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SECTION

EXL

EXTERIOR LIGHTING SYSTEM

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## PRECAUTION

### PRECAUTIONS

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

INFOID:0000000012422956

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

#### Precaution for Work

INFOID:0000000012422957

- 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.

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EXL

# PREPARATION

< PREPARATION >

[HALOGEN HEADLAMP]

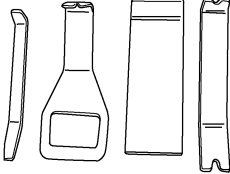
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:0000000012422958

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
<p>— (J-46534) Trim Tool Set</p>  <p>AWJIA0483ZZ</p>	Removing trim components



# COMPONENT PARTS

< SYSTEM DESCRIPTION >

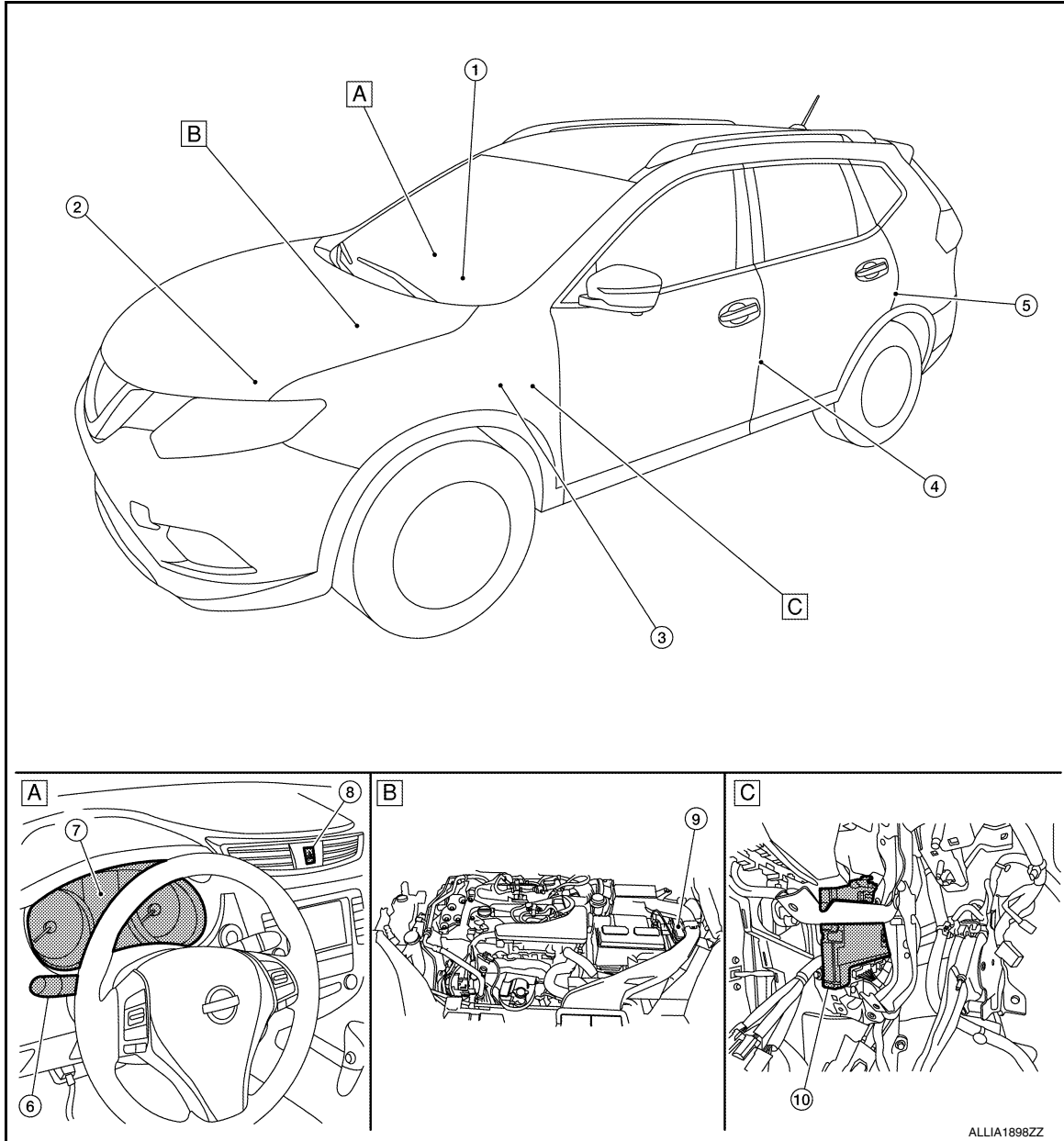
[HALOGEN HEADLAMP]

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:0000000012422959



A. Instrument panel

B. Engine compartment

C. Left side of instrument panel (view with trim panel removed)

No.	Part	Function
1.	Optical sensor	Refer to <a href="#">EXL-10, "Optical Sensor"</a> .
2.	LED headlamp control module	Turns the headlamps ON according to the power supply from IPDM E/R.
3.	Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the daytime running light system.
4.	Front door switch LH (RH similar)	Transmits the door open signal to the BCM to operate the autolight system.
5.	Rear door switch LH (RH similar)	

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

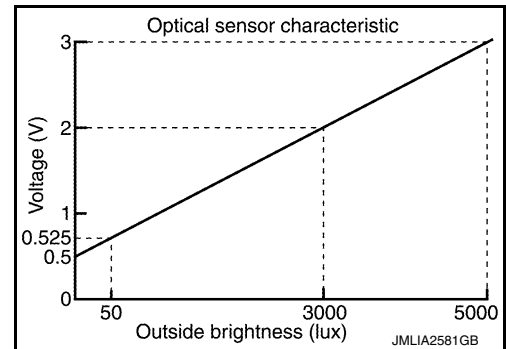
[HALOGEN HEADLAMP]

