON  |                           | Battery voltage                                   |

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                           |                  | Condition   | Value<br>(Approx.)  |  |
|------------------------------|--------|---------------------------------------|------------------|---|---|--|
| +                            | -      | Signal name                           | Input/<br>Output |   |   |  |
| 27<br>(W)                    | Ground | Ignition relay monitor                | Input            | Ignition switch OFF or ACC  | Battery voltage   |  |
|                              |        |                                       |                  | Ignition switch ON  | 0 V   |  |
| 28<br>(SB)                   | Ground | Push-button ignition switch           | Input            | Press the push-button ignition switch                                     | 0 V   |  |
|                              |        |                                       |                  | Release the push-button ignition switch                                   | Battery voltage   |  |
| 30<br>(BR)                   | Ground | Starter relay control                 | Input            | CVT selector lever in any position other than P or N (ignition switch ON) | 0 V   |  |
|                              |        |                                       |                  | CVT selector lever P or N (ignition switch ON)                            | Battery voltage   |  |
| 34<br>(O)                    | Ground | Cooling fan relay-3 control           | Input            | Ignition switch OFF or ACC  | 0 V   |  |
|                              |        |                                       |                  | Ignition switch ON  | 0.7 V   |  |
| 35<br>(P)                    | Ground | Cooling fan motor control             | Output           | Ignition switch OFF or ACC  | 0 V   |  |
|                              |        |                                       |                  | Ignition switch ON  | 0.7 V   |  |
| 36<br>(G)                    | Ground | Battery power supply                  | Input            | Ignition switch OFF   | Battery voltage   |  |
| 38<br>(GR)                   | Ground | Cooling fan motor control             | Output           | Ignition switch OFF or ACC  | 0 V   |  |
|                              |        |                                       |                  | Ignition switch ON  | 0.7 V   |  |
| 39<br>(P)                    | —      | CAN - L                               | Input/<br>Output | —   | —   |  |
| 40<br>(L)                    | —      | CAN - H                               | Input/<br>Output | —   | —   |  |
| 41<br>(B)                    | Ground | Ground                                | —                | Ignition switch ON  | 0 V   |  |
| 42<br>(SB)                   | Ground | Cooling fan relay-2 control           | Input            | Ignition switch OFF or ACC  | 0 V   |  |
|                              |        |                                       |                  | Ignition switch ON  | 0.7 V   |  |
| 43<br>(Y)                    | Ground | CVT shift selector (Detention switch) | Input            | Press the CVT selector button (CVT selector lever P)                      | Battery voltage   |  |
|                              |        |                                       |                  | Ignition switch ON  | <ul style="list-style-type: none"> <li>• CVT selector lever in any position other than P</li> <li>• Release the CVT selector button (CVT selector lever P)</li> </ul> | 0 V  |
| 44<br>(W)                    | Ground | Horn relay control                    | Input            | The horn is deactivated   | Battery voltage   |  |
|                              |        |                                       |                  | The horn is activated   | 0 V   |  |
| 45<br>(GR)                   | Ground | Anti theft horn relay control         | Input            | The horn is deactivated   | Battery voltage   |  |
|                              |        |                                       |                  | The horn is activated   | 0 V   |  |
| 46<br>(BR)                   | Ground | Starter relay control                 | Input            | CVT selector lever in any position other than P or N (ignition switch ON) | 0 V   |  |
|                              |        |                                       |                  | CVT selector lever P or N (ignition switch ON)                            | Battery voltage   |  |
| 48<br>(W)                    | Ground | A/C relay power supply                | Output           | Engine running  | <ul style="list-style-type: none"> <li>A/C switch OFF</li> <li>A/C switch ON (A/C compressor is operating)</li> </ul>   | <ul style="list-style-type: none"> <li>0 V</li> <li>Battery voltage</li> </ul> |

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# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                               |                  | Condition   |   | Value<br>(Approx.)                           |
|------------------------------|--------|---|------------------|---|---|--|
| +                            | -      | Signal name                               | Input/<br>Output |   |   |  |
| 49<br>(R/B)                  | Ground | ECM relay power supply                    | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | 0 V  |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | Battery voltage                              |
| 51<br>(LG)                   | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 52<br>(Y/G)                  | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 53<br>(R/W)                  | Ground | ECM relay power supply                    | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | 0 V  |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | Battery voltage                              |
| 54<br>(G/W)                  | Ground | Throttle control motor relay power supply | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | 0 V  |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | Battery voltage                              |
| 55<br>(W/L)                  | Ground | ECM power supply                          | Output           | Ignition switch OFF   |   | Battery voltage                              |
| 56<br>(R/Y)                  | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 57<br>(O)                    | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 58<br>(Y)                    | Ground | Ignition relay power supply               | Output           | Ignition switch OFF   |   | 0 V  |
|                              |        |   |                  | Ignition switch ON  |   | Battery voltage                              |
| 69<br>(W/B)                  | Ground | ECM relay control                         | Output           | Ignition switch OFF<br>(For a few seconds after turning ignition switch OFF)  |   | Battery voltage                              |
|                              |        |   |                  | <ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Ignition switch OFF<br/>(More than a few seconds after turning ignition switch OFF)</li> </ul> |   | 0 - 1.5 V                                    |
| 70<br>(O)                    | Ground | Throttle control motor relay control      | Output           | Ignition switch ON → OFF  |   | 0 -1.0 V<br>↓<br>Battery voltage<br>↓<br>0 V |
|                              |        |   |                  | Ignition switch ON  |   | 0 - 1.0 V                                    |
| 72<br>(R/B)                  | Ground | Transmission range switch signal          | Input            | Ignition switch ON  | CVT selector lever in P or N position                         | Battery voltage                              |
|                              |        |   |                  |   | CVT selector lever in any position other than P or N position |  |

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description                          |                  | Condition   |  | Value<br>(Approx.)   |
|------------------------------|--------|--------------------------------------|------------------|---|--|--|
|                              |        |                                      |                  |   |  |  |
|                              |        | Signal name                          | Input/<br>Output |   |  |  |
| 75<br>(LG)                   | Ground | Oil pressure switch                  | Input            | Ignition<br>switch ON   | Engine stopped   | 0 V  |
|                              |        |                                      |                  |   | Engine running   | Battery voltage  |
| 76<br>(SB)                   | Ground | Power generation com-<br>mand signal | Output           | Ignition switch ON  |  | <p style="text-align: right; margin-right: 50px;">JPMIA0001GB</p> <p style="text-align: center;">6.3 V</p> |
|                              |        |                                      |                  |   | 40% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"   | <p style="text-align: right; margin-right: 50px;">JPMIA0002GB</p> <p style="text-align: center;">3.8 V</p> |
|                              |        |                                      |                  |   | 80% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"   | <p style="text-align: right; margin-right: 50px;">JPMIA0003GB</p> <p style="text-align: center;">1.4 V</p> |
| 77<br>(GR)                   | Ground | Fuel pump relay control              | Output           | <ul style="list-style-type: none"> <li>• Approximately 1 second after turning the ignition switch ON</li> <li>• Engine running</li> </ul> |  | 0 - 1.0 V  |
|                              |        |                                      |                  |   | Approximately 1 second or more after turning the ignition switch ON  | Battery voltage  |
| 80<br>(B)                    | Ground | Starter motor                        | Output           | At engine cranking  |  | Battery voltage  |
| 83<br>(R/Y)                  | Ground | Headlamp LO (RH)                     | Output           | Ignition<br>switch ON   | Lighting switch OFF  | 0 V  |
|                              |        |                                      |                  |   | Lighting switch 2ND  | Battery voltage  |
| 84<br>(L)                    | Ground | Headlamp LO (LH)                     | Output           | Ignition<br>switch ON   | Lighting switch OFF  | 0 V  |
|                              |        |                                      |                  |   | Lighting switch 2ND  | Battery voltage  |
| 86<br>(W/R)                  | Ground | Front fog lamp (RH)                  | Output           | Lighting<br>switch<br>2ND   | <ul style="list-style-type: none"> <li>• Front fog lamp switch ON</li> <li>• Daytime running light activated (Only for Canada models)</li> </ul> | Battery voltage  |
|                              |        |                                      |                  |   | Front fog lamp switch OFF  | 0 V  |
| 87<br>(L/Y)                  | Ground | Front fog lamp (LH)                  | Output           | Lighting<br>switch<br>2ND   | <ul style="list-style-type: none"> <li>• Front fog lamp switch ON</li> <li>• Daytime running light activated (Only for Canada models)</li> </ul> | Battery voltage  |
|                              |        |                                      |                  |   | Front fog lamp switch OFF  | 0 V  |

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# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Terminal No.<br>(Wire color) |        | Description  |                  | Condition   |  | Value<br>(Approx.) |
|------------------------------|--------|--|------------------|---|--|--------------------|
| +                            | -      | Signal name  | Input/<br>Output |   |  |                    |
| 88<br>(R/W)                  | Ground | Washer pump power supply                             | Output           | Ignition switch ON  |  | Battery voltage    |
| 89<br>(L/W)                  | Ground | Headlamp HI (RH)                                     | Output           | Ignition switch ON  | • Lighting switch HI<br>• Lighting switch PASS | Battery voltage    |
|                              |        |  |                  |   | Lighting switch OFF                            | 0 V                |
| 90<br>(G)                    | Ground | Headlamp HI (LH)                                     | Output           | Ignition switch ON  | • Lighting switch HI<br>• Lighting switch PASS | Battery voltage    |
|                              |        |  |                  |   | Lighting switch OFF                            | 0 V                |
| 91<br>(LG/R)                 | Ground | Parking lamp (RH)                                    | Output           | Ignition switch ON  | Lighting switch 1ST                            | Battery voltage    |
|                              |        | Side marker lamp (RH)                                |                  |   | Lighting switch OFF                            | 0 V                |
| 92<br>(LG/B)                 | Ground | Parking lamp (LH)                                    | Output           | Ignition switch ON  | Lighting switch 1ST                            | Battery voltage    |
|                              |        | Side marker lamp (LH)                                |                  |   | Lighting switch OFF                            | 0 V                |
| 99<br>(BR/W)                 | Ground | Ambient sensor ground                                | —                | Ignition switch ON  |  | 0V                 |
| 100<br>(SB)                  | Ground | Ambient sensor                                       | —                | Ignition switch ON  |  | 5V                 |
| 101<br>(W)                   | Ground | Refrigerant pressure sensor ground                   | —                | Ignition switch ON  |  | 0V                 |
| 102<br>(R)                   | Ground | Refrigerant pressure sensor                          | —                | • Ignition switch ON (READY)<br>• Both A/C switch and blower motor switch ON (electric compressor operates) |  | 1.0 - 4.0V         |
| 103<br>(P)                   | Ground | Refrigerant pressure sensor power supply             | —                | Ignition switch ON  |  | 5V                 |
| 105<br>(V)                   | Ground | Daytime light relay control (Only for Canada models) | Output           | Ignition switch ON  | Daytime light system active                    | Battery voltage    |
|                              |        |  |                  | Ignition switch ON  | Daytime light system inactive                  | 0 V                |

## Fail Safe

INFOID:000000010070065

### CAN COMMUNICATION CONTROL

When CAN communication with ECM and 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 ECM

| Control part   | Fail-safe in operation   |
|----------------|--|
| Cooling fan    | <ul style="list-style-type: none"> <li>• Signals cooling fans ON when the ignition switch is turned ON</li> <li>• Signals cooling fans OFF when the ignition switch is turned OFF</li> </ul> |
| A/C compressor | A/C relay OFF  |
| Generator      | Outputs the power generation command signal (PWM signal) 0%  |

If No CAN Communication Is Available With BCM

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

| Control part  | Fail-safe in operation   |
|---|--|
| Headlamp  | <ul style="list-style-type: none"> <li>• Turns ON the headlamp low relay when the ignition switch is turned ON</li> <li>• Turns OFF the headlamp low relay when the ignition switch is turned OFF</li> <li>• Headlamp high relay OFF</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Parking lamps</li> <li>• Side marker lamps</li> <li>• License plate lamps</li> <li>• Illumination</li> <li>• Tail lamps</li> </ul> | <ul style="list-style-type: none"> <li>• Turns ON the tail lamp relay when the ignition switch is turned ON</li> <li>• Turns OFF the tail lamp relay when the ignition switch is turned OFF</li> </ul>   |
| Front wiper   | <ul style="list-style-type: none"> <li>• The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed.</li> <li>• The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.</li> </ul> |
| Front fog lamps (if equipped)   | Front fog lamp relay OFF   |
| Horn  | Horn OFF   |
| Ignition relay  | The status just before activation of fail-safe is maintained.  |
| Starter motor   | Starter control relay OFF  |

## IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay-1 inside it.
- IPDM E/R judges the ignition relay-1 error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay-1 cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay-1 malfunction when the ignition switch is turned OFF.

| DTC                  | Ignition switch | Ignition relay-1 | Tail lamp relay |
|----------------------|-----------------|------------------|-----------------|
| —                    | ON              | ON               | —               |
| —                    | OFF             | OFF              | —               |
| B2098: IGN RELAY ON  | OFF             | ON               | ON (10 minutes) |
| B2099: IGN RELAY OFF | ON              | OFF              | —               |

### NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

## FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 seconds activation and 20 seconds stop five times.

| Ignition switch | Front wiper switch | Auto stop signal   |
|-----------------|--------------------|--|
| ON              | OFF                | Front wiper stop position signal cannot be input 10 seconds. |
|                 | ON                 | The signal does not change for 10 seconds.                   |

### NOTE:

This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

## STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

## DTC Index

INFOID:000000010070066

| CONSULT display  | Fail-safe | TIME <sup>NOTE</sup> |        | Refer to               |
|--|-----------|----------------------|--------|------------------------|
| No DTC is detected.<br>further testing<br>may be required. | —         | —                    | —      | —                      |
| U1000: CAN COMM CIRCUIT                                    | ×         | CRNT                 | 1 – 39 | <a href="#">PCS-15</a> |
| B2098: IGN RELAY ON  | ×         | CRNT                 | 1 – 39 | <a href="#">PCS-16</a> |
| B2099: IGN RELAY OFF                                       | —         | CRNT                 | 1 – 39 | <a href="#">PCS-17</a> |
| B210B: START CONT RLY ON                                   | —         | CRNT                 | 1 – 39 | <a href="#">SEC-69</a> |
| B210C: START CONT RLY OFF                                  | —         | CRNT                 | 1 – 39 | <a href="#">SEC-72</a> |
| B210D: STARTER RELAY ON                                    | —         | CRNT                 | 1 – 39 | <a href="#">SEC-72</a> |
| B210E: STARTER RELAY OFF                                   | —         | CRNT                 | 1 – 39 | <a href="#">SEC-74</a> |
| B210F: INTRLCK/PNP SW ON                                   | —         | CRNT                 | 1 – 39 | <a href="#">SEC-76</a> |
| B2110: INTRLCK/PNP SW OFF                                  | —         | CRNT                 | 1 – 39 | <a href="#">SEC-78</a> |

### NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.



# HEADLAMP

< WIRING DIAGRAM >

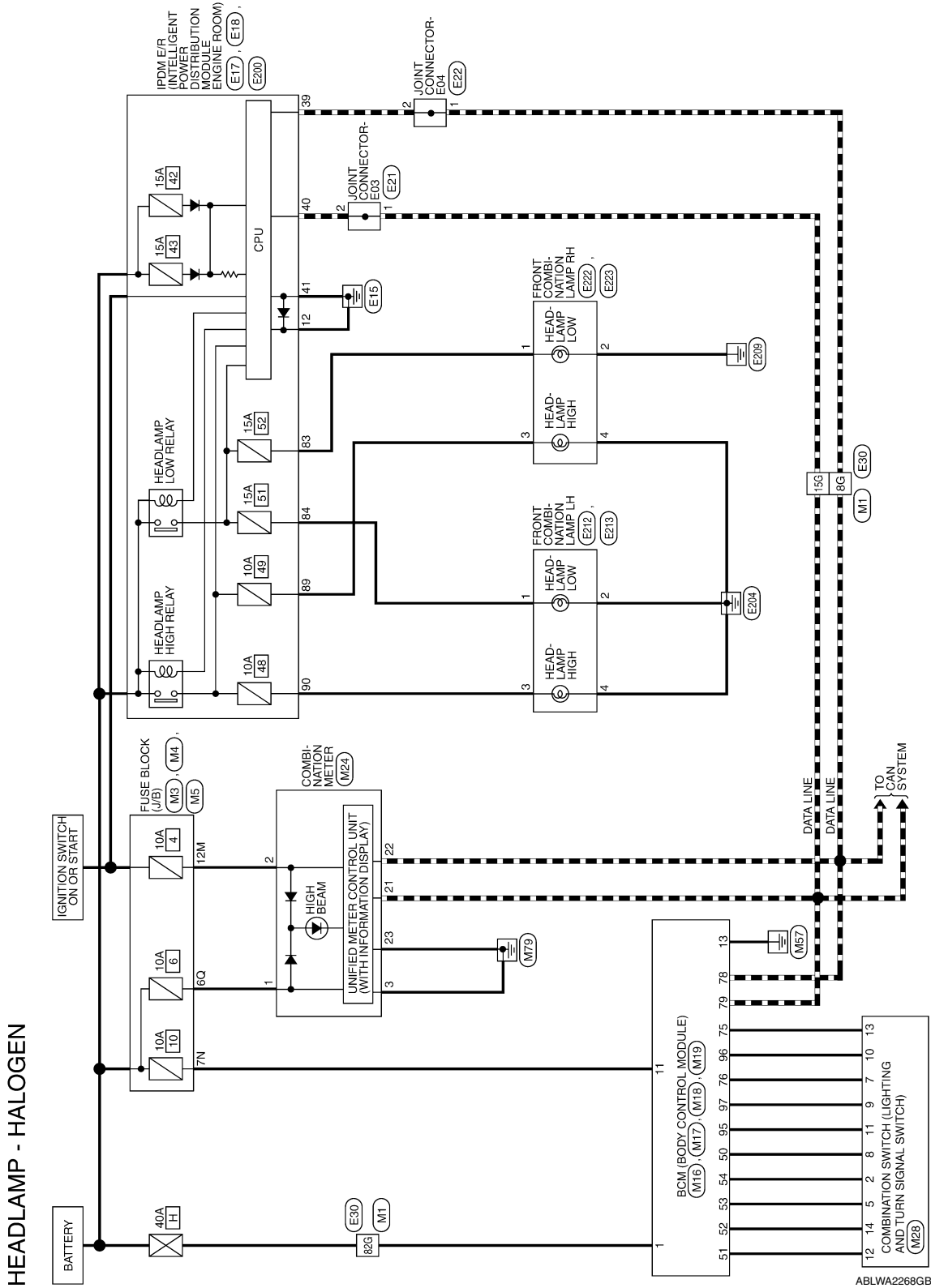
[HALOGEN TYPE]

## WIRING DIAGRAM

### HEADLAMP

#### Wiring Diagram

INFOID:000000010051087



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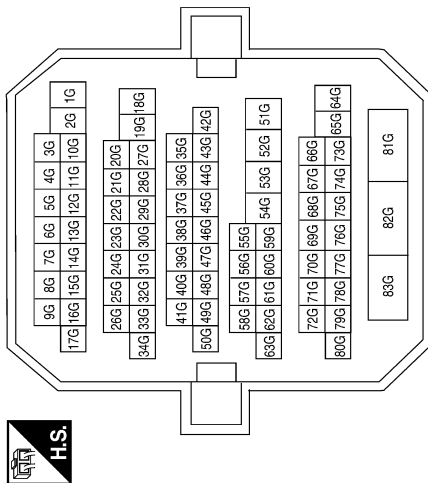
# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

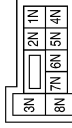
## HEADLAMP CONNECTORS - HALOGEN

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6Q           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12M          | O             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |




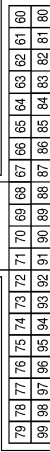
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

# HEADLAMP

< WIRING DIAGRAM >


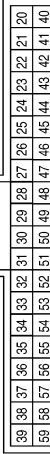
[HALOGEN TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |


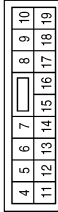
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |


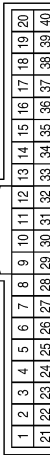
|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |

| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 1            | Y/R           | BAT           |
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |

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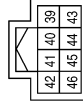
EXL

# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

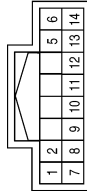
|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



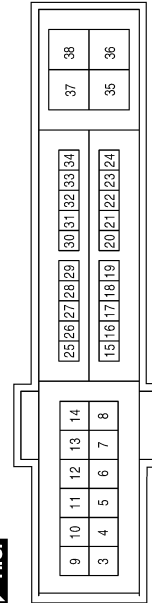
|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12           | B             | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



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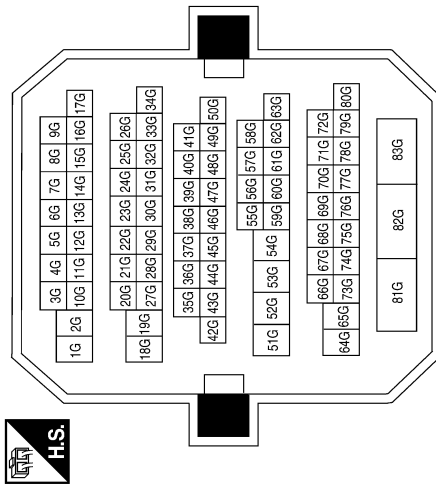
# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

| Connector No.   | E30          |
|-----------------|--------------|
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Connector No.   | E22                 |
|-----------------|---------------------|
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |

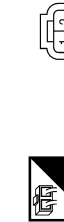


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

| Connector No.   | E213                      |
|-----------------|---------------------------|
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | BLACK                     |



| Connector No.   | E212  |
|-----------------|---|
| Connector Name  | FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | BLACK   |



| Connector No.   | E200   |
|-----------------|--|
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | G             | -           |
| 4            | B             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 83           | R/Y           | HEADLAMP LO RH |
| 84           | L             | HEADLAMP LO LH |
| 89           | L/W           | HEADLAMP HI RH |
| 90           | G             | HEADLAMP HI LH |

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# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |   |
|-----------------|---|
| Connector No.   | E223  |
| Connector Name  | FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | BLACK   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | R/Y           | -           |
| 2            | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E222   |
| Connector Name  | FRONT COMBINATION LAMP RH (WITHOUT DAYTIME LIGHT SYSTEM) |
| Connector Color | BLACK  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | L/W           | -           |
| 4            | B             | -           |

ABLIA3996GB

# DAYTIME RUNNING LIGHT SYSTEM

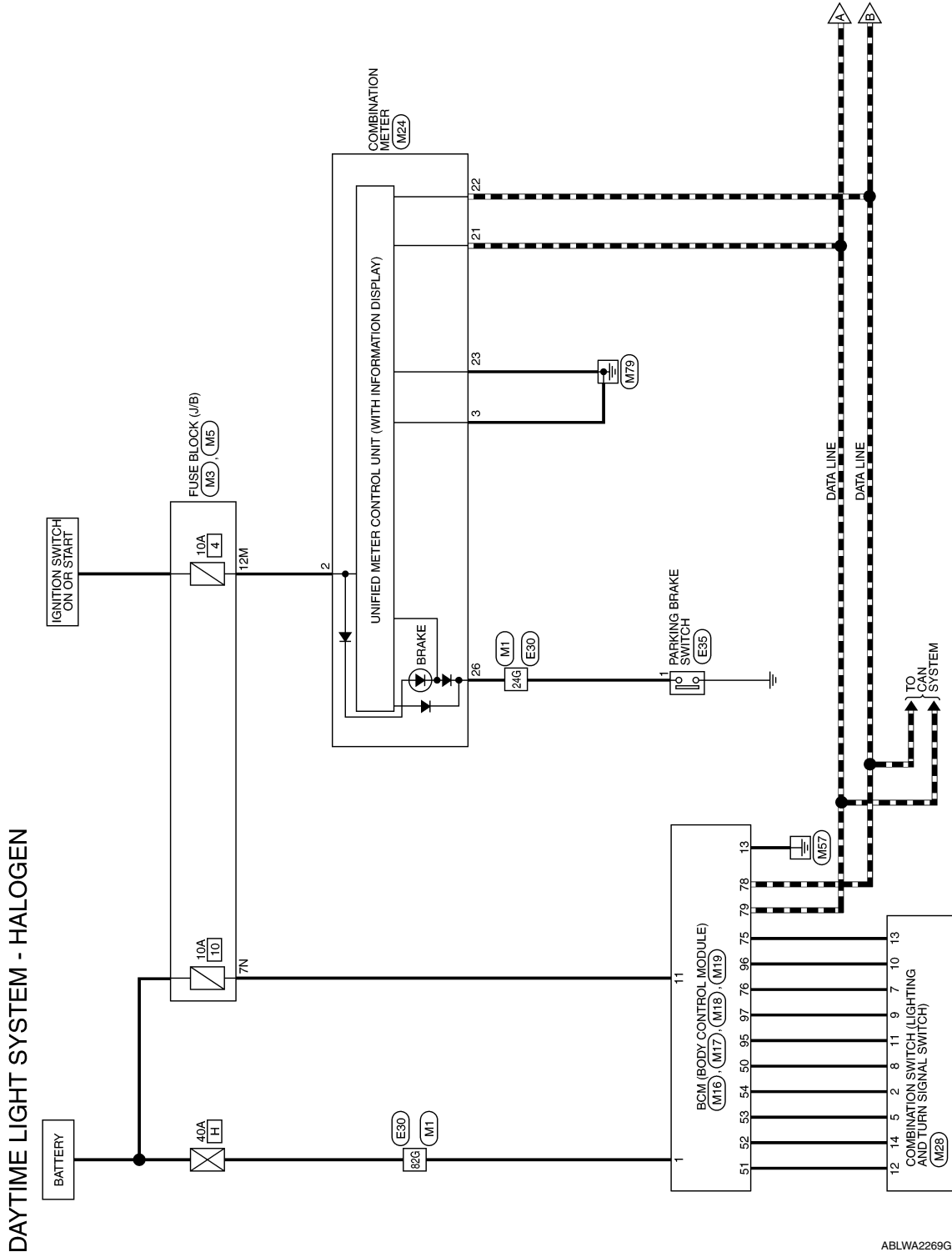
< WIRING DIAGRAM >

[HALOGEN TYPE]

## DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

INFOID:0000000110051088



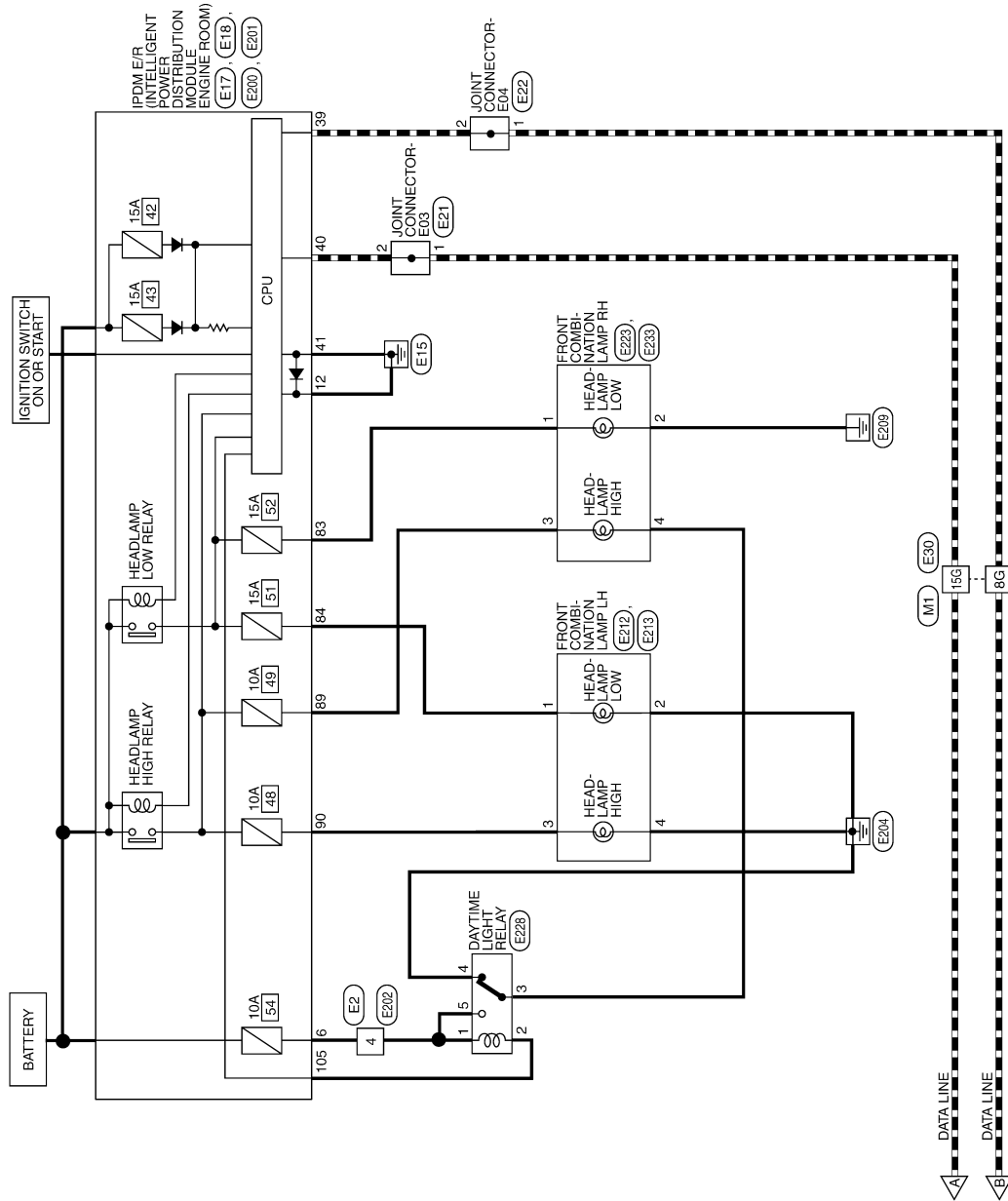
ABLWA2269GB

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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]



ABLWA1135GB



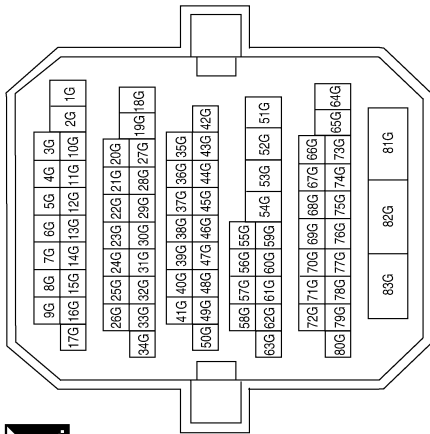
# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

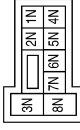
## DAYTIME LIGHT SYSTEM CONNECTORS - HALOGEN

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



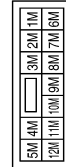
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 24G          | G/R           | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



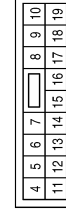
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 12M          | O             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 |

| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |
| 26           | G/R           | PKB           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

|                 |              |
|-----------------|--------------|
| Connector No.   | E2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 |   |   |
| 4 | 5 | 6 | 7 | 8 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



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

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |

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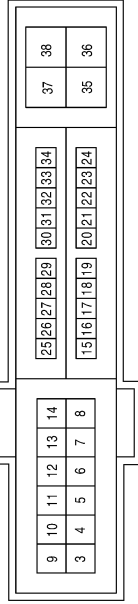
# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

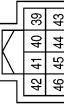
[HALOGEN TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | L             | DTRL/DEICER |
| 12           | B             | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | E22                 |
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

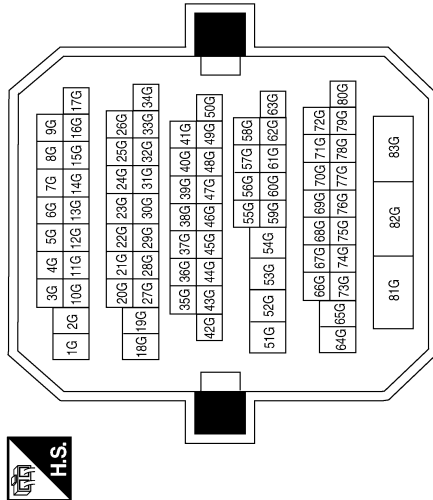
|                 |                      |
|-----------------|----------------------|
| Connector No.   | E35                  |
| Connector Name  | PARKING BRAKE SWITCH |
| Connector Color | BLACK                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 24G          | P             | -           |
| 82G          | LG            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

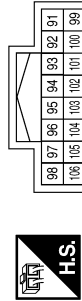


|                 |              |
|-----------------|--------------|
| Connector No.   | E202         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



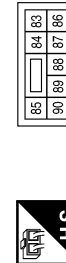
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | SB            | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E201   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 105          | V             | DTRL RLY    |

|                 |  |
|-----------------|--|
| Connector No.   | E200   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 83           | R/Y           | HEADLAMP LO RH |
| 84           | L             | HEADLAMP LO LH |
| 89           | L/W           | HEADLAMP HI RH |
| 90           | G             | HEADLAMP HI LH |

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# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |   |
|-----------------|---|
| Connector No.   | E223  |
| Connector Name  | FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | BLACK   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | R/Y           | -           |
| 2            | B             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E213                      |
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | G             | -           |
| 4            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | E212  |
| Connector Name  | FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | BLACK   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | E233  |
| Connector Name  | FRONT COMBINATION LAMP RH (WITH DAYTIME LIGHT SYSTEM) |
| Connector Color | BLACK   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | LW            | -           |
| 4            | GR/R          | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | E228                |
| Connector Name  | DAYTIME LIGHT RELAY |
| Connector Color | BLACK               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | SB            | -           |
| 2            | V             | -           |
| 3            | GR/R          | -           |
| 4            | B             | -           |
| 5            | SB            | -           |

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# AUTO LIGHT SYSTEM

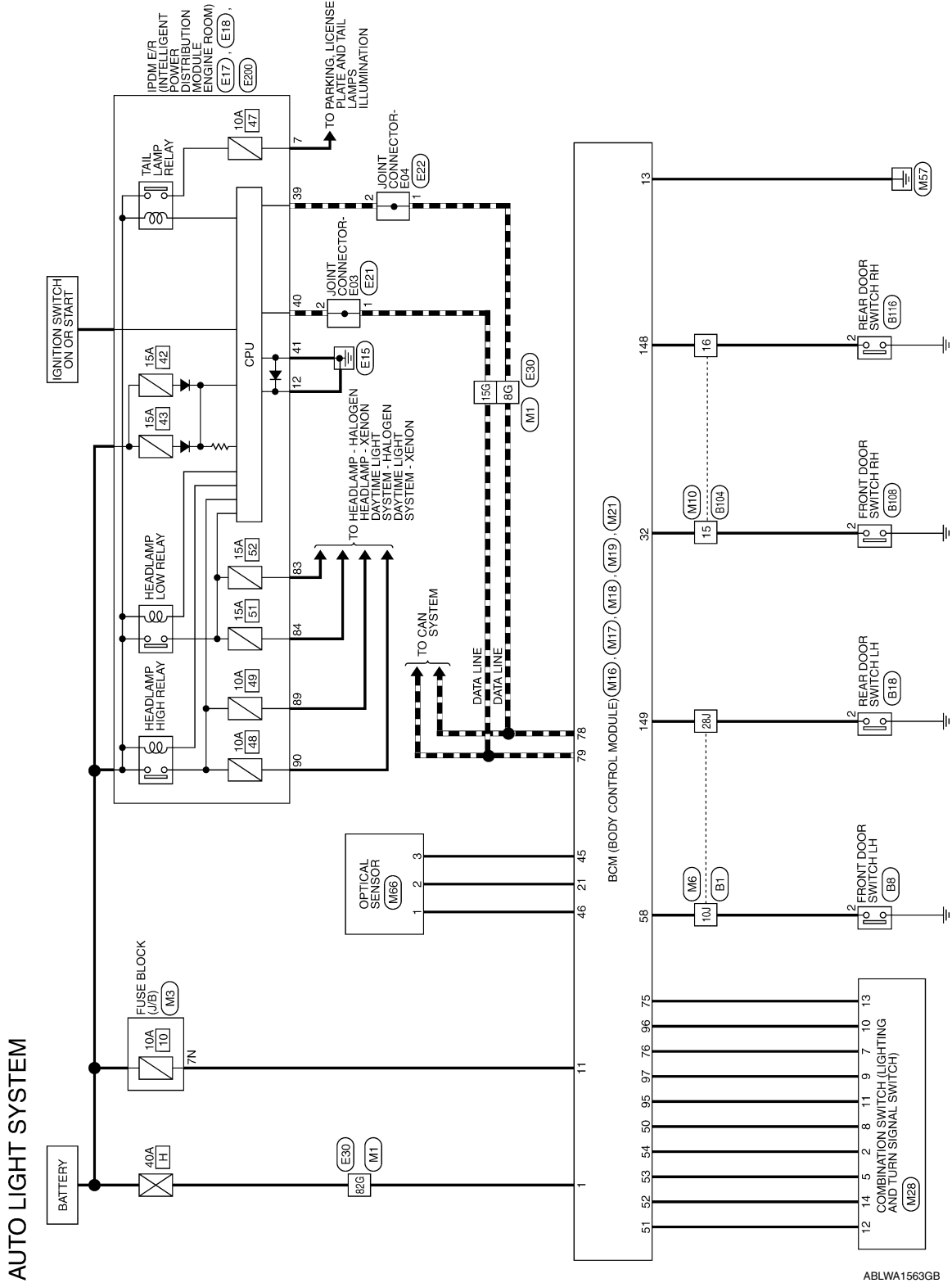
< WIRING DIAGRAM >

[HALOGEN TYPE]