No.	Part	Function
6.	Combination switch (Lighting and turn signal switch)	Refer to <a href="#">BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description"</a> (with Intelligent Key system) or <a href="#">BCS-82, "COMBINATION SWITCH READING SYSTEM : System Description"</a> (without Intelligent Key system).
7.	Combination meter	Refer to <a href="#">MWI-8, "METER SYSTEM : System Description"</a> .
8.	Hazard switch	Refer to <a href="#">EXL-10, "Hazard Switch"</a> .
9.	IPDM E/R	<ul style="list-style-type: none"> <li>Supplies voltage to the load according to the request from BCM (via CAN communication).</li> <li>Refer to <a href="#">PCS-6, "Component Parts Location"</a> for detailed installation location.</li> </ul>
10.	BCM	<ul style="list-style-type: none"> <li>Detects each switch condition by the combination switch reading function.</li> <li>Judges that the exterior lamps are turned ON according to the vehicle condition.</li> <li>Requests the headlamp (HI/LO), tail lamp and front fog lamp ON to IPDM E/R (via CAN communication).</li> <li>Requests high beam indicator lamp ON to the combination meter (via CAN communication).</li> <li>Judges the outside brightness from the optical sensor signal.</li> <li>Judges the ON/OFF timing according to the vehicle condition.</li> <li>Judges the ON/OFF status of the exterior lamp according to the outside brightness and the vehicle condition.</li> <li>Refer to <a href="#">BCS-7, "BODY CONTROL SYSTEM : Component Parts Location"</a> (with Intelligent Key system) or <a href="#">BCS-80, "BODY CONTROL SYSTEM : Component Parts Location"</a> (without Intelligent Key system).</li> </ul>

## Optical Sensor

INFOID:0000000012422960

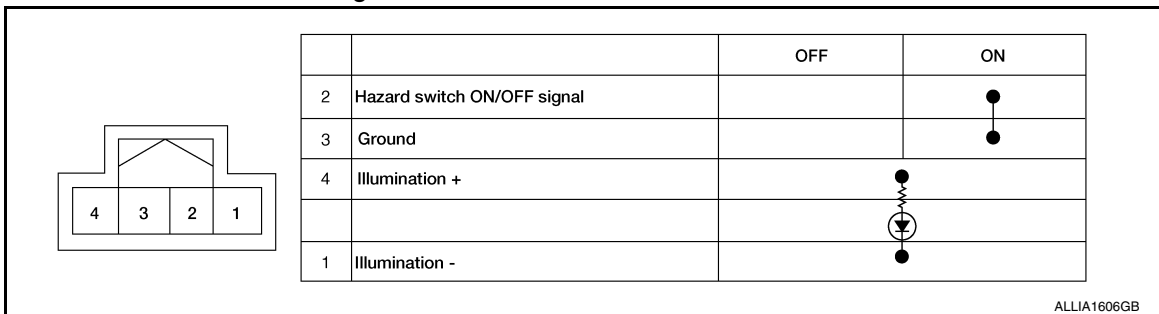
Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.



## Hazard Switch

INFOID:0000000012422961

Inputs the hazard switch ON/OFF signal to BCM.



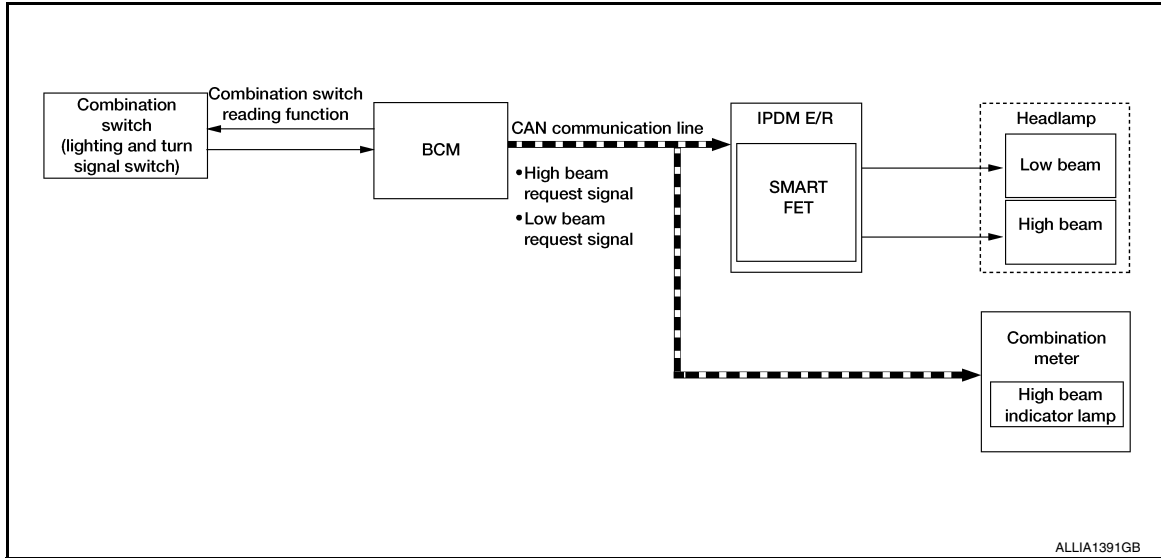
## SYSTEM

## HEADLAMP SYSTEM

## HEADLAMP SYSTEM : System Description

INFOID:0000000012422962

## SYSTEM DIAGRAM



## OUTLINE

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

## HEADLAMP (LO) OPERATION

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

Headlamp (LO) ON condition:

- Lighting switch 2ND
- Lighting switch AUTO (auto light function ON judgment)
- Lighting switch AUTO, with the front fog lamp switch ON and the ignition switch ON
- Lighting switch PASS

## HEADLAMP (HI) OPERATION

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

Headlamp (HI) ON condition:

- Lighting switch HI with the lighting switch 2ND or AUTO (auto light function ON judgment)
- Lighting switch PASS
- Lighting switch AUTO, with the front fog lamp switch ON, the ignition switch ON and lighting switch HI
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the headlamp ON according to the high beam request signal.

## HEADLAMP SYSTEM : Fail-Safe

INFOID:0000000012422963

## CAN COMMUNICATION CONTROL

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

If no CAN communication is available with BCM

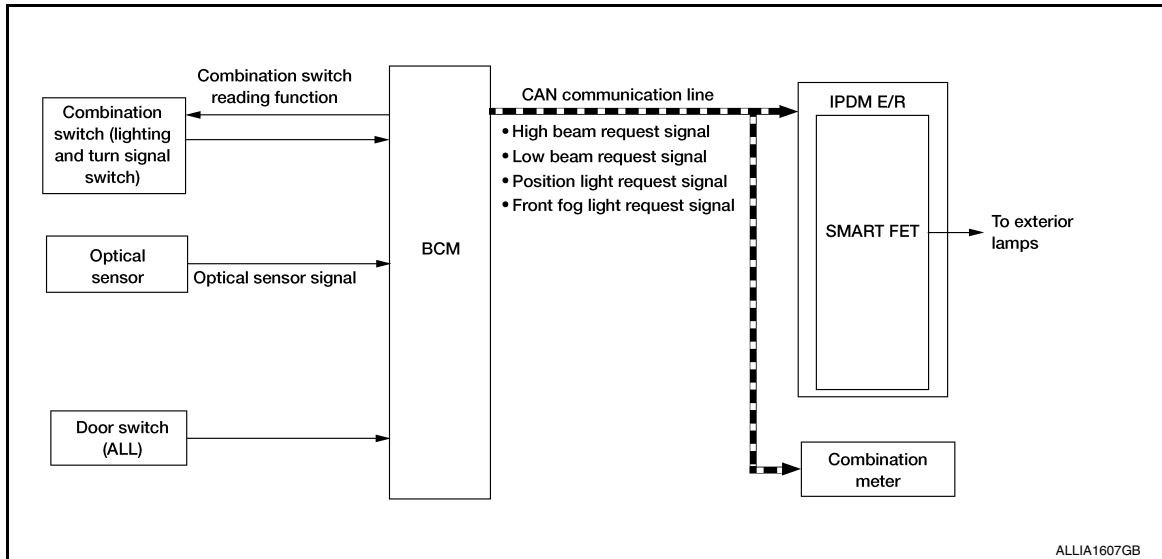
Control part	Fail-safe operation
Headlamp	<ul style="list-style-type: none"> <li>• Turns ON the headlamp low beam when the ignition switch is turned ON</li> <li>• Turns OFF the headlamp low beam when the ignition switch is turned OFF</li> </ul>

## AUTO LIGHT SYSTEM

### AUTO LIGHT SYSTEM : System Description

INFOID:0000000012422964

### SYSTEM DIAGRAM



### OUTLINE

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

Controlled by BCM:

- Combination switch reading function
- Headlamp control function
- Auto light function
- Delay timer function
- Auto light adjustment system

Controlled by IPDM E/R:

- Auto light system has the auto light function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps\* and each illumination automatically, depending on the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns the exterior lamps OFF, depending on the vehicle condition with the auto light function after a certain period of time.

\*: Headlamp (LO/Hi), parking lamp, side marker lamp, tail lamp and front fog lamp (Headlamp HI and front fog lamp depend on the combination switch condition).

### AUTO LIGHT FUNCTION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to optical sensor when the ignition switch is turned ON or ACC.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- BCM judges outside brightness from the optical sensor signal and judges ON/OFF condition of the exterior lamp and each illumination according to the outside brightness.
- BCM transmits each request signal to IPDM E/R and combination meter via CAN communication according to ON/OFF condition by the auto light function.

### NOTE:

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to [BCS-19. "HEAD LAMP : CONSULT Function \(BCM - HEADLAMP\)".](#)

### AUTO LIGHT ADJUSTMENT SYSTEM

# SYSTEM

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

The auto light adjustment system automatically dims/brightens the display according to brightness outside the vehicle when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to [EXL-12, "AUTO LIGHT SYSTEM : System Description"](#).

### DELAY TIMER FUNCTION

BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.

- Turns the exterior lamp OFF 5 minutes after detecting that any door opens. (Door switch ON).
- Turns the exterior lamp OFF a certain period of time\* after closing all doors. (Door switch ON→OFF).
- Turns the exterior lamp OFF with the ignition switch ACC or the light switch OFF.

\*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to [BCS-19, "HEAD LAMP : CONSULT Function \(BCM - HEADLAMP\)"](#) (with Intelligent Key system) or [BCS-91, "HEAD LAMP : CONSULT Function \(BCM - HEADLAMP\)"](#) (without Intelligent Key system).