## AUTO LIGHT SYSTEM

Wiring Diagram

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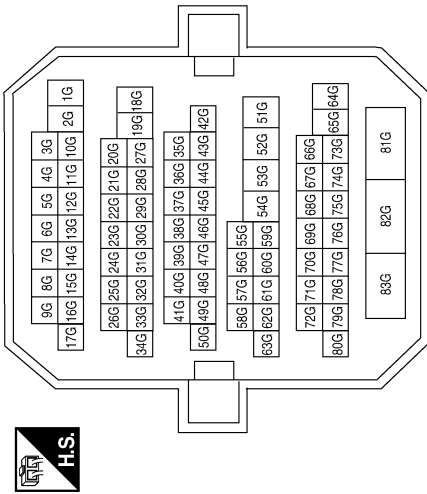
# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

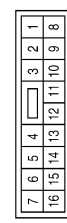
## AUTO LIGHT SYSTEM CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



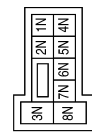
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M10          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



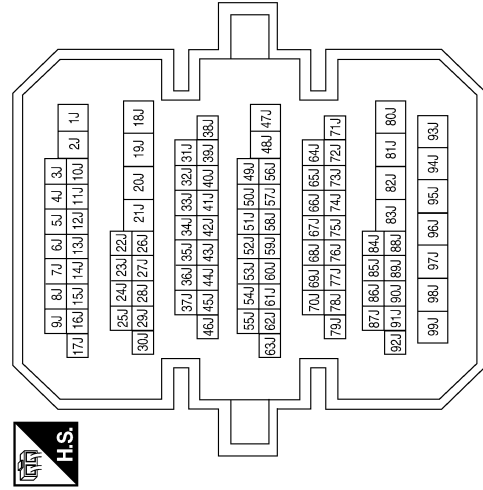
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 15           | R/B           | -           |
| 16           | R/W           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



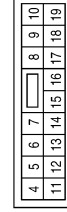
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | M6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10J          | SB            | -           |
| 28J          | R/B           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

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# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name         |
|--------------|---------------|---------------------|
| 21           | P/B           | A/L SIGNAL TYPE 1   |
| 32           | R/B           | AS DOOR SW 1        |
| 45           | P             | GND RF2 A/L         |
| 46           | V/W           | A/L POWER SUPPLY 5V |
| 50           | LG/B          | INPUT 5             |
| 51           | L/W           | INPUT 1             |
| 52           | G/B           | INPUT 2             |
| 53           | LG/R          | INPUT 3             |
| 54           | G/Y           | INPUT 4             |
| 58           | SB            | DR DOOR SW          |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M21                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GRAY                      |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 131 | 130 | 129 | 128 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 |
| 151 | 150 | 149 | 148 | 147 | 146 | 145 | 144 | 143 | 142 | 141 | 140 | 139 | 138 | 137 | 136 | 135 | 134 | 133 | 132 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 148          | R/W           | RR DOOR SW  |
| 149          | R/B           | RL DOOR SW  |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



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

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |



# AUTO LIGHT SYSTEM

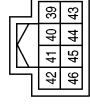
< WIRING DIAGRAM >

[HALOGEN TYPE]

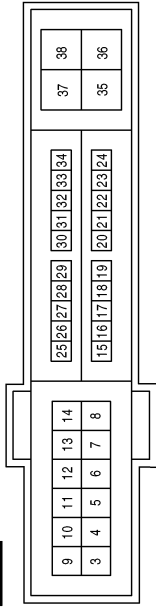
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| Connector No.   | M66            |
| Connector Name  | OPTICAL SENSOR |
| Connector Color | WHITE          |



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| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



|                 |  |
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| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | V/W           | -           |
| 2            | P/B           | -           |
| 3            | P             | -           |

| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | GR            | TAIL/ILLUMI |
| 12           | B             | GND (POWER) |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



|                 |                     |
|-----------------|---------------------|
| Connector No.   | E22                 |
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

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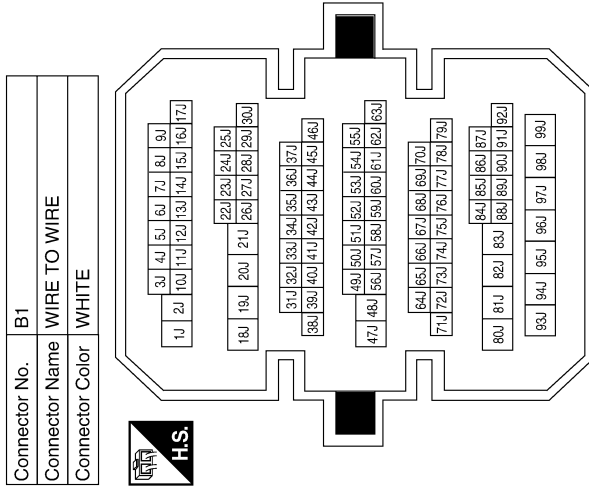
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# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

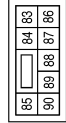
[HALOGEN TYPE]



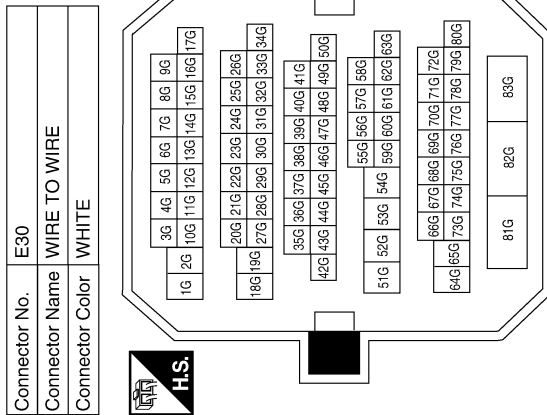
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| Connector No.   | B1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10J          | SB            | -           |
| 28J          | BR            | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E200   |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 83           | R/Y           | HEADLAMP LO RH |
| 84           | L             | HEADLAMP LO LH |
| 89           | L/W           | HEADLAMP HI RH |
| 90           | G             | HEADLAMP HI LH |

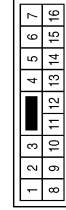


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|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

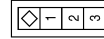


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|-----------------|--------------|
| Connector No.   | B104         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



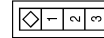
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 15           | GR            | -           |
| 16           | B             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B18                 |
| Connector Name  | REAR DOOR SWITCH LH |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | BR            | -           |

|                 |                      |
|-----------------|----------------------|
| Connector No.   | B8                   |
| Connector Name  | FRONT DOOR SWITCH LH |
| Connector Color | WHITE                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | SB            | -           |

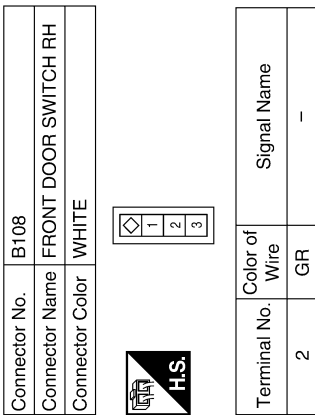
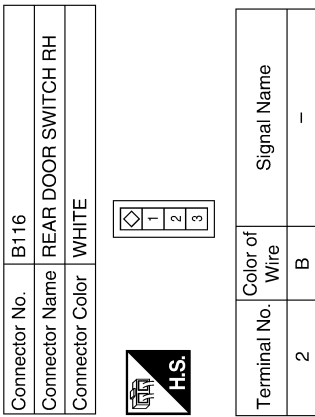
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# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

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# FRONT FOG LAMP SYSTEM

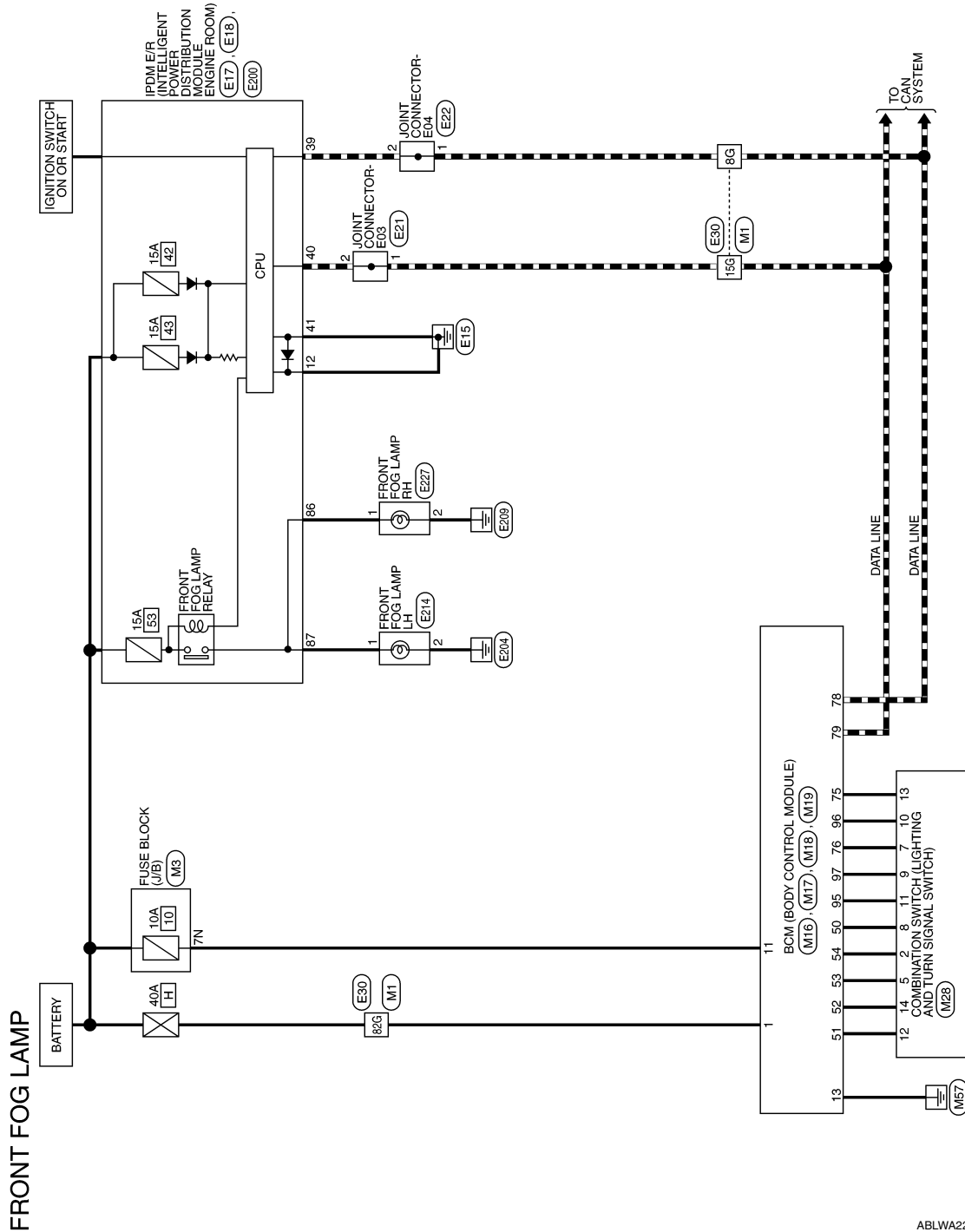
[HALOGEN TYPE]

< WIRING DIAGRAM >

## FRONT FOG LAMP SYSTEM

Wiring Diagram

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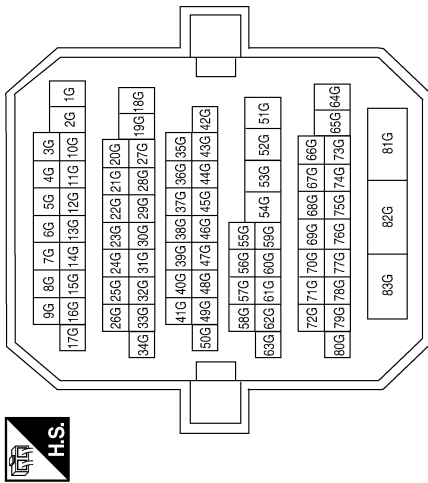
# FRONT FOG LAMP SYSTEM

[HALOGEN TYPE]

< WIRING DIAGRAM >

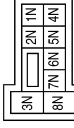
## FRONT FOG LAMP CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



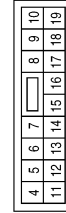
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| Terminal No. | Color of Wire | Signal Name |
| 7N           | Y/R           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



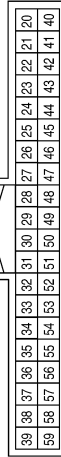
|              |               |             |
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| Terminal No. | Color of Wire | Signal Name |
| 1            | W/B           | BATT (F/L)  |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



|              |               |              |
|--------------|---------------|--------------|
| Terminal No. | Color of Wire | Signal Name  |
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

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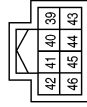
EXL

# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

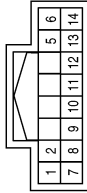
[HALOGEN TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



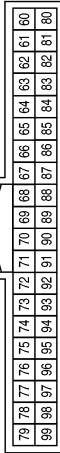
| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

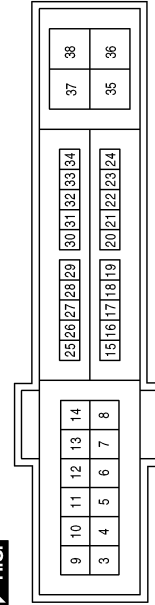
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| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

|               |             |
|---------------|-------------|
| Terminal No.  | 12          |
| Color of Wire | B           |
| Signal Name   | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



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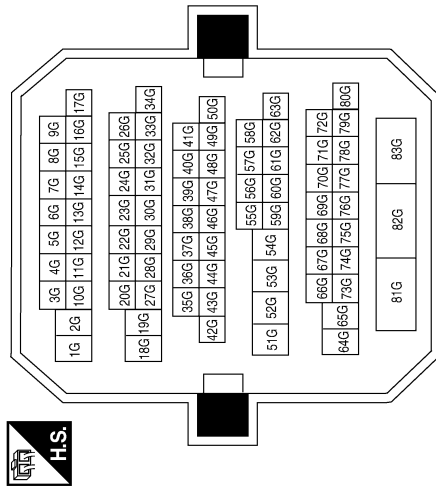
# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

| Connector No.   | E30          |
|-----------------|--------------|
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Connector No.   | E22                 |
|-----------------|---------------------|
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

| Connector No.   | E227              |
|-----------------|-------------------|
| Connector Name  | FRONT FOG LAMP RH |
| Connector Color | BLACK             |



| Connector No.   | E214              |
|-----------------|-------------------|
| Connector Name  | FRONT FOG LAMP LH |
| Connector Color | BLACK             |



| Connector No.   | E200   |
|-----------------|--|
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/R           | -           |
| 2            | B             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L/Y           | -           |
| 2            | B             | -           |

| Terminal No. | Color of Wire | Signal Name    |
|--------------|---------------|----------------|
| 86           | W/R           | FR FOG LAMP RH |
| 87           | L/Y           | FR FOG LAMP LH |

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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