### NOTE:

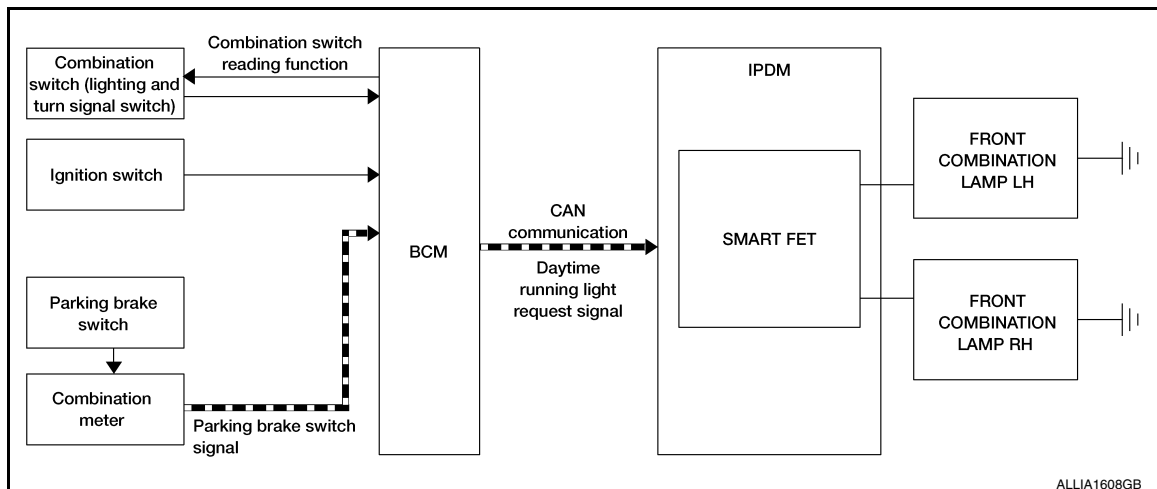
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

## DAYTIME RUNNING LIGHT SYSTEM

### DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000012422965

### SYSTEM DIAGRAM



### OUTLINE

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

### DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects the vehicle condition according to ignition switch
- BCM detects the parking brake condition by the parking brake switch signal received from combination meter using CAN communication.
- BCM transmits the daytime running light request signal to IPDM E/R using CAN communication according to the daytime running light ON condition.

Daytime running light ON condition:

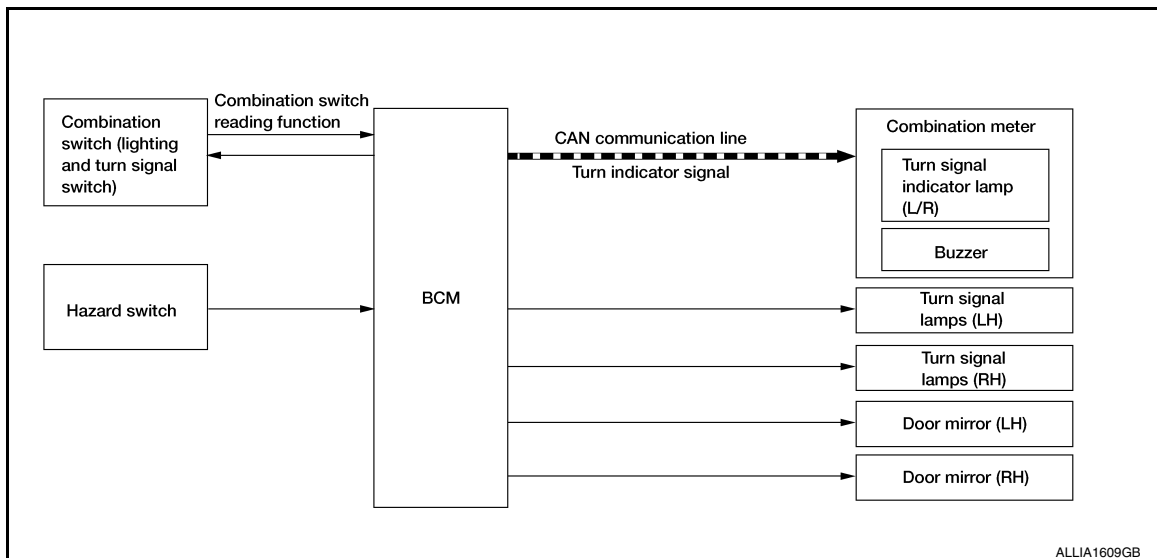
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO, and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light request signal.
- Power is supplied from the IPDM E/R to the daytime lights.

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

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

INFOID:0000000012422966

### SYSTEM DIAGRAM



### OUTLINE

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

### TURN SIGNAL LAMP OPERATION

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

### HAZARD WARNING LAMP OPERATION

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

### TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL OPERATION

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

### HIGH FLASHER OPERATION

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

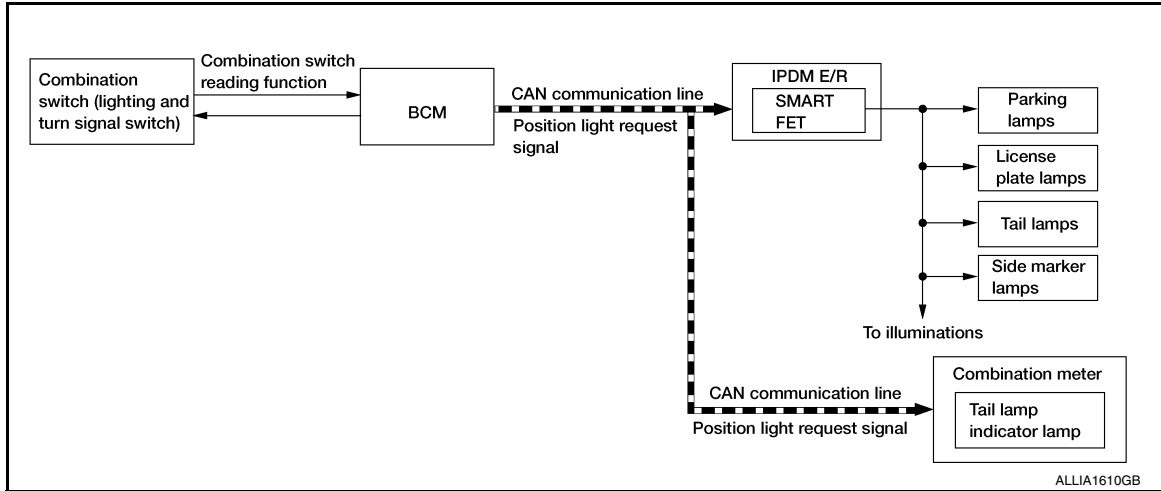
#### NOTE:

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

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System De-

## SYSTEM DIAGRAM



## OUTLINE

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

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS OPERATION

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

Parking, license plate, side marker and tail lamps ON condition:

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment
- Lighting switch AUTO, with the front fog lamp switch ON and the ignition switch ON
- IPDM E/R turns the parking, license plate, side marker and tail lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : Fail-Safe

## CAN COMMUNICATION CONTROL

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

If no CAN communication is available with BCM

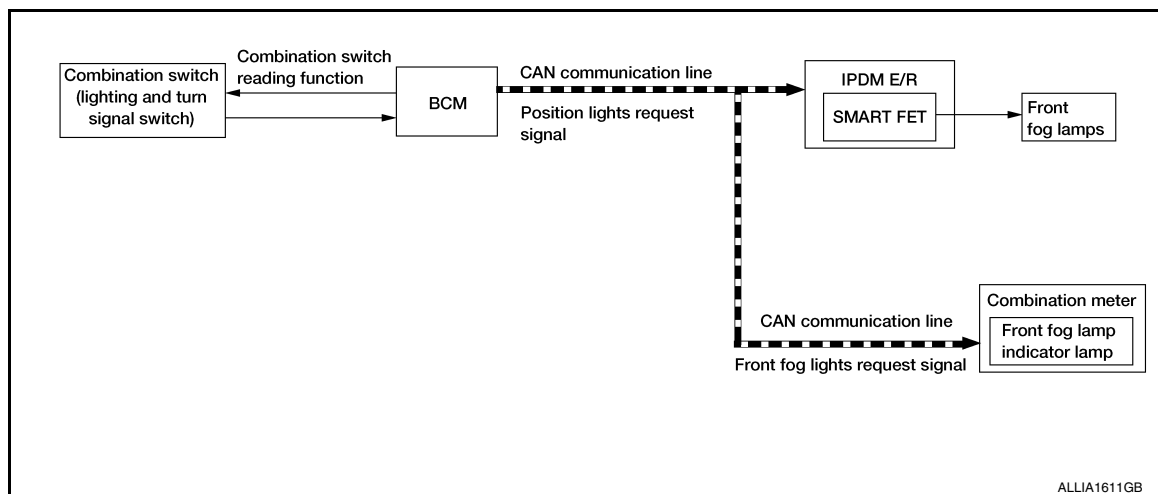
Control part	Fail-safe operation
<ul style="list-style-type: none"> <li>• Parking lamp</li> <li>• License plate lamp</li> <li>• Illumination</li> <li>• Tail lamp</li> <li>• Side marker lamp</li> </ul>	<ul style="list-style-type: none"> <li>• Turns ON the tail lamp when the ignition switch is turned ON</li> <li>• Turns OFF the tail lamp when the ignition switch is turned OFF</li> </ul>

## FRONT FOG LAMP SYSTEM

## FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000012422969

## SYSTEM DIAGRAM



## OUTLINE

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

## FRONT FOG LAMP OPERATION

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

Front fog lamp ON condition:

- Front fog lamp switch ON, and any of the following conditions are satisfied (except for the high beam ON):
- Lighting switch 2ND
- Lighting switch AUTO and the ignition switch ON

IPDM E/R turns the front fog lamp ON according to the front fog lights request signal.

Combination meter turns the front fog lamp indicator lamp ON according to the front fog lights request signal.

## FRONT FOG LAMP SYSTEM : Fail-Safe

INFOID:0000000012422970

## CAN COMMUNICATION CONTROL

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

If no CAN communication is available with BCM

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

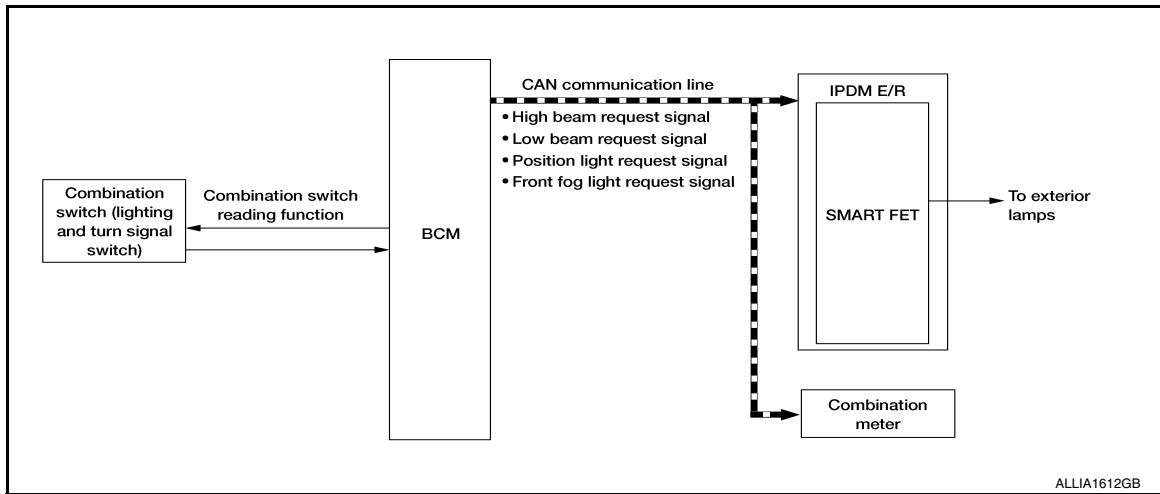
## EXTERIOR LAMP BATTERY SAVER SYSTEM



## EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:000000012422971

## SYSTEM DIAGRAM



## OUTLINE

- Exterior lamp battery saver system is controlled by each function of BCM and IPDM E/R.

Controlled by BCM:

- Combination switch reading function
- Headlamp control function
- Exterior lamp battery saver function

Controlled by IPDM E/R:

- BCM turns the exterior lamps\* OFF after a period of time to prevent the battery from over-discharge when the ignition switch is turned OFF with the exterior lamps ON.

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

## EXTERIOR LAMP BATTERY SAVER ACTIVATION

BCM activates the timer and turns the exterior lamp OFF 5 minutes after the ignition switch is turned from ON → OFF with the exterior lamps ON.

**NOTE:**

- Headlamp control function turns the exterior lamps ON normally when the ignition switch is turned ACC or set the vehicle to READY (both before and after the exterior lamp battery saver is turned OFF).
- The timer starts at the time that the lighting switch is turned from OFF → 1ST or 2ND with the exterior lamps OFF.

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

## DIAGNOSIS SYSTEM (BCM) WITH INTELLIGENT KEY

WITH INTELLIGENT KEY : CONSULT Function (BCM - COMMON ITEM) INFOID:0000000012731438

### 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	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing BCM.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

### 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			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
Air conditioner	AIR CONDITIONER				×			

WITH INTELLIGENT KEY : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000012731439

### DATA MONITOR

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Monitor Item [Unit]	Description	
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	A
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates engine status received from ECM on CAN communication line.	B
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.	
TURN SIGNAL R [On/Off]	Indicates condition of combination switch.	C
TURN SIGNAL L [On/Off]		
TAIL LAMP SW [On/Off]		
HI BEAM SW [On/Off]		D
HEAD LAMP SW [On/Off]		
LIGHT OFF SW [On/Off]		E
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		
FR FOG SW [On/Off]		F
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.	G
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.	
DOOR SW-BK [On/Off]	Indicates condition of back door switch.	H
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.	
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.	
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.	I

## ACTIVE TEST

Test Item	Description	
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].	J
STOP LAMP 1	This test is able to check rear combination lamp stop lamp operation [On/Off].	K
STOP LAMP 3	This test is able to check high-mounted stop lamp operation [On/Off].	
DAYTIME RUNNING LIGHT	This test is able to check daytime running light operation [On/Off].	
ILL DIM SIGNAL	This test is able to check illumination dimmer signal [On/Off].	EXL

## WORK SUPPORT

Support Item	Setting	Description	
TWILIGHT ON	MODE2*	Autolamp function ON.	M
	MODE1	Autolamp function OFF.	N
CUSTOM A/LIGHT SETTING	MODE4	Less sensitive than normal setting (turns ON later).	
	MODE3	More sensitive than MODE2.	
	MODE2	More sensitive than normal setting (turns ON earlier).	O
	MODE1*	Normal setting.	P

## DIAGNOSIS SYSTEM (BCM)

&lt; SYSTEM DESCRIPTION &gt;

**[HALOGEN HEADLAMP]**

Support Item	Setting	Description
ILL DELAY SET	MODE 8	Autolamp delay timer.
	MODE 7	
	MODE 6	
	MODE 5	
	MODE 4	
	MODE 3	
	MODE 2	
	MODE 1*	
WIPER LINK	MODE 4	This item is displayed but cannot be used
	MODE 3*	With wiper INT, LO and HI
	MODE 2	With wiper LO and HI
	MODE 1	Without wiper linked and auto light function

\*: Initial setting

### WITH INTELLIGENT KEY : CONSULT Function (BCM - FLASHER)

INFOID:0000000012731440

#### 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.

#### WORK SUPPORT

Support Item	Setting	Description
3-TIME FLASHER SETTING	On*	3-time flasher setting ON.
	Off	3-time flasher setting OFF.

\*: Initial setting

### WITHOUT INTELLIGENT KEY

### WITHOUT INTELLIGENT KEY : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012731441

#### 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	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Direct Diagnostic Mode	Description
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing BCM.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

## 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			x	x	x		
Rear window defogger	REAR DEFOGGER			x	x	x		
Warning chime	BUZZER			x	x			
Interior room lamp timer	INT LAMP			x	x	x		
Remote keyless entry system	MULTI REMOTE ENT					x		
Exterior lamp	HEADLAMP			x	x			
Wiper and washer	WIPER			x	x	x		
Turn signal and hazard warning lamps	FLASHER			x	x			
Combination switch	COMB SW			x				
BCM	BCM	x	x			x	x	x
Immobilizer	IMMU		x		x			
Interior room lamp battery saver	BATTERY SAVER			x	x			
Back door open	TRUNK			x				
Vehicle security system	THEFT ALM			x	x	x		
RAP system	RETAINED PWR			x				
TPMS	AIR PRESSURE MONITOR		x	x	x	x		

WITHOUT INTELLIGENT KEY : CONSULT Function (BCM - HEADLAMP) INFOID:0000000012731442

## DATA MONITOR

Monitor Item [Unit]	Description
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 [On/Off]	
LIGHT OFF SW [On/Off]	
PASSING SW [On/Off]	
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.

## DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Monitor Item [Unit]	Description
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.

### ACTIVE TEST

Test Item	Description
DAYTIME RUNNING LIGHT	This test is able to check daytime running lamp operation [On/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].

### WITHOUT INTELLIGENT KEY : CONSULT Function (BCM - FLASHER)

INFOID:0000000012731443

### DATA MONITOR

Monitor Item [Unit]	Description
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].