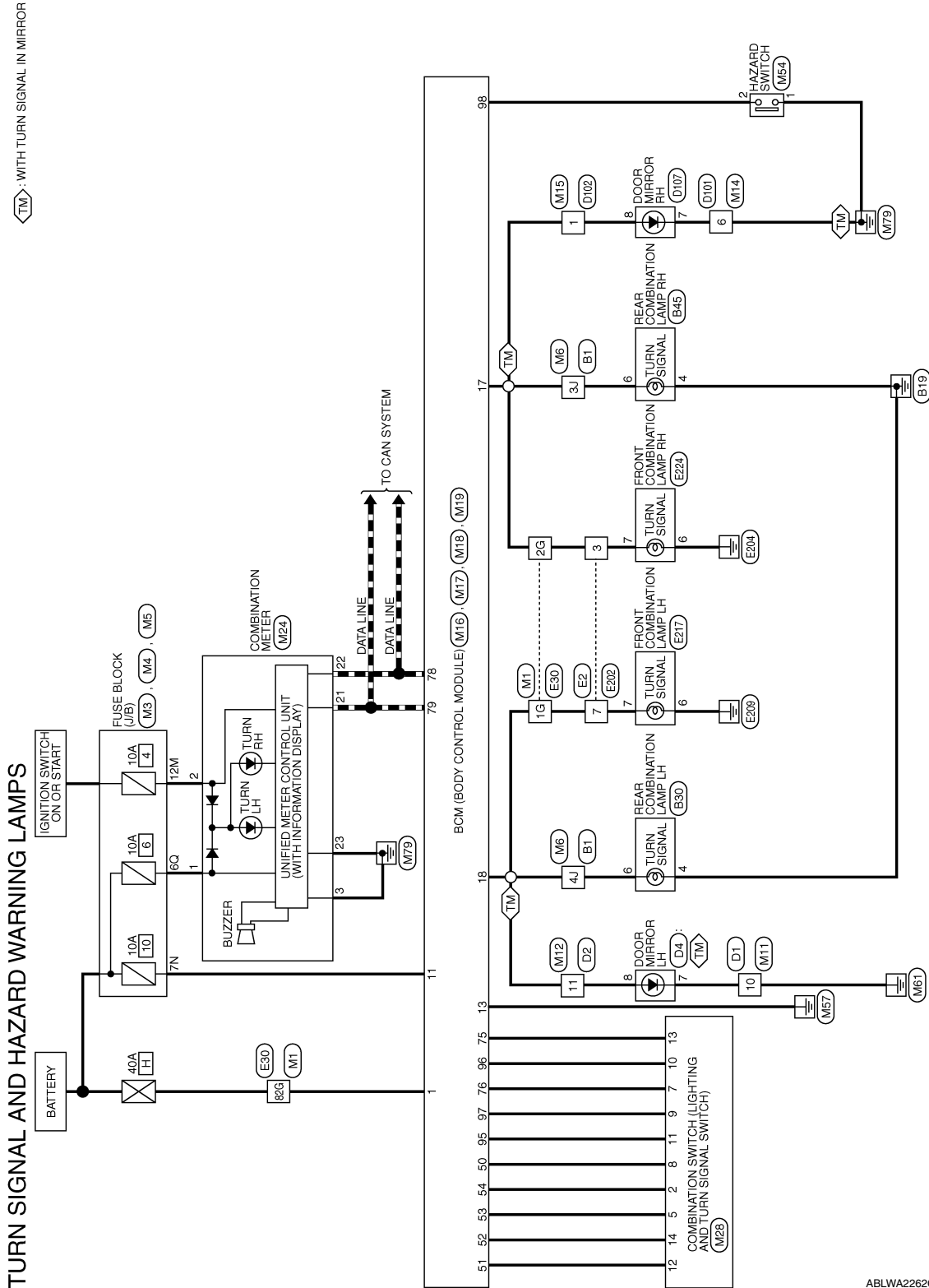
< WIRING DIAGRAM >

[HALOGEN TYPE]

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

INFOID:000000010062159





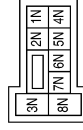
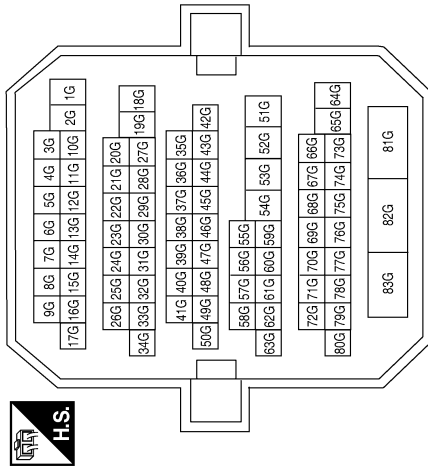
# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

## TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

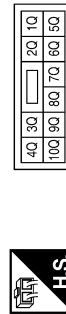


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1G           | G/Y           | -           |
| 2G           | G/B           | -           |
| 82G          | W/B           | -           |

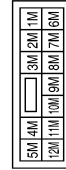
|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |

|              |    |               |     |             |   |
|--------------|----|---------------|-----|-------------|---|
| Terminal No. | 7N | Color of Wire | Y/R | Signal Name | - |
|--------------|----|---------------|-----|-------------|---|

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



|              |    |               |     |             |   |
|--------------|----|---------------|-----|-------------|---|
| Terminal No. | 6Q | Color of Wire | Y/R | Signal Name | - |
|--------------|----|---------------|-----|-------------|---|

|              |     |               |   |             |   |
|--------------|-----|---------------|---|-------------|---|
| Terminal No. | 12M | Color of Wire | O | Signal Name | - |
|--------------|-----|---------------|---|-------------|---|

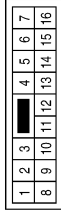
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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

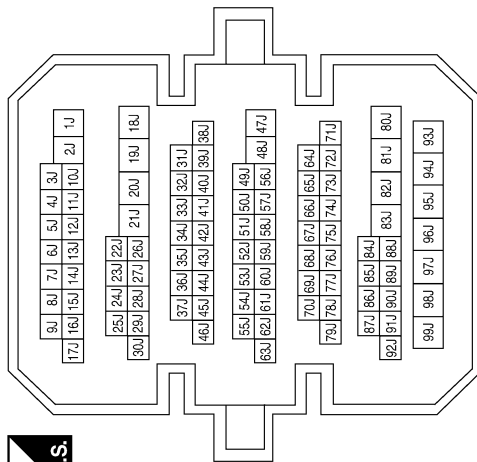
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| Connector No.   | M11          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |    |               |   |             |   |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 10 | Color of Wire | B | Signal Name | - |
|--------------|----|---------------|---|-------------|---|

|              |          |               |            |             |        |
|--------------|----------|---------------|------------|-------------|--------|
| Terminal No. | 3J<br>4J | Color of Wire | G/B<br>G/Y | Signal Name | -<br>- |
|--------------|----------|---------------|------------|-------------|--------|

|                 |              |
|-----------------|--------------|
| Connector No.   | M6           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

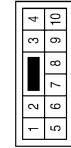


|                 |              |
|-----------------|--------------|
| Connector No.   | M15          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



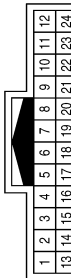
|              |   |               |     |             |   |
|--------------|---|---------------|-----|-------------|---|
| Terminal No. | 1 | Color of Wire | G/B | Signal Name | - |
|--------------|---|---------------|-----|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | M14          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 6 | Color of Wire | B | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | M12          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |    |               |     |             |   |
|--------------|----|---------------|-----|-------------|---|
| Terminal No. | 11 | Color of Wire | G/Y | Signal Name | - |
|--------------|----|---------------|-----|-------------|---|

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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |
| 17           | G/B           | FR FLASHER   |
| 18           | G/Y           | FL FLASHER   |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |
| 98           | G/O           | HAZARD SW   |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 1            | Y/R           | BAT           |
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |

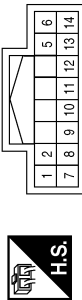
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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |               |
|-----------------|---------------|
| Connector No.   | M54           |
| Connector Name  | HAZARD SWITCH |
| Connector Color | WHITE         |



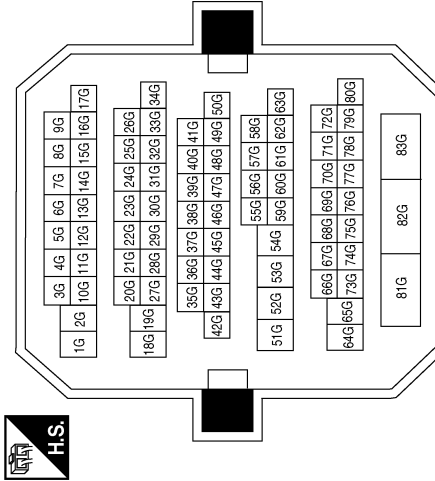
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | G/O           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | SB            | -           |
| 7            | Y             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



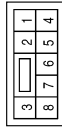
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1G           | Y             | -           |
| 2G           | SB            | -           |
| 82G          | LG            | -           |

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |              |
|-----------------|--------------|
| Connector No.   | E202         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | G/B           | -           |
| 7            | G/Y           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E217                      |
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | GRAY                      |



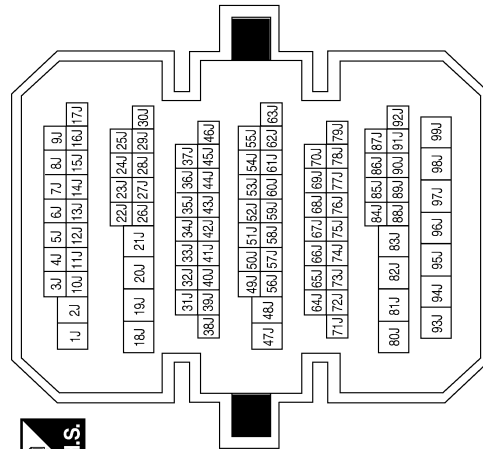
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | B             | -           |
| 7            | G/Y           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E224                      |
| Connector Name  | FRONT COMBINATION LAMP RH |
| Connector Color | GRAY                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6            | B             | -           |
| 7            | G/B           | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3J           | BR            | -           |
| 4J           | LG            | -           |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | B             | -           |
| 6            | LG            | -           |

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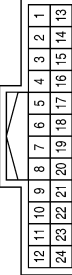
EXL

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >


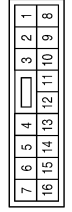
[HALOGEN TYPE]

|                 |              |
|-----------------|--------------|
| Connector No.   | D2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |


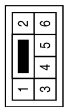
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|--------------|----|---------------|----|-------------|---|
| Terminal No. | 11 | Color of Wire | GR | Signal Name | — |
|--------------|----|---------------|----|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | D1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |


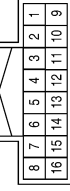
|              |    |               |   |             |   |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 10 | Color of Wire | B | Signal Name | — |
|--------------|----|---------------|---|-------------|---|

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |


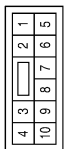
|              |   |               |    |             |   |
|--------------|---|---------------|----|-------------|---|
| Terminal No. | 4 | Color of Wire | B  | Signal Name | — |
|              | 6 | Color of Wire | BR | Signal Name | — |

|                 |              |
|-----------------|--------------|
| Connector No.   | D102         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |


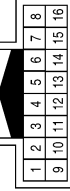
|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 1 | Color of Wire | W | Signal Name | — |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | D101         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |

|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 6 | Color of Wire | B | Signal Name | — |
|--------------|---|---------------|---|-------------|---|

|                 |                |
|-----------------|----------------|
| Connector No.   | D4             |
| Connector Name  | DOOR MIRROR LH |
| Connector Color | WHITE          |

|              |   |               |    |             |   |
|--------------|---|---------------|----|-------------|---|
| Terminal No. | 7 | Color of Wire | B  | Signal Name | — |
|              | 8 | Color of Wire | GR | Signal Name | — |

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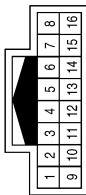
# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

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| Connector No.   | D107           |
| Connector Name  | DOOR MIRROR RH |
| Connector Color | WHITE          |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | B             | -           |
| 8            | W             | -           |

ABLIA4011GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

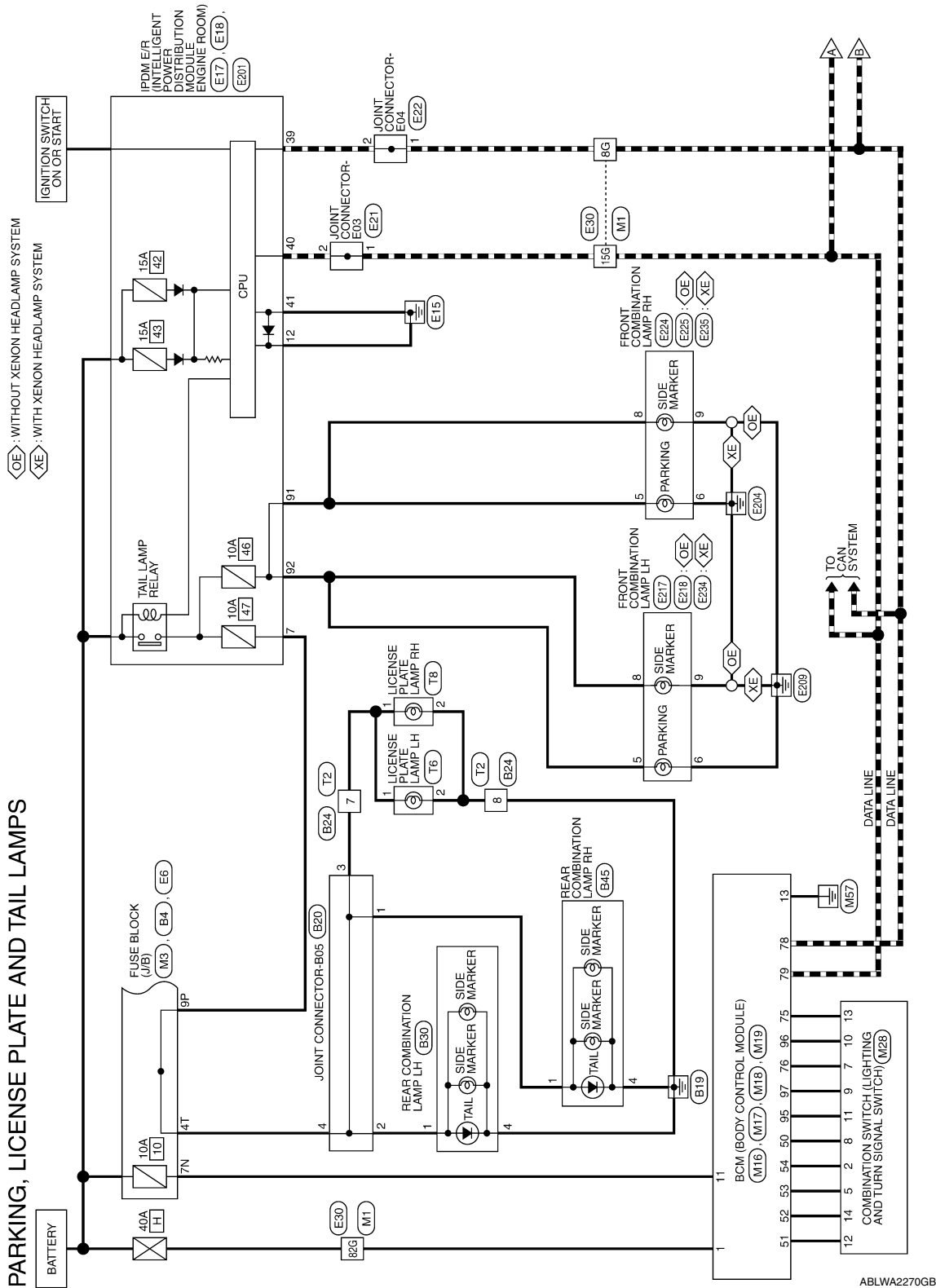
< WIRING DIAGRAM >

[HALOGEN TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

### Wiring Diagram

INFOID:000000010062160



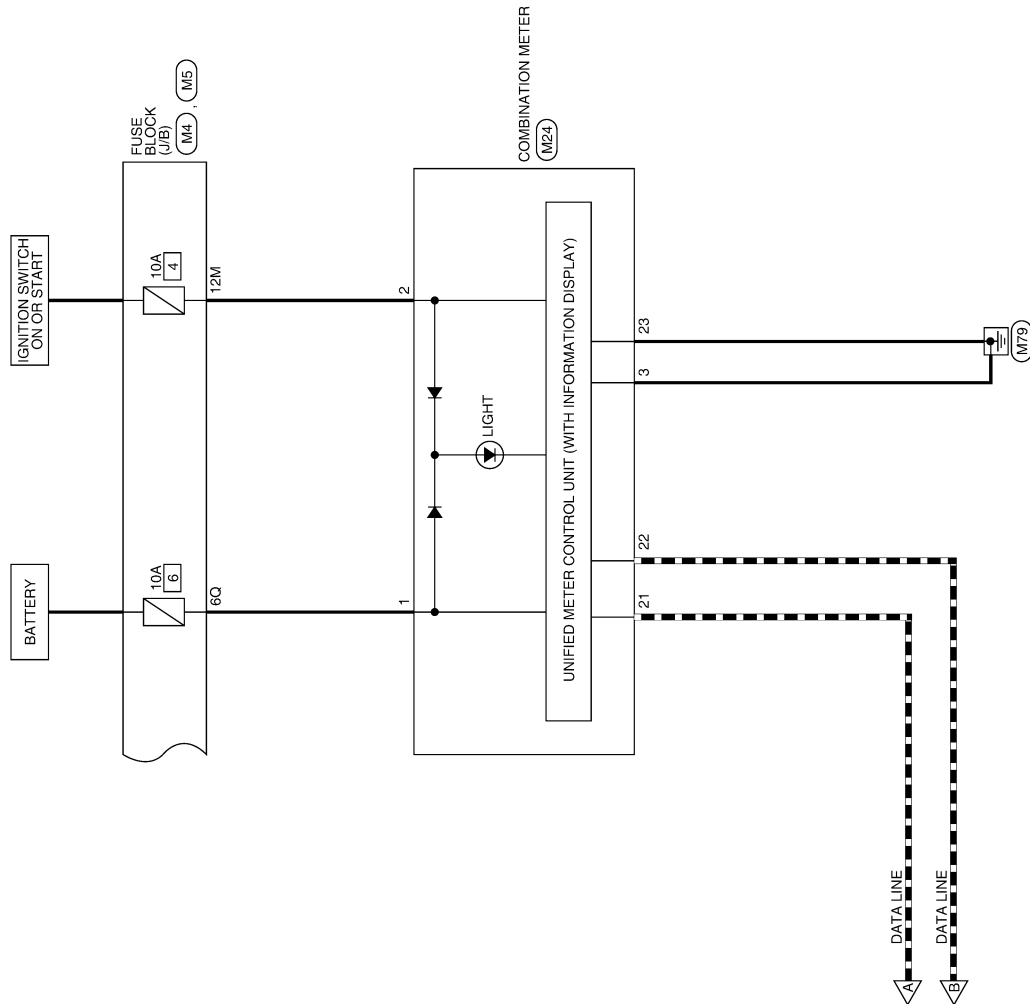
ABLWA2270GB



# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]



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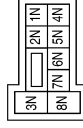
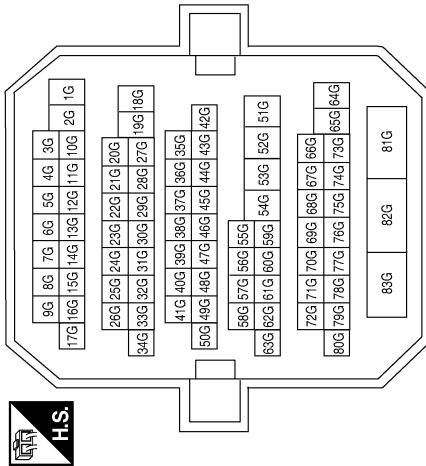
# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

## PARKING, LICENCE PLATE AND TAIL LAMPS CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | W/B           | -           |

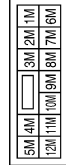
|                 |                  |
|-----------------|------------------|
| Connector No.   | M3               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7N           | Y/R           | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | M4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 6Q           | Y/R           | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M16                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | W/B           | BATT (F/L)  |

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M19                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 75           | R/Y           | OUTPUT 5    |
| 76           | R/G           | OUTPUT 3    |
| 78           | P             | CAN-L       |
| 79           | L             | CAN-H       |
| 95           | R/W           | OUTPUT 1    |
| 96           | P/B           | OUTPUT 4    |
| 97           | R/B           | OUTPUT 2    |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M18                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | GREEN                     |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 50           | LG/B          | INPUT 5     |
| 51           | L/W           | INPUT 1     |
| 52           | G/B           | INPUT 2     |
| 53           | LG/R          | INPUT 3     |
| 54           | G/Y           | INPUT 4     |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | M17                       |
| Connector Name  | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE                     |



|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 4  | 5  | 6  | 7  | 8  | 9  | 10 |    |    |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 11           | Y/R           | BAT BCM FUSE |
| 13           | B             | GND1         |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9            | R/B           | -           |
| 10           | P/B           | -           |
| 11           | R/W           | -           |
| 12           | L/W           | -           |
| 13           | R/Y           | -           |
| 14           | G/B           | -           |

|                 |                    |
|-----------------|--------------------|
| Connector No.   | M28                |
| Connector Name  | COMBINATION SWITCH |
| Connector Color | WHITE              |



|   |   |   |    |    |    |    |    |
|---|---|---|----|----|----|----|----|
| 1 | 2 | 5 | 6  |    |    |    |    |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | G/Y           | -           |
| 5            | LG/R          | -           |
| 7            | R/G           | -           |
| 8            | LG/B          | -           |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 |

| Terminal No. | Color of Wire | Signal Name   |
|--------------|---------------|---------------|
| 1            | Y/R           | BAT           |
| 2            | O             | IGN           |
| 3            | B             | GND (POWER)   |
| 21           | L             | CAN-H         |
| 22           | P             | CAN-L         |
| 23           | B             | GND (CIRCUIT) |

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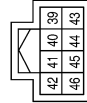
EXL

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E17  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 39           | P             | CAN-L        |
| 40           | L             | CAN-H        |
| 41           | B             | GND (SIGNAL) |

|                 |                  |
|-----------------|------------------|
| Connector No.   | E6               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 9P           | GR            | -           |

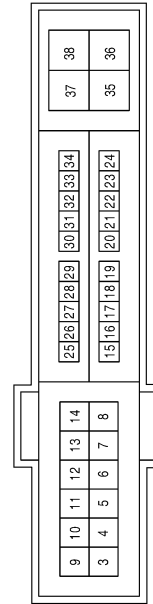
|                 |                     |
|-----------------|---------------------|
| Connector No.   | E21                 |
| Connector Name  | JOINT CONNECTOR-E03 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | GR            | TAIL/ILLUMI |
| 12           | B             | GND (POWER) |

|                 |  |
|-----------------|--|
| Connector No.   | E18  |
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



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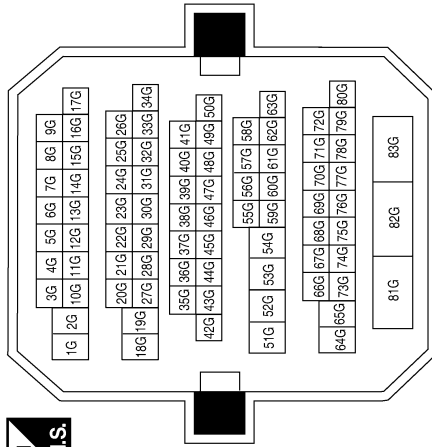
# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8G           | P             | -           |
| 15G          | L             | -           |
| 82G          | LG            | -           |

| Connector No.   | E30          |
|-----------------|--------------|
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Connector No.   | E22                 |
|-----------------|---------------------|
| Connector Name  | JOINT CONNECTOR-E04 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | P             | -           |
| 2            | P             | -           |

| Connector No.   | E218  |
|-----------------|---|
| Connector Name  | FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY  |



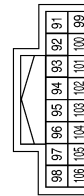
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/B          | -           |
| 9            | B             | -           |

| Connector No.   | E217                      |
|-----------------|---------------------------|
| Connector Name  | FRONT COMBINATION LAMP LH |
| Connector Color | GRAY                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5            | LG/B          | -           |
| 6            | B             | -           |

| Connector No.   | E201   |
|-----------------|--|
| Connector Name  | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 91           | LG/R          | CLEARANCE RH |
| 92           | LG/B          | CLEARANCE LH |

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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |  |
|-----------------|--|
| Connector No.   | E234   |
| Connector Name  | FRONT COMBINATION LAMP LH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/B          | -           |
| 9            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | E225  |
| Connector Name  | FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY  |



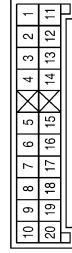
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/R          | -           |
| 9            | B             | -           |

|                 |                           |
|-----------------|---------------------------|
| Connector No.   | E224                      |
| Connector Name  | FRONT COMBINATION LAMP RH |
| Connector Color | GRAY                      |



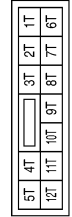
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5            | LG/R          | -           |
| 6            | B             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B20                 |
| Connector Name  | JOINT CONNECTOR-B05 |
| Connector Color | BLUE                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | L             | -           |
| 3            | L             | -           |
| 4            | L             | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | B4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | BROWN            |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4T           | L             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | E235   |
| Connector Name  | FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM) |
| Connector Color | GRAY   |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | LG/R          | -           |
| 9            | B             | -           |

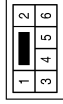
ABLIA4006GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

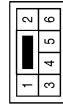
[HALOGEN TYPE]

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |



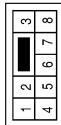
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 4            | B             | -           |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 4            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B24          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | L             | -           |
| 8            | B             | -           |

|                 |                       |
|-----------------|-----------------------|
| Connector No.   | T8                    |
| Connector Name  | LICENSE PLATE LAMP RH |
| Connector Color | BROWN                 |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

|                 |                       |
|-----------------|-----------------------|
| Connector No.   | T6                    |
| Connector Name  | LICENSE PLATE LAMP LH |
| Connector Color | BROWN                 |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | L             | -           |
| 2            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | T2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7            | L             | -           |
| 8            | B             | -           |

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# STOP LAMP

[HALOGEN TYPE]

< WIRING DIAGRAM >

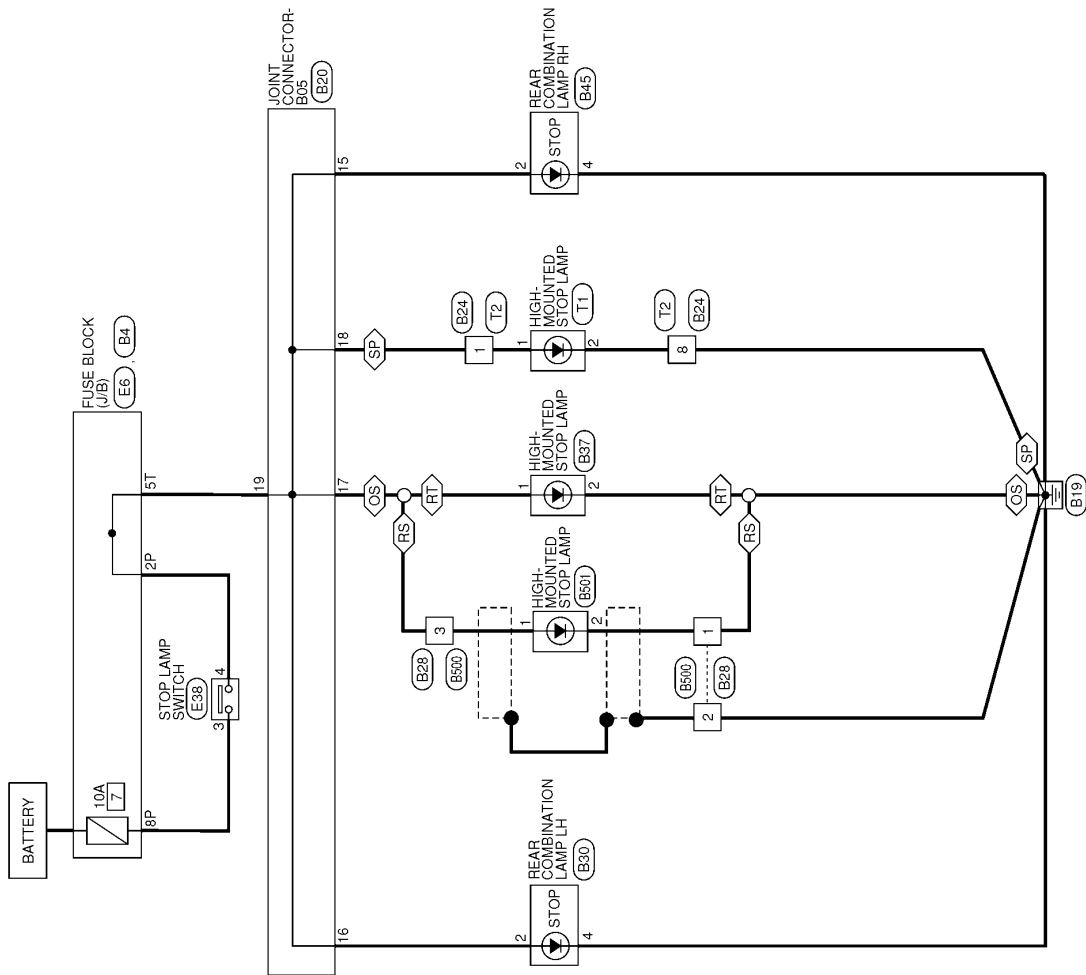
## STOP LAMP

### Wiring Diagram

INFOID:000000010062162

- OS : WITHOUT REAR SPOILER
- RS : WITH REAR SUNSHADE
- RT : WITHOUT REAR SUNSHADE
- SP : WITH REAR SPOILER

### STOP LAMP - XENON



ABLWA2260GB



# STOP LAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

## STOP LAMP CONNECTORS

|                 |                  |
|-----------------|------------------|
| Connector No.   | E6               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



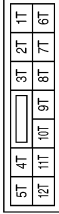
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2P           | LG            | -           |
| 8P           | R             | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | E38              |
| Connector Name  | STOP LAMP SWITCH |
| Connector Color | WHITE            |



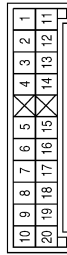
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | R             | -           |
| 4            | LG            | -           |

|                 |                  |
|-----------------|------------------|
| Connector No.   | B4               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | BROWN            |



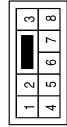
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5T           | O             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B20                 |
| Connector Name  | JOINT CONNECTOR-B05 |
| Connector Color | BLUE                |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 15           | O             | -           |
| 16           | O             | -           |
| 17           | O             | -           |
| 18           | O             | -           |
| 19           | O             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B24          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 8            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B28          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | B             | -           |
| 3            | O             | -           |

ABLIA0526GB

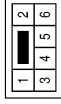
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# STOP LAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |



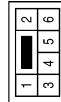
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | O             | -           |
| 4            | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | B37  |
| Connector Name  | HIGH-MOUNTED STOP LAMP (WITHOUT REAR SUNSHADE) |
| Connector Color | WHITE  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | B             | -           |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | O             | -           |
| 4            | B             | -           |

|                 |  |
|-----------------|--|
| Connector No.   | T1   |
| Connector Name  | HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER) |
| Connector Color | BROWN                                      |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | B             | -           |

|                 |   |
|-----------------|---|
| Connector No.   | B501  |
| Connector Name  | HIGH-MOUNTED STOP LAMP (WITH REAR SUNSHADE) |
| Connector Color | GRAY  |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | B             | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | B500         |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | B             | -           |
| 2            | B             | -           |
| 3            | O             | -           |

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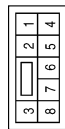
# STOP LAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

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| Connector No.   | T2           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 8            | B             | -           |

ABLIA0528GB



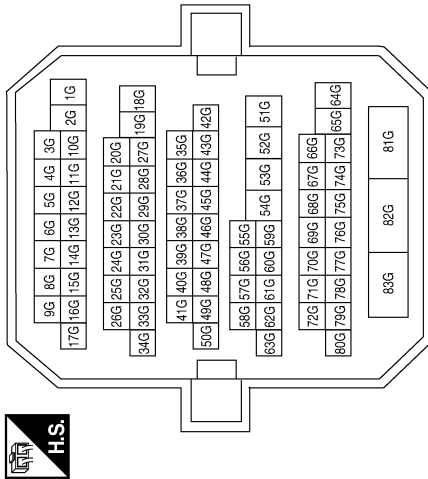
# BACK-UP LAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

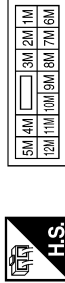
## BACK-UP LAMP CONNECTORS

|                 |              |
|-----------------|--------------|
| Connector No.   | M1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



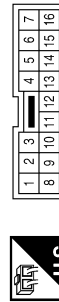
|              |     |               |   |             |   |
|--------------|-----|---------------|---|-------------|---|
| Terminal No. | 13G | Color of Wire | O | Signal Name | - |
|--------------|-----|---------------|---|-------------|---|

|                 |                  |
|-----------------|------------------|
| Connector No.   | M5               |
| Connector Name  | FUSE BLOCK (J/B) |
| Connector Color | WHITE            |



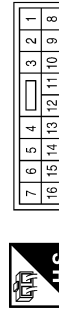
|              |     |               |   |             |   |
|--------------|-----|---------------|---|-------------|---|
| Terminal No. | 12M | Color of Wire | O | Signal Name | - |
|--------------|-----|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | E3           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 4 | Color of Wire | R | Signal Name | - |
|--------------|---|---------------|---|-------------|---|

|                 |              |
|-----------------|--------------|
| Connector No.   | E29          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|              |    |               |   |             |   |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 15 | Color of Wire | W | Signal Name | - |
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# BACK-UP LAMP

< WIRING DIAGRAM >

[HALOGEN TYPE]

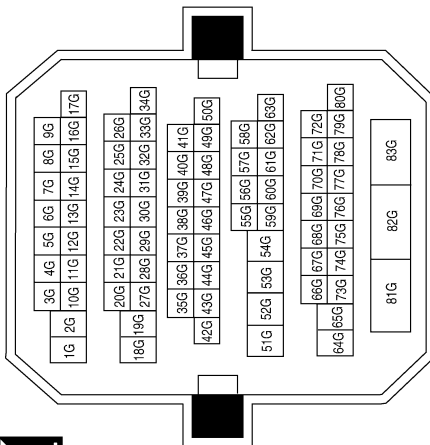
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|-----------------|--------------------|
| Connector No.   | E34                |
| Connector Name  | BACK-UP LAMP RELAY |
| Connector Color | BLUE               |



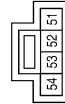
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 2            | R             | -           |
| 3            | W             | -           |
| 5            | LG            | -           |

|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 13G          | BR            | -           |

|                 |              |
|-----------------|--------------|
| Connector No.   | E30          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



|                 |                |
|-----------------|----------------|
| Connector No.   | E49            |
| Connector Name  | JUNCTION BLOCK |
| Connector Color | BROWN          |



|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 51           | LG            | -           |
| 52           | O             | -           |

|                 |                |
|-----------------|----------------|
| Connector No.   | E47            |
| Connector Name  | JUNCTION BLOCK |
| Connector Color | WHITE          |



|              |               |             |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 45           | BR            | -           |

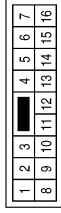
ABLIA0530GB

# BACK-UP LAMP

< WIRING DIAGRAM >

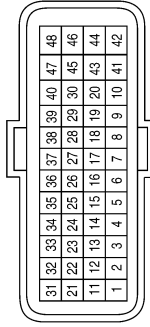
[HALOGEN TYPE]

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| Connector No.   | B10          |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



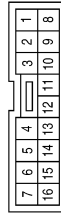
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|--------------|----|---------------|---|-------------|---|
| Terminal No. | 15 | Color of Wire | V | Signal Name | - |
|--------------|----|---------------|---|-------------|---|

|                 |                                   |
|-----------------|-----------------------------------|
| Connector No.   | F15                               |
| Connector Name  | TCM (TRANSMISSION CONTROL MODULE) |
| Connector Color | BLACK                             |



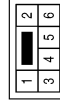
|              |    |               |     |             |              |
|--------------|----|---------------|-----|-------------|--------------|
| Terminal No. | 19 | Color of Wire | G/B | Signal Name | REV LAMP RLY |
|--------------|----|---------------|-----|-------------|--------------|

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| Connector No.   | F1           |
| Connector Name  | WIRE TO WIRE |
| Connector Color | WHITE        |



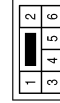
|              |   |               |     |             |   |
|--------------|---|---------------|-----|-------------|---|
| Terminal No. | 4 | Color of Wire | G/B | Signal Name | - |
|--------------|---|---------------|-----|-------------|---|

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B45                      |
| Connector Name  | REAR COMBINATION LAMP RH |
| Connector Color | WHITE                    |



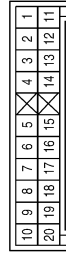
|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 3 | Color of Wire | V | Signal Name | - |
| 4            | B | B             | B | B           | - |

|                 |                          |
|-----------------|--------------------------|
| Connector No.   | B30                      |
| Connector Name  | REAR COMBINATION LAMP LH |
| Connector Color | WHITE                    |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 3 | Color of Wire | V | Signal Name | - |
| 4            | B | B             | B | B           | - |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | B20                 |
| Connector Name  | JOINT CONNECTOR-B05 |
| Connector Color | BLUE                |



|              |   |               |   |             |   |
|--------------|---|---------------|---|-------------|---|
| Terminal No. | 7 | Color of Wire | V | Signal Name | - |
| 8            | V | V             | V | V           | - |
| 9            | V | V             | V | V           | - |

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# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

## SYMPTOM DIAGNOSIS

### EXTERIOR LIGHTING SYSTEM SYMPTOMS

#### Symptom Table

INFOID:000000010051095

**CAUTION:**

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 does not switch to the high beam.                                       | One side  | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Harness between IPDM E/R and the front combination lamp</li> <li>• Front combination lamp (High beam relay)</li> <li>• IPDM E/R</li> </ul>                 | Headlamp (HI) circuit. Refer to <a href="#">EXL-201</a> .  |
|  | Both sides  | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM"<br>Refer to <a href="#">EXL-307</a> .  |  |
| High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.) |   | <ul style="list-style-type: none"> <li>• Combination meter</li> <li>• BCM</li> </ul>  | <ul style="list-style-type: none"> <li>• Combination meter. Data monitor "HI-BEAM IND".</li> <li>• BCM (HEAD LAMP). Active test "HEADLAMP".</li> </ul> |
| Headlamp does not switch to the low beam.  | One side  | Front combination lamp (Low beam relay)   | —  |
|  | Both sides  | <ul style="list-style-type: none"> <li>• Combination switch (lighting and turn signal switch)</li> <li>• Harness between the combination switch (lighting and turn signal switch) and BCM</li> <li>• BCM</li> </ul> | Combination switch (lighting and turn signal switch). Refer to <a href="#">EXL-186</a> .   |
|  |   | High beam request signal  | IPDM E/R. Data monitor "HL HI REQ".  |
|  |   | IPDM E/R  | —  |
| Headlamp does not turn ON.   | One side  | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Bulb</li> <li>• Harness between IPDM E/R and the front combination lamp</li> <li>• Front combination lamp</li> <li>• IPDM E/R</li> </ul>                   | Headlamp (LO) circuit. Refer to <a href="#">EXL-205</a> .  |
|  | Both sides  | <b>Symptom diagnosis</b><br>"BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-308</a> .  |  |
| Headlamp does not turn OFF.  | When the ignition switch is turned ON                                   | <ul style="list-style-type: none"> <li>• BCM</li> <li>• Combination switch (lighting and turn signal switch)</li> </ul>   | Combination switch (lighting and turn signal switch). Refer to <a href="#">EXL-186</a> .   |
|  | The ignition switch is turned OFF (After activating the battery saver). | IPDM E/R  | —  |



# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

| Symptom   | Possible cause   | Inspection item  |  |
|---|--|--|--|
| Headlamp is not turned ON/OFF with the lighting switch AUTO.  | <ul style="list-style-type: none"> <li>• Combination switch (lighting and turn signal switch)</li> <li>• Harness between the combination switch (lighting and turn signal switch) and BCM</li> <li>• BCM</li> </ul>  | Combination switch (lighting and turn signal switch). Refer to <a href="#">EXL-186</a> .   |  |
|   | <ul style="list-style-type: none"> <li>• Optical sensor</li> <li>• Harness between the optical sensor and BCM</li> <li>• BCM</li> </ul>  | Optical sensor. Refer to <a href="#">EXL-217</a> .   |  |
| Daytime light system does not activate.   | <ul style="list-style-type: none"> <li>• Either high beam bulb</li> <li>• Parking brake switch</li> <li>• Combination switch (lighting and turn signal switch)</li> <li>• BCM</li> <li>• IPDM E/R</li> <li>• Daytime light relay</li> <li>• Harness between IPDM E/R and daytime light relay.</li> </ul> | Daytime light system description. Refer to <a href="#">EXL-176</a> , " <a href="#">System Description</a> ".   |  |
| Front fog lamp is not turned ON.  | One side   | <ul style="list-style-type: none"> <li>• Front fog lamp bulb</li> <li>• Harness between IPDM E/R and the front combination lamp</li> <li>• Front combination lamp</li> <li>• IPDM E/R</li> </ul>                         | Front fog lamp circuit. Refer to <a href="#">EXL-207</a> .   |
|   | Both side  | <b>Symptom diagnosis</b><br>"BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON"<br>Refer to <a href="#">EXL-310</a> .  |  |
| Parking lamp is not turned ON.  | One side   | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Parking lamp bulb</li> <li>• Harness between IPDM E/R and the front/rear combination lamp</li> <li>• Front/rear combination lamp</li> <li>• IPDM E/R</li> </ul> | Parking lamp circuit. Refer to <a href="#">EXL-209</a> .   |
|   | Both sides   | <b>Symptom diagnosis</b><br>"PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON".<br>Refer to <a href="#">EXL-309</a> .   |  |
| Turn signal lamp does not blink.  | Indicator lamp is normal. (The applicable side performs the high flasher activation).  | <ul style="list-style-type: none"> <li>• Harness between BCM and each turn signal lamp</li> <li>• Turn signal lamp bulb</li> <li>• Door mirror (if equipped with turn signals in the door mirrors)</li> </ul>            | Turn signal lamp circuit. Refer to <a href="#">EXL-213</a> .   |
| Turn signal indicator lamp does not blink.  | One side   | Combination meter  | —  |
|   | Both sides (Always)  | <ul style="list-style-type: none"> <li>• Turn signal indicator lamp signal</li> <li>• Combination meter</li> <li>• BCM</li> </ul>  | <ul style="list-style-type: none"> <li>• Combination meter. Data monitor "TURN IND".</li> <li>• BCM (FLASHER). Active test "FLASHER".</li> </ul> |
|   | Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)   | <ul style="list-style-type: none"> <li>• The combination meter power supply and the ground circuit</li> <li>• Combination meter</li> </ul>   | Combination meter. Power supply and the ground circuit Refer to <a href="#">EXL-186</a> .  |
| <ul style="list-style-type: none"> <li>• Hazard warning lamp does not activate.</li> <li>• Hazard warning lamp continues activating. (Turn signal is normal)</li> </ul> | <ul style="list-style-type: none"> <li>• Hazard switch</li> <li>• Harness between the hazard switch and BCM</li> <li>• BCM</li> </ul>  | Hazard switch Refer to <a href="#">EXL-220</a> .   |  |

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## NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

---

### NORMAL OPERATING CONDITION

#### Description

*INFOID:000000010051096*

#### AUTO LIGHT SYSTEM

The auto light system may not turn the headlamp ON/OFF immediately after passing a dark area or a bright area (short tunnel, sky bridge, shadowed area etc.). This is normal.

# BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

## BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

### Description

INFOID:000000010051097

The headlamps (both sides) do not switch to high beam when the lighting switch is in the HI or PASS setting.

### Diagnosis Procedure

INFOID:000000010051098

#### 1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [EXL-186, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

##### CONSULT DATA MONITOR

1. Select "HL HI REQ" of IPDM E/R DATA MONITOR item.
2. While operating the lighting switch, check the monitor status.

| Monitor item | Condition             |                       | Monitor status |
|--------------|-----------------------|-----------------------|----------------|
| HL HI REQ    | Lighting switch (2ND) | HI or PASS            | ON             |
|              |                       | Except for HI or PASS | OFF            |

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to [EXL-201, "Diagnosis Procedure"](#).

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

## BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

### Description

INFOID:000000010051099

The headlamps (both sides) do not turn ON in any lighting switch setting.

### Diagnosis Procedure

INFOID:000000010051100

#### 1. CHECK COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)

Check the combination switch (lighting and turn signal switch). Refer to [EXL-186, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

- YES >> GO TO 2.
- NO >> Repair or replace the malfunctioning part.

#### 2. CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

##### Ⓟ CONSULT DATA MONITOR

1. Select "HL LO REQ" of IPDM E/R DATA MONITOR item.
2. While operating the lighting switch, check the monitor status.

| Monitor item | Condition       | Monitor status |     |
|--------------|-----------------|----------------|-----|
| HL LO REQ    | Lighting switch | 2ND            | ON  |
|              |                 | OFF            | OFF |

Is the item status normal?

- YES >> GO TO 3.
- NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3. HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to [EXL-205, "Diagnosis Procedure"](#).

Is the headlamp (LO) circuit normal?

- YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).
- NO >> Repair or replace the malfunctioning part.

# PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000010051101

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

### Diagnosis Procedure

INFOID:0000000010051102

#### 1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [EXL-186, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

##### CONSULT DATA MONITOR

1. Select "TAIL & CLR REQ" of IPDM E/R DATA MONITOR item.
2. While operating the lighting switch, check the monitor status.

| Monitor item   | Condition       | Monitor status |     |
|----------------|-----------------|----------------|-----|
| TAIL & CLR REQ | Lighting switch | 1ST            | ON  |
|                |                 | OFF            | OFF |

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to [EXL-209, "Diagnosis Procedure"](#).

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

### Description

INFOID:000000010051103

The front fog lamps do not turn ON in any setting.

### Diagnosis Procedure

INFOID:000000010051104

#### 1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [EXL-186, "System Description"](#).

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

#### 2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

##### ⓅCONSULT DATA MONITOR

1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.
2. While operating the front fog lamp switch, check the monitor status.

| Monitor item | Condition                                      | Monitor status |     |
|--------------|--|----------------|-----|
| FR FOG REQ   | Front fog lamp switch<br>(Lighting switch 2ND) | ON             | ON  |
|              |  | OFF            | OFF |

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).

#### 3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to [EXL-207, "Diagnosis Procedure"](#).

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

PRECAUTION

PRECAUTIONS

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

INFOID:000000009465379

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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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.

General precautions for service operations

INFOID:000000009465380

- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.
- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. (If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.)

Precaution for Work

INFOID:000000009731490

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
  - Water soluble dirt:
    - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
    - Then rub with a soft, dry cloth.
  - Oily dirt:

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## PRECAUTIONS

[HALOGEN TYPE]

< PRECAUTION >

- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.



# PREPARATION

< PREPARATION >

[HALOGEN TYPE]

## PREPARATION

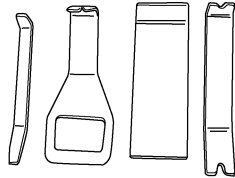
### PREPARATION

#### Special Service Tool

INFOID:000000009465382

The actual shapes of the tools may differ from those illustrated here.

| Tool number<br>(TechMate No.)<br>Tool name | Description              |
|--|--------------------------|
| —<br>(J-46534)<br>Trim Tool Set            | Removing trim components |



AWJIA0483ZZ

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# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

## PERIODIC MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT

#### Description

INFOID:000000009465383

#### PREPARATION BEFORE ADJUSTING

##### CAUTION:

Do not use organic solvent (thinner, gasoline etc.)

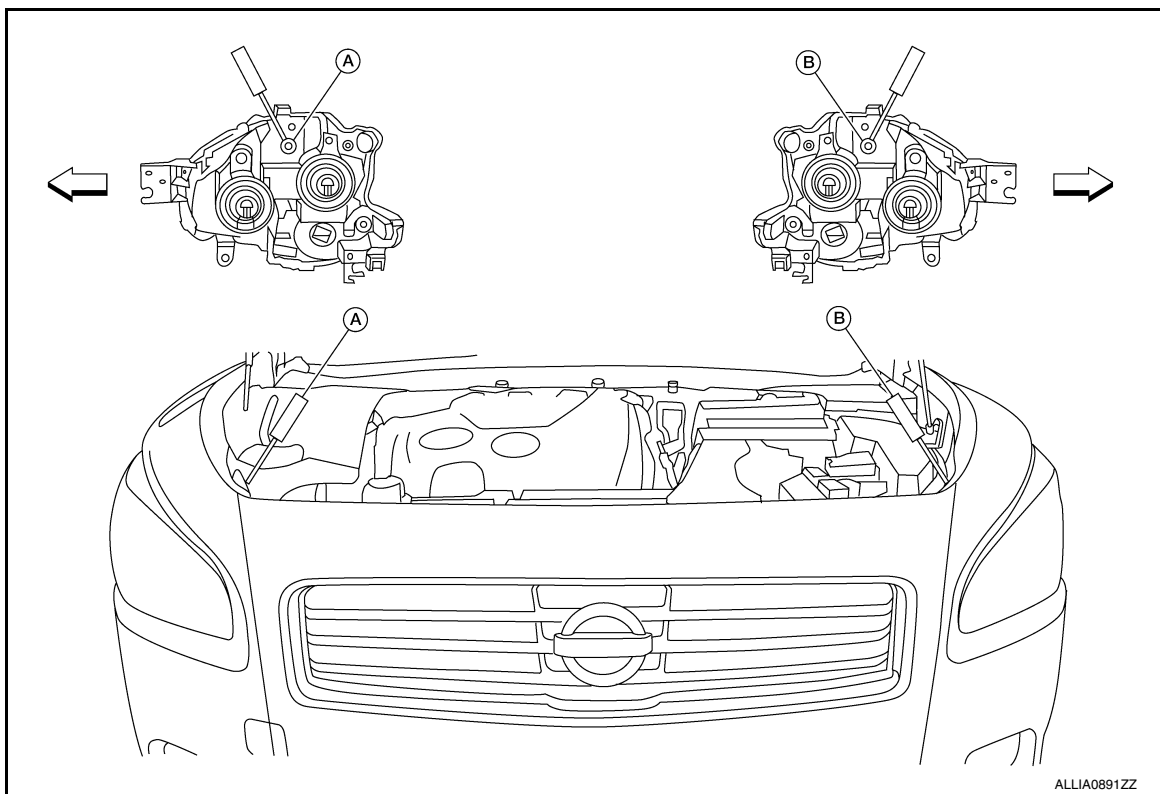
##### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming adjustment if the vehicle front body has been repaired and/or the front combination lamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Keep all tires inflated to correct pressure.
- Place vehicle on level ground.
- See that the vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in drivers seat.

#### AIMING ADJUSTMENT SCREW



A. Headlamp RH (UP/DOWN) adjustment screw

B. Headlamp LH (UP/DOWN) adjustment screw

← Vehicle center

| Adjustment screw |                       | Screw driver rotation | Facing direction |
|------------------|-----------------------|-----------------------|------------------|
| A                | Headlamp RH (UP/DOWN) | Clockwise             | DOWN             |
|                  |                       | Counterclockwise      | UP               |
| B                | Headlamp LH (UP/DOWN) | Clockwise             | DOWN             |
|                  |                       | Counterclockwise      | UP               |

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

## Aiming Adjustment Procedure

INFOID:00000009465384

### NOTE:

Set the screen so that it is perpendicular to the road.

1. Position the screen.
2. Make the distance between the headlamp center and the screen 7.62 m (25 ft.).
3. Start the engine and illuminate the headlamp (LO).

### CAUTION:

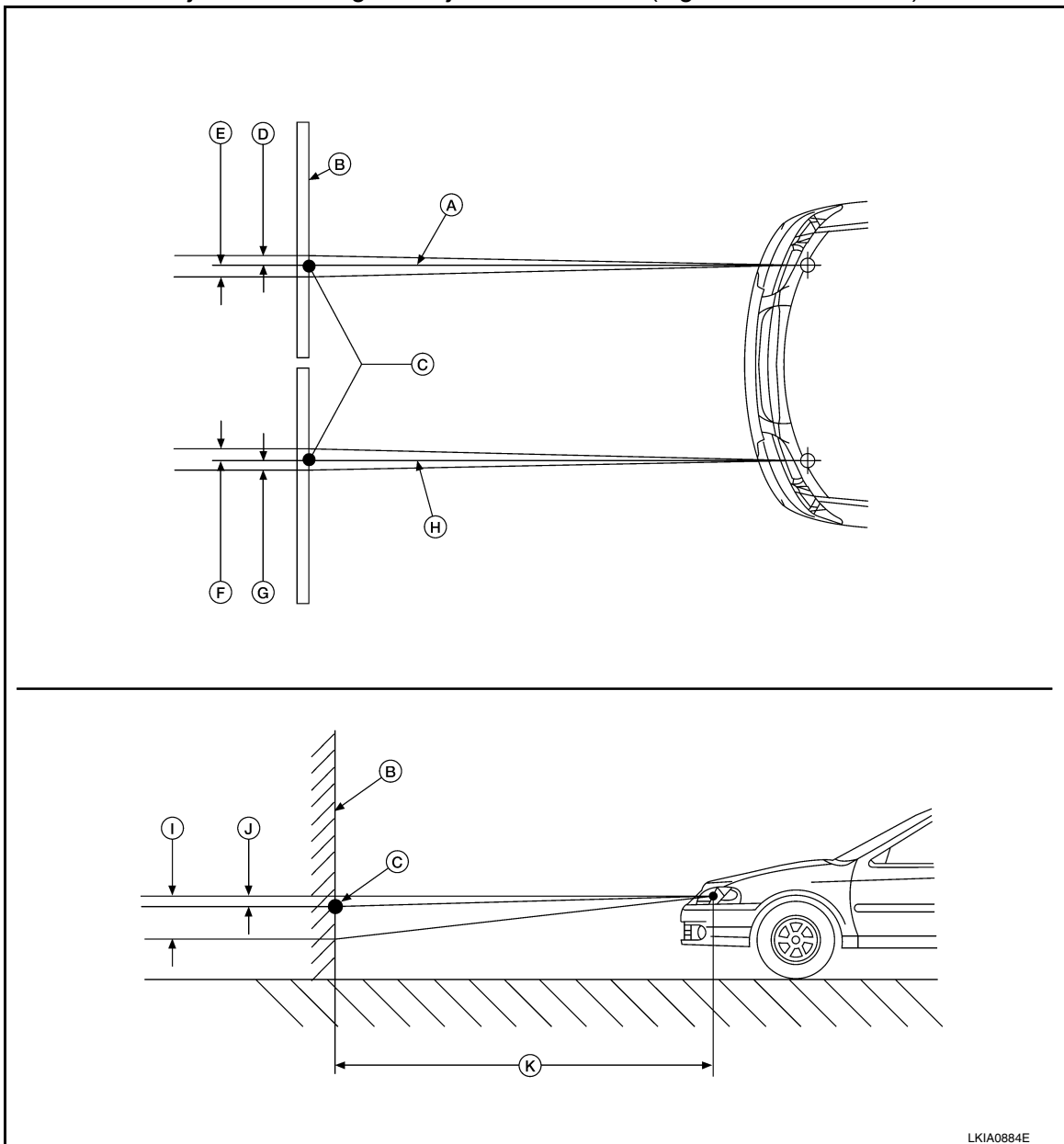
Do not cover the lens surface with tape, etc. because it is made of plastic.

### NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the screen.

4. Use the adjustment screw to adjust the low beams on the screen, so that it is within the aiming adjustment area.

### Adjustment Using An Adjustment Screen (Light/Dark Borderline)



A. Headlamp beam (RH)

B. Screen

C. Horizontal/Vertical center point of headlamp

D. 66.5 mm (2.6 in)

E. 66.5 mm (2.6 in)

F. 66.5 mm (2.6 in)

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

G. 66.5 mm (2.6 in)

H. Headlamp beam (LH)

I. 53.2 mm (2.1 in)

J. 13.3 mm (0.5 in)

K. 7.62 m (25 ft)

# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

## FRONT FOG LAMP AIMING ADJUSTMENT

### Description

INFOID:000000009465385

### PREPARATION BEFORE ADJUSTING

#### CAUTION:

Do not use organic solvent (thinner, gasoline etc.).

#### NOTE:

For details, refer to the regulations in your own country.

Before performing aiming adjustment, check the following.

- Keep all tires inflated to correct pressure.
- Place vehicle on level ground.
- See that the vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in drivers seat.

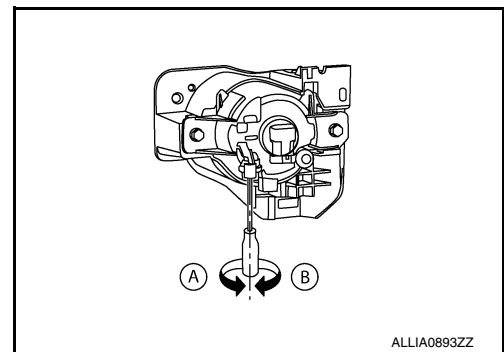
### AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment as shown.

#### NOTE:

A screwdriver or hexagonal wrench [6 mm (0.24 in)] can be used for adjustment.

- A: Up
- B: Down



### Aiming Adjustment Procedure

INFOID:000000009465386

#### NOTE:

Set the screen so that it is perpendicular to the road.

1. Position the screen.
2. Make the distance between the headlamp center and the screen 7.62 m (25 ft.).
3. Start the engine and illuminate the fog lamp ON.

#### CAUTION:

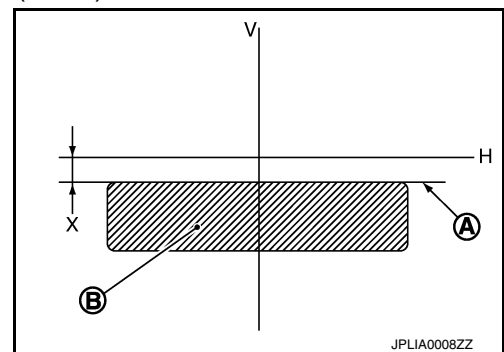
Do not cover the lens surface with tape, etc. because it is made of plastic.

#### NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the screen

4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4.0 in).

- Front fog lamp light distribution on the screen is as shown.
- A: Cutoff line
- B: High illuminance area
- H: Horizontal center line of front fog lamp
- V: Vertical center line of front fog lamp
- X: Cutoff line height



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# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

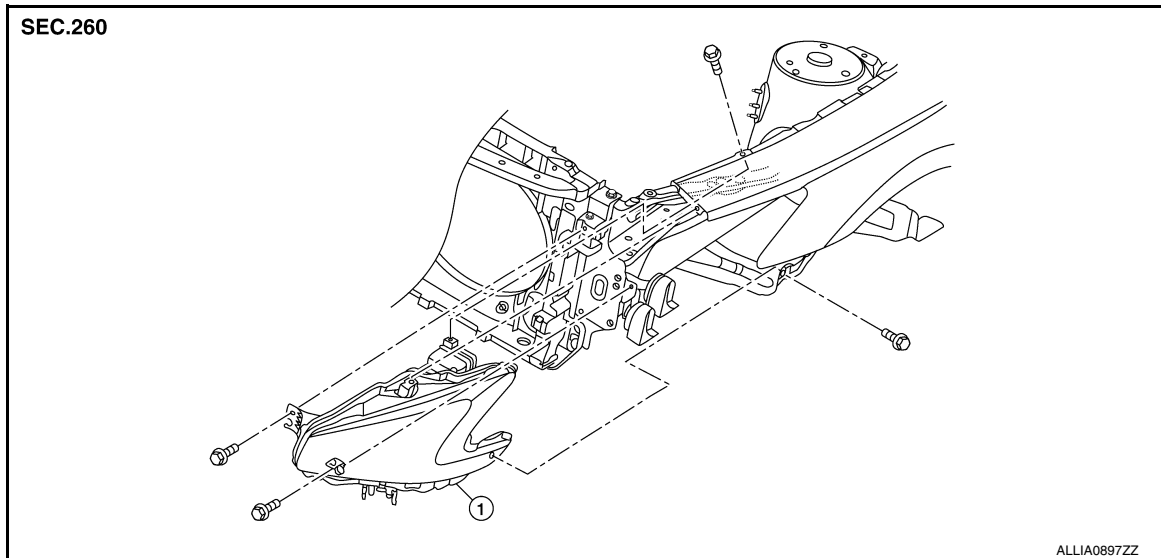
[HALOGEN TYPE]

## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View

INFOID:000000009465387



1. Front combination lamp

### Removal and Installation

INFOID:000000009465388

#### FRONT COMBINATION LAMP

##### Removal

1. Remove the front bumper fascia. Refer to [EXT-16, "Removal and Installation"](#).
2. Remove the front combination lamp bolts.
3. Remove the harness clips from the front combination lamp assembly.
4. Pull out the front combination lamp toward the front of vehicle.
5. Disconnect the harness connectors from the front combination lamp and remove.

##### Installation

Installation is in the reverse order of removal.

##### NOTE:

After installation, perform headlamp aiming adjustment. Refer to [EXL-315, "Aiming Adjustment Procedure"](#).

#### HALOGEN BULB (LOW BEAM)

##### Removal

##### WARNING:

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.

##### CAUTION:

- After installing the bulb, install the plastic cover and the bulb socket securely for watertightness.
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.

1. Remove the front combination lamp. Refer to [EXL-318, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket

##### Installation

# FRONT COMBINATION LAMP

[HALOGEN TYPE]

## < REMOVAL AND INSTALLATION >

Installation is in the reverse order of removal.

### HALOGEN BULB (HIGH BEAM)

#### Removal

1. Remove the front combination lamp. Refer to [EXL-318, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket.

#### Installation

Installation is in the reverse order of removal.

### FRONT TURN SIGNAL LAMP BULB

#### Removal

1. Remove the front combination lamp. Refer to [EXL-318, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket.

#### Installation

Installation is in the reverse order of removal.

### FRONT SIDE MARKER LAMP BULB

#### Removal

1. Remove the front combination lamp. Refer to [EXL-318, "Removal and Installation"](#).
2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
3. Remove the bulb from the bulb socket.

#### Installation

Installation is in the reverse order of removal.

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# FRONT FOG LAMP

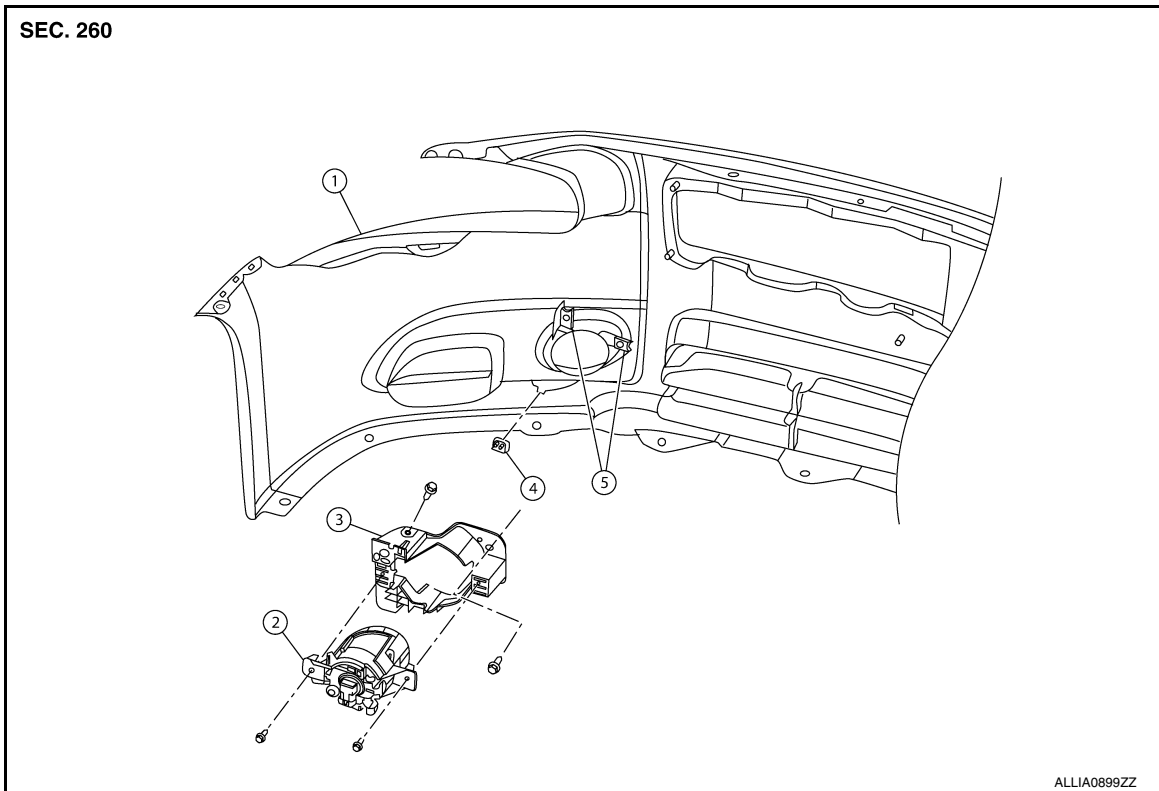
< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## FRONT FOG LAMP

Exploded View

INFOID:000000009465389



- |                        |                   |                           |
|------------------------|-------------------|---------------------------|
| 1. Front bumper fascia | 2. Front fog lamp | 3. Front fog lamp bracket |
| 4. Clip                | 5. Spring nuts    |                           |

## Removal and Installation

INFOID:000000009465390

### FRONT FOG LAMP

#### Removal

1. Remove the front bumper fascia. Refer to [EXT-16. "Removal and Installation"](#).
2. Disconnect the harness connector from the fog lamp.
3. Remove the front fog lamp bolts.
4. Remove the front fog lamp.

#### Installation

Installation is in the reverse order of removal.

#### NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to [EXL-317. "Aiming Adjustment Procedure"](#).

### FRONT FOG LAMP BULB

#### Removal

#### WARNING:

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.

#### CAUTION:

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.

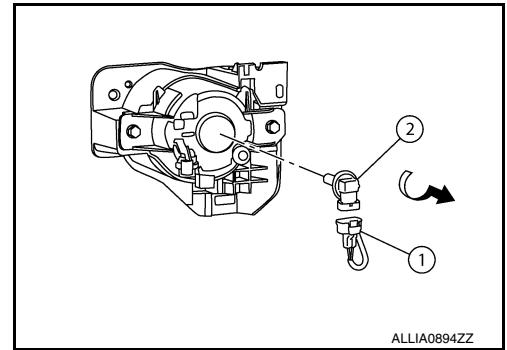


# FRONT FOG LAMP

## < REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

1. Remove the front fender protector. Refer to [EXT-24, "Removal and Installation"](#).
2. Disconnect the harness connector (1) from the front fog lamp.
3. Rotate the bulb (2) counterclockwise and unlock it.



### Installation

Installation is in the reverse order of removal.

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# OPTICAL SENSOR

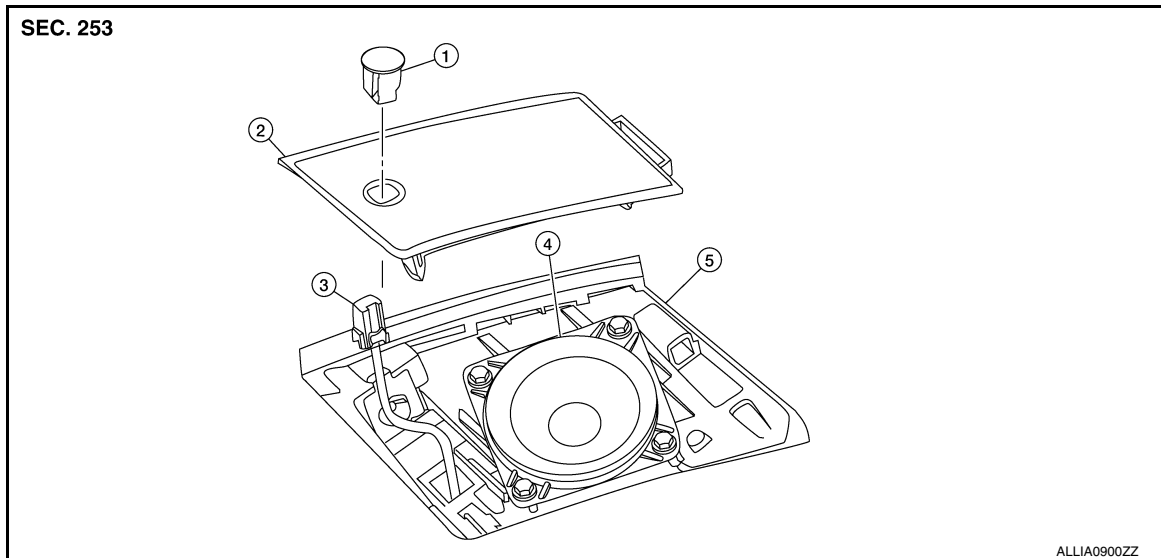
< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## OPTICAL SENSOR

### Exploded View

INFOID:000000009465391



- |                             |                                    |                                     |
|-----------------------------|------------------------------------|-------------------------------------|
| 1. Optical sensor           | 2. LH front tweeter speaker grille | 3. Optical sensor harness connector |
| 4. LH front tweeter speaker | 5. Instrument panel                |                                     |

### Removal and Installation

INFOID:000000009465392

#### **CAUTION:**

**Whenever a suitable tool is used, always wrap a cloth around the end of the tool to protect components from damage.**

#### REMOVAL

1. Carefully remove the LH front tweeter speaker grille using a suitable tool.
2. Insert a suitable tool between the optical sensor and the LH front tweeter speaker grille. Lift the optical sensor upward.
3. Disconnect the harness connector from the optical sensor and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# DOOR MIRROR TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## DOOR MIRROR TURN SIGNAL LAMP

### Removal and Installation

INFOID:000000009465393

The door mirror turn signal lamp is an integral part of the door mirror and must be replaced as an assembly. Refer to [MIR-19. "Removal and Installation"](#).

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# LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## LIGHTING & TURN SIGNAL SWITCH

### Removal and Installation

INFOID:000000009465394

#### NOTE:

The lighting and turn signal switch is integral with the combination switch assembly.

#### REMOVAL

1. Unlock steering wheel.

#### CAUTION:

- Before servicing, disconnect both battery terminals and wait at least three minutes
- Do not use air tools or electric tools for servicing.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to [SRC-12, "SRS Operation Check"](#).

2. Remove steering column covers. Refer to [JP-13, "Removal and Installation"](#).
3. Rotate steering wheel clockwise to access first combination switch bolt, then remove bolt.
4. Rotate steering wheel counter-clockwise to access second combination switch bolt, then remove bolt.
5. Disconnect the harness connectors from the lighting and turn signal switch and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# HAZARD SWITCH

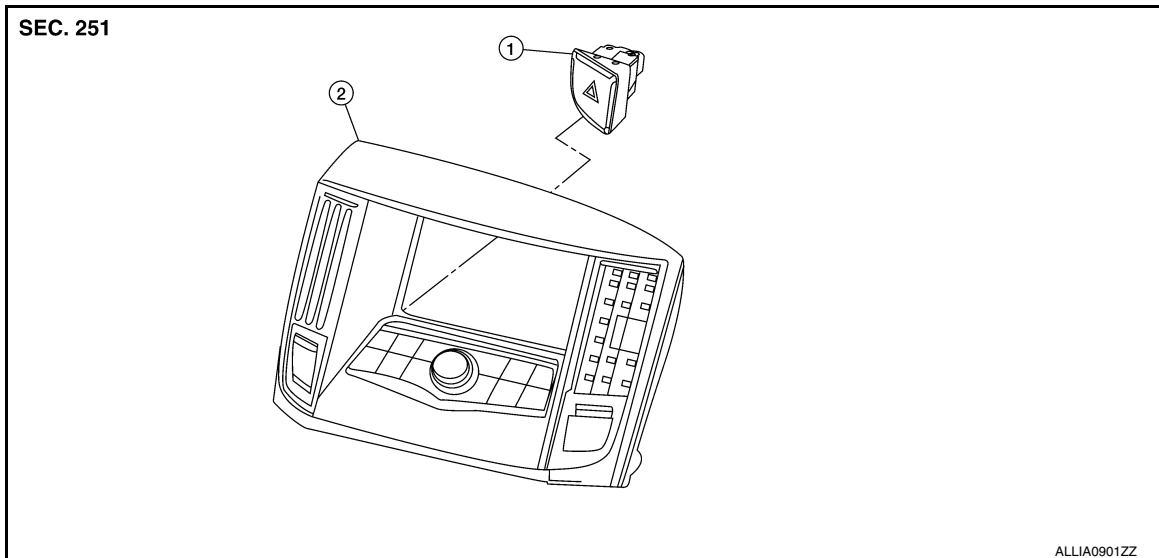
< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## HAZARD SWITCH

### Exploded View

INFOID:00000009465395



1. Hazard switch
2. Cluster lid D

### Removal and Installation

INFOID:00000009465396

#### REMOVAL

1. Remove cluster lid D. Refer to [IP-18, "Removal and Installation"](#).
2. Disconnect the harness connector from the hazard switch.
3. Remove the hazard switch.

#### INSTALLATION

Installation is in the reverse order of removal.

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EXL

# REAR COMBINATION LAMP

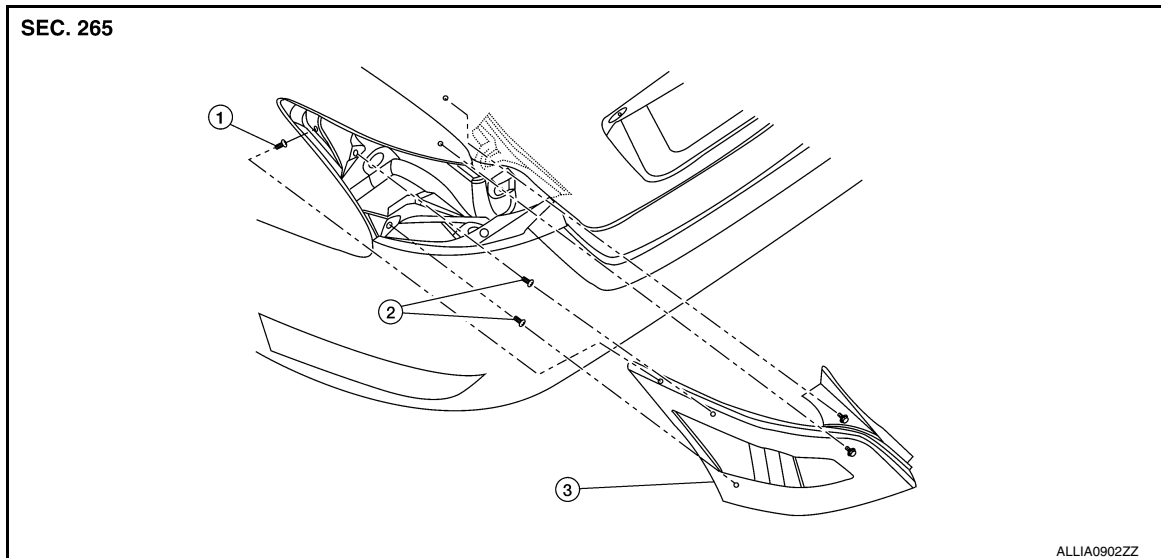
< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## REAR COMBINATION LAMP

### Exploded View

INFOID:000000009465397



1. Slide clip

2. Grommets

3. Rear combination lamp

### Removal and Installation

INFOID:000000009465398

#### REAR COMBINATION LAMP

##### Removal

1. Remove the trunk side finisher. Refer to [INT-36, "Exploded View"](#).
2. Remove the rear combination lamp nuts.
3. Pull the rear combination lamp toward the rear of the vehicle to remove it.
4. Disconnect the harness connector from the rear combination lamp.

##### Installation

Installation is in the reverse order of removal.

#### **WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.**

#### **CAUTION:**

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.

#### STOP/TAIL LAMP

Replacement is integral with rear combination lamp. Refer to [EXL-326, "Exploded View"](#).

#### REAR SIDE MARKER LAMP BULB

##### Removal

1. Remove the rear combination lamp. Refer to [EXL-326, "Exploded View"](#).
2. Rotate the rear side marker lamp socket counterclockwise and unlock from rear combination lamp.
3. Remove the bulb from the rear side marker lamp socket.

##### Installation

Installation is in the reverse order of removal.

#### REAR TURN SIGNAL LAMP BULB

# REAR COMBINATION LAMP

[HALOGEN TYPE]

## < REMOVAL AND INSTALLATION >

### Removal

1. Remove the rear combination lamp. Refer to [EXL-326, "Exploded View"](#).
2. Rotate the rear turn signal lamp socket counterclockwise and unlock from rear combination lamp.
3. Remove the bulb from the rear turn signal lamp socket.

### Installation

Installation is in the reverse order of removal.

### BACK-UP LAMP BULB

### Removal

1. Remove the rear combination lamp. Refer to [EXL-326, "Exploded View"](#).
2. Rotate the back-up lamp socket counterclockwise and unlock from rear combination lamp.
3. Remove the bulb from the back-up lamp socket.

### Installation

Installation is in the reverse order of removal.

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# HIGH-MOUNTED STOP LAMP

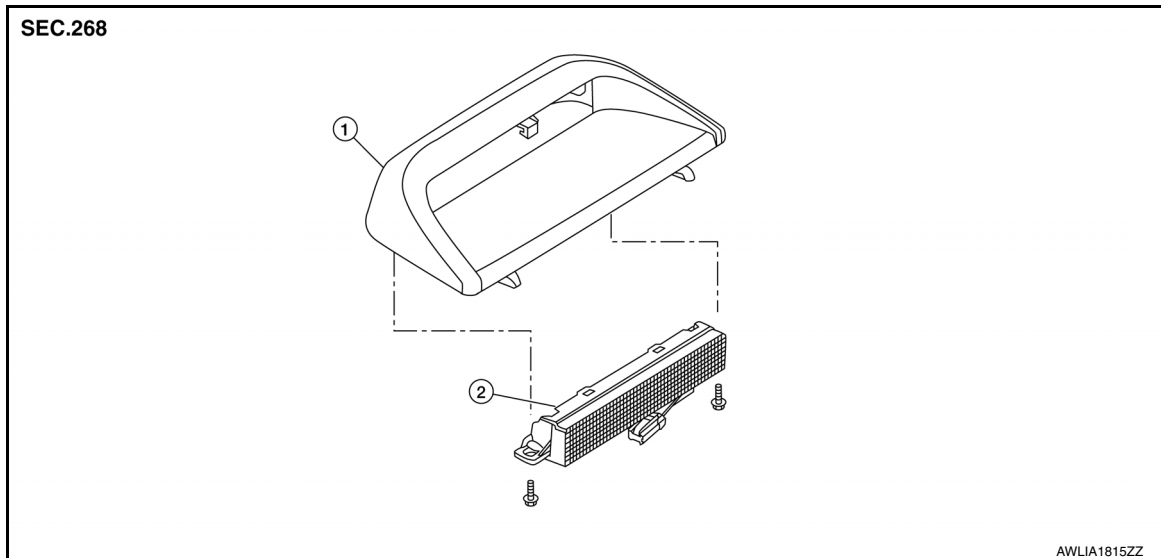
< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:000000009465399



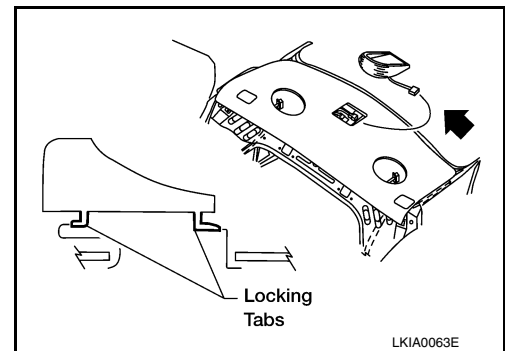
1. High-mounted stop lamp cover
2. High-mounted stop lamp bulb

## Removal and Installation

INFOID:000000009465400

### REMOVAL

1. Slide the high-mounted stop lamp rearward on the parcel shelf to give clearance to the front locking tabs.
2. Lift the front of the high-mounted stop lamp up and slide it forward to give clearance to the rear locking tabs.
3. Disconnect the harness connector from the high-mounted stop lamp and remove.



### INSTALLATION

Installation is in the reverse order of removal.



# LICENSE PLATE LAMP

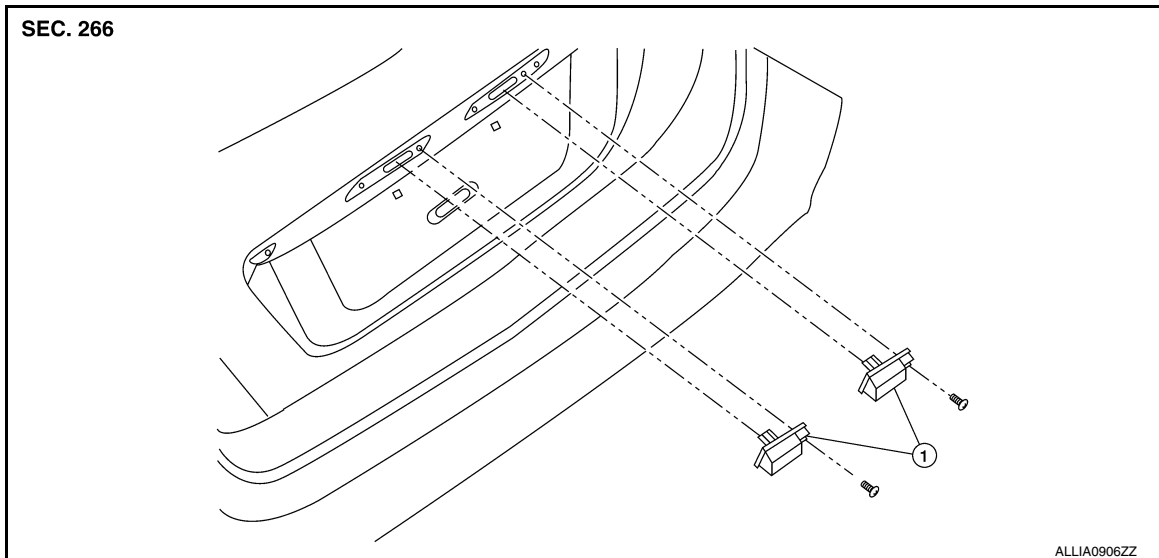
< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## LICENSE PLATE LAMP

### Exploded View

INFOID:000000009465401



1. License plate lamp

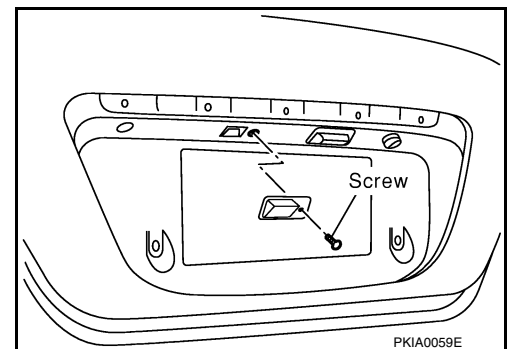
### Removal and Installation

INFOID:000000009465402

## LICENSE PLATE LAMP

### Removal

1. Remove the license lamp finisher. Refer to [EXT-31, "Removal and Installation"](#).
2. Position trunk lid finisher aside. Refer to [INT-36, "Exploded View"](#).
3. Remove the license plate lamp screw and remove the license plate lamp.



### Installation

Installation is in the reverse order of removal.

## LICENSE PLATE LAMP BULB

### Removal

#### **WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result.**

#### **CAUTION:**

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.

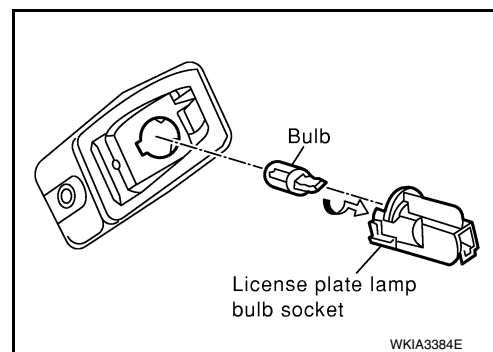
1. Position trunk lid finisher aside. Refer to [INT-36, "Exploded View"](#).

## LICENSE PLATE LAMP

### < REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

2. Turn the license plate lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the license plate lamp bulb socket.



### Installation

Installation is in the reverse order of removal.

# FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN TYPE]

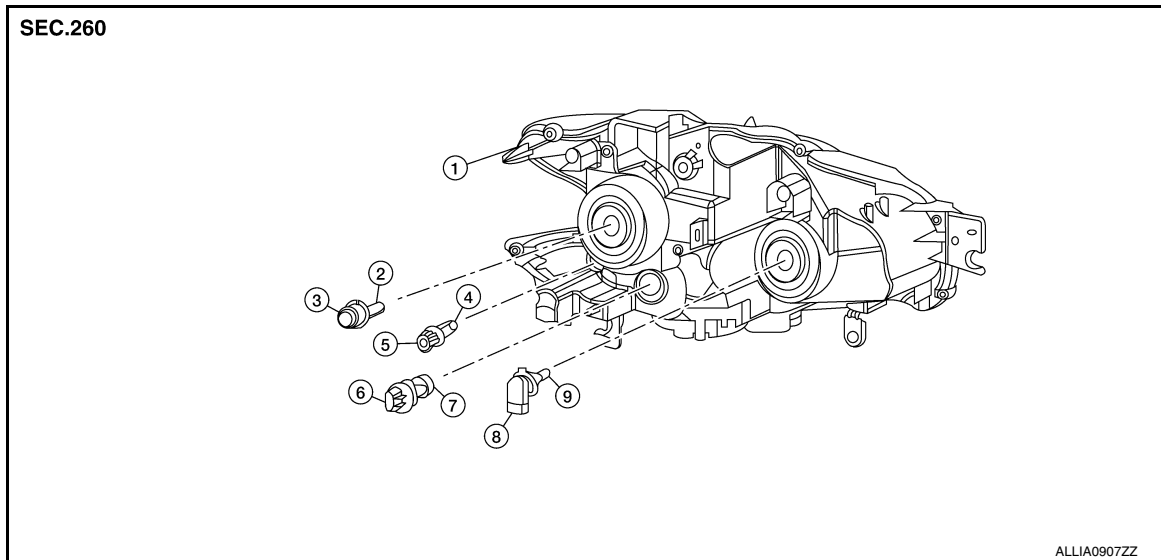
## UNIT DISASSEMBLY AND ASSEMBLY

### FRONT COMBINATION LAMP

#### Disassembly and Assembly

INFOID:000000009465403

#### EXPLODED VIEW



- |                                |                                    |                                   |
|--------------------------------|------------------------------------|-----------------------------------|
| 1. Front combination lamp      | 2. Halogen bulb (low beam)         | 3. Halogen bulb socket (low beam) |
| 4. Side marker lamp bulb       | 5. Side marker lamp socket         | 6. Front turn signal lamp socket  |
| 7. Front turn signal lamp bulb | 8. Halogen bulb socket (high beam) | 9. Halogen bulb (high beam)       |

#### DISASSEMBLY

1. Rotate the halogen bulb socket (low beam) counterclockwise and unlock it.
2. Remove the bulb from halogen bulb socket (low beam).
3. Rotate the halogen bulb socket (high beam) counterclockwise and unlock it.
4. Remove the bulb from halogen bulb socket (high beam).
5. Rotate the front turn signal lamp socket counterclockwise and unlock it.
6. Remove the bulb from front turn signal lamp socket.
7. Rotate the front side marker lamp socket counterclockwise and unlock it.
8. Remove the bulb from front side marker lamp socket.

#### ASSEMBLY

Assembly is in the reverse order of disassembly.

# REAR COMBINATION LAMP

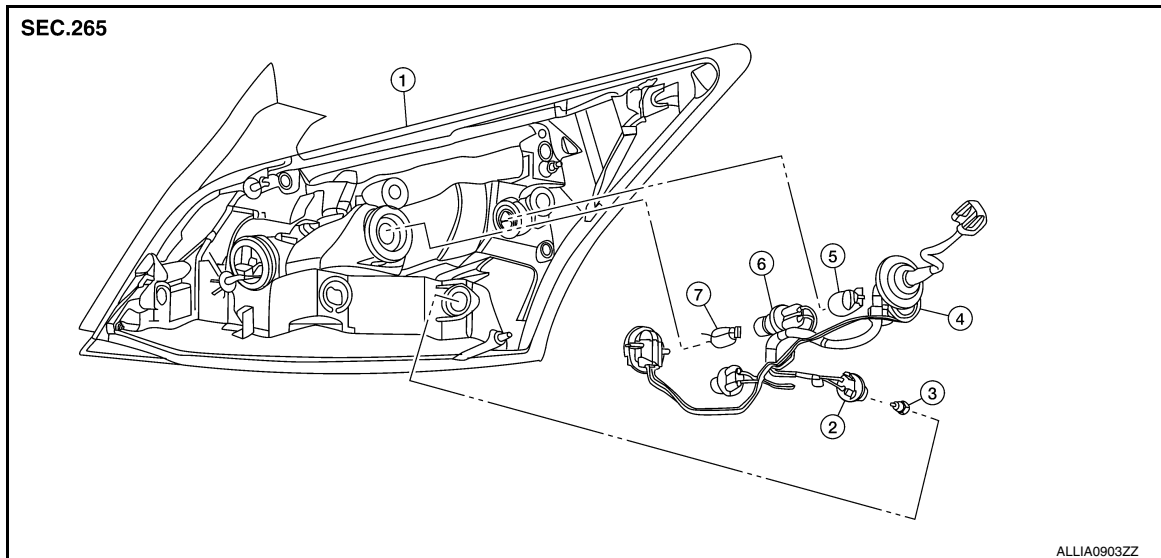
< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN TYPE]

## REAR COMBINATION LAMP

### Disassembly and Assembly

INFOID:000000009465404



- |                                 |                                 |                               |
|---------------------------------|---------------------------------|-------------------------------|
| 1. Rear combination lamp        | 2. Rear side marker lamp socket | 3. Rear side marker lamp bulb |
| 4. Rear turn signal lamp socket | 5. Rear turn signal lamp bulb   | 6. Back-up lamp socket        |
| 7. Back-up lamp bulb            |                                 |                               |

### DISASSEMBLY

1. Rotate the rear side marker lamp socket counterclockwise and unlock it.
2. Remove the bulb from rear side marker lamp socket.
3. Rotate the rear turn signal lamp socket counterclockwise and unlock it.
4. Remove the bulb from rear turn signal lamp socket.
5. Rotate the back-up lamp socket counterclockwise and unlock it.
6. Remove the bulb from back up lamp socket.

### ASSEMBLY

Assembly is in the reverse order of disassembly.

# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN TYPE]

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Bulb Specifications

INFOID:000000009465405

| Item                         |                              | Wattage (W)* |
|------------------------------|------------------------------|--------------|
| Front combination lamp       | Headlamp (Halogen low beam)  | 55           |
|                              | Headlamp (Halogen high beam) | 65           |
|                              | Park/Turn lamp               | 28/8         |
|                              | Front side marker lamp       | 5            |
| Front fog lamp               |                              | 55           |
| Door mirror turn signal lamp |                              | —            |
| Rear combination lamp        | Stop lamp                    | —            |
|                              | Tail lamp                    | —            |
|                              | Rear turn signal lamp        | 21           |
|                              | Rear side marker lamp        | 5            |
|                              | Back-up lamp                 | 18           |
| License plate lamp           |                              | 5            |
| High-mounted stop lamp       | Without rear spoiler         | —            |
|                              | With rear spoiler            | —            |

\*: Always check with the Parts Department for the latest parts information.

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

EXL