## DIAGNOSIS SYSTEM (IPDM E/R)

## CONSULT Function (IPDM E/R)

INFOID:000000012731444

## 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-26, "DTC Index"](#).

## DATA MONITOR

Monitor Item [Unit]	Description
REVERSE SIGNAL [Open/Close]	Indicates condition of transmission range switch R (Reverse) position.
IGN RELAY [Open/Close]	Indicates condition of ignition relay-1.
PUSH SW [Open/Close]	Indicates condition of push-button ignition switch.
INTERLOCK/PNP SW [Open/Close]	Indicates condition of transmission range switch P (Park) and N (Neutral) positions.
OIL PRESSURE SW [Open/Close]	Indicates condition of oil pressure switch.
HOOD SW [Open/Close]	Indicates condition of hood switch.
COMPRESSOR [OFF/ON]	Indicates condition of A/C compressor.
HORN RELAY [OFF/ ON]	Indicates condition of horn relay.
COOLING FAN [OFF/ON]	Indicates condition of cooling fan relay-1.
FRONT WIPER HI/LO RELAY [OFF/ON]	Indicates condition of front wiper high relay.
FRONT WIPER RELAY [OFF/ON]	Indicates condition of front wiper relay.
IGN RELAY OFF STATUS [OFF/ON]	Indicates condition of ignition relay-1 OFF status.
IGN RELAY ON STATUS [OFF/ON]	Indicates condition of ignition relay-1 ON status.
COOLING FAN RELAY 1 [OFF/ON]	Indicates condition of cooling fan relay-1.
STARTER RELAY [OFF/ON]	Indicates condition of starter relay.
COMP ECV DUTY [%]	Indicates condition of A/C compressor.
COOLING FAN RELAY 2 [%]	Indicates condition of cooling fan relay-2.
FR FOG LAMP LH [%]	Indicates condition of front fog lamp LH.
FR FOG LAMP RH [%]	Indicates condition of front fog lamp RH.
PARKING LAMP [%]	Indicates condition of parking lamp.
TAIL LAMP LH [%]	Indicates condition of tail lamp LH.
TAIL LAMP RH [%]	Indicates condition of tail lamp RH.
DAYTIME RUNNING LIGHT LH [%]	Indicates condition of daytime running light LH.
DAYTIME RUNNING LIGHT RH [%]	Indicates condition of daytime running light RH.
HEADLAMP (HI) LH [%]	Indicates condition of headlamp high beam LH.

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

Monitor Item [Unit]	Description
HEADLAMP (HI) RH [%]	Indicates condition of headlamp high beam RH.
HEADLAMP (LO) LH [%]	Indicates condition of headlamp low beam LH.
HEADLAMP (LO) RH [%]	Indicates condition of headlamp low beam RH.
A/C RELAY STUCK [NG/OK]	Indicates condition of A/C relay.
A/C RELAY [Off/On]	Indicates condition of A/C relay.
COMP ECV STATUS [NG/OK]	Indicates condition of A/C compressor.
VEHICLE SECURITY HORN [Off/On]	Indicates condition of horn relay.
BATTERY CURRENT SENSOR [NG/OK]	Indicates condition of battery current sensor.
FRONT FOG LAMP [Off/On]	Indicates condition of front fog lamps.
COMP ECV CURRENT [A]	Indicates condition of A/C compressor current.
BATTERY VOLTAGE [V]	Indicates condition of battery voltage.
COOLING FAN DUTY [%]	Indicates condition of cooling fans.
HOOD SW (CAN) [OPEN/CLOSE]	Indicates condition of hood switch.
FRONT WIPER [STOP/LOW/HIGH]	Indicates condition of front wiper motor.
FR WIPER STOP POSITION [STOP P/ACTIVE P]	Indicates condition of front wiper motor stop.
HEADLAMP (HI) [Off/On]	Indicates condition of headlamp high beams.
HEADLAMP (LO) [Off/On]	Indicates condition of headlamp low beams.
IGNITION RELAY STATUS [Off/On]	Indicates condition of ignition relay-1.
IGN RELAY MONITOR [Off/On]	Indicates condition of ignition relay-1 feedback.
IGNITION POWER SUPPLY [Off/On]	Indicates condition of ignition relay-1.
INTERLOCK/PNP SW (CAN) [Off/On]	Indicates condition of transmission range switch P (Park) and N (Neutral) positions.
PUSH-BUTTON IGN SW (CAN) [Off/On]	Indicates condition of push-button ignition switch.
TAIL LAMP [Off/On]	Indicates condition of tail lamps.
REVERSE SIGNAL (CAN) [Off/On]	Indicates condition of transmission range switch R (Reverse) position.
ST&ST CONT RELAY STATUS [Off/ST R On]	Indicates condition of starter cut and starter relays.
STARTER MOTOR STATUS [Off/On]	Indicates condition of starter motor.
STARTER RELAY (CAN) [LOW/HIGH]	Indicates condition of starter relay.
IPDM NOT SLEEP [NO RDY/RDY]	Indicates condition of IPDM E/R sleep status.
AFTER COOLING TIME [No request/Request]	Indicates condition of cooling fan request.
AFTER COOLING SPEED [%]	Indicates condition of cooling fans.
COOLING FAN TYPE [NISSAN/RENAULT]	Indicates cooling fan type.
COMPRESSOR REQ1 [Off/On]	Indicates condition of A/C compressor request.
VHCL SECURITY HORN REQ [Off/On]	Indicates condition of horn relay request.
DTRL REQ [Off/On]	Indicates condition of daytime running light request.
SLEEP/WAKE UP [WAKEUP/SLEEP]	Indicates condition of IPDM E/R sleep/wake.
CRANKING ENABLE-TCM [NG/OK]	Indicates condition of crank enable from TCM.
CRANKING ENABLE-ECM [NG/OK]	Indicates condition of crank enable from ECM.
CAN DIAGNOSIS [NG/OK]	Indicates condition of CAN diagnosis.
FRONT FOG LAMP REQ [Off/On]	Indicates condition of front fog lamp request.
HIGH BEAM REQ [Off/On]	Indicates condition of headlamp high beam request.
HORN CHIRP [Off/On]	Indicates condition of horn relay request.
COOLING FAN REQ [%]	Indicates condition of cooling fan request.
ENGINE STATUS [STOP/RUN/IDLING]	Indicates condition of engine status.



# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

Monitor Item [Unit]	Description	
TURN SIGNAL REQ [Off/LH/RH]	Indicates condition of turn signal request.	A
FR WIPER REQ [RETURN/LOW/HIGH]	Indicates condition of front wiper motor request.	
SHIFT POSITION [P/R/N/D/L]	Indicates condition of transmission range switch positions.	B
LOW BEAM REQ [Off/On]	Indicates condition of headlamp low beam request.	
POSITION LIGHT REQ [Off/On]	Indicates condition of parking lamp request.	
COMPRESSOR REQ2 [Off/On]	Indicates condition of A/C compressor request.	C
IGNITION SW [Off/On]	Indicates condition of ignition switch.	
VEHICLE SPEED (METER) [mph/km/h]	Indicates vehicle speed.	D
STARTER OPERATION COUNT	Displays the number of times the starter motor is turned ON.	
H/P F/PUMP OPERATN COUNT	Displays the number of times the high pressure fuel pump is turned ON.	E
BAT DISCHARGE COUNT [—]	Monitor the cumulative discharge value of the battery. <b>NOTE:</b> When 65,000 or more is counted, replace the battery.	F
P LAMP CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the parking lamp circuit. <b>NOTE:</b> When the number of parking lamp circuit retries count is 20, this item counts 1.	G
NMB P LAMP CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the parking lamp circuit. <b>NOTE:</b> When the number of short circuits in the parking lamp circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	H
NMB P LAMP CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the parking lamp circuit.	I
DTRL LH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (left) circuit. <b>NOTE:</b> When the number of daytime running light (left) circuit retries count is 20, this item counts 1.	J
NMB DTRL LH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (left) circuit. <b>NOTE:</b> When the number of short circuits in the daytime running light (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	K
NMB DTRL LH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (left) circuit.	EXL
DTRL RH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (right) circuit. <b>NOTE:</b> When the number of daytime running light (right) circuit retries count is 20, this item counts 1.	M
NMB DTRL RH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (right) circuit. <b>NOTE:</b> When the number of short circuits in the daytime running light (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	N
NMB DTRL RH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (right) circuit.	O
		P

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

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

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

## [HALOGEN HEADLAMP]

Monitor Item [Unit]	Description	
NMB HL (LO) LH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (left) circuit. <b>NOTE:</b> When the number of short circuits in the headlamp (LO) (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	A
NMB HL (LO) LH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (left) circuit.	B
HL (LO) RH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (LO) (right) circuit. <b>NOTE:</b> When the number of headlamp (LO) (right) circuit retries count is 20, this item counts 1.	C
NMB HL (LO) RH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (right) circuit. <b>NOTE:</b> When the number of short circuits in the headlamp (LO) (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	D
NMB HL (LO) RH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (right) circuit.	E
T LAMP LH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (left) circuit. <b>NOTE:</b> When the number of tail lamp (left) circuit retries count is 20, this item counts 1.	F
NMB T LAMP LH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (left) circuit. <b>NOTE:</b> When the number of short circuits in the tail lamp (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	G
NMB T LAMP LH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (left) circuit.	H
T LAMP RH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (right) circuit. <b>NOTE:</b> When the number of tail lamp (right) circuit retries count is 20, this item counts 1.	I
NMB T LAMP RH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (right) circuit. <b>NOTE:</b> When the number of short circuits in the tail lamp (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.	J
NMB T LAMP RH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (right) circuit.	K
BATTERY STATUS [OK/NG]	Monitor the battery status from the battery output.	EXL
BAT DISCHARGE COUNT [0-100]	Indicates condition of battery discharge.	M
BATTERY STATUS [NG/OK]	Indicates battery status.	N

## ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [Off/On].
FRONT WIPER	This test is able to check wiper motor operation [Off/Low/High].

## DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Test item	Description
COMPRESSOR	This test is able to check A/C compressor operation [Off/On].
COOLING FAN (DUAL)	This test is able to check cooling fan operation [Off/LO/HI].
HEADLAMP (HI)	This test is able to check headlamp high beam operation [Off/3/5].
HEADLAMP (LO)	This test is able to check headlamp low beam operation [Off/3/5].
FRONT FOG LAMP	This test is able to check front fog lamp operation [Off/3/5].
DAYTIME RUNNING LAMP	This test is able to check daytime running lamp operation [Off/3/5].
PARKING LAMP	This test is able to check parking lamp operation [Off/3/5].
TAIL LAMP	This test is able to check tail lamp operation [Off/3/5].

### CAN DIAG SUPPORT MNTR

Refer to [LAN-17, "CAN Diagnostic Support Monitor"](#).

### WORK SUPPORT

Work item	Description
CML B/DCHRG CRNT CLEAR	In this mode, cumulative battery discharge current is cleared.

## ECU DIAGNOSIS INFORMATION

### BCM, IPDM E/R

#### List of ECU Reference

INFOID:0000000012422979

ECU	Reference
BCM (with Intelligent Key system)	<a href="#">BCS-29, "Reference Value"</a>
	<a href="#">BCS-47, "Fail Safe"</a>
	<a href="#">BCS-47, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-48, "DTC Index"</a>
BCM (without Intelligent Key system)	<a href="#">BCS-97, "Reference Value"</a>
	<a href="#">BCS-108, "Fail Safe"</a>
	<a href="#">BCS-109, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-109, "DTC Index"</a>
IPDM E/R	<a href="#">PCS-17, "Reference Value".</a>
	<a href="#">PCS-25, "Fail-safe"</a>
	<a href="#">PCS-26, "DTC Index"</a>

# HEADLAMP

[HALOGEN HEADLAMP]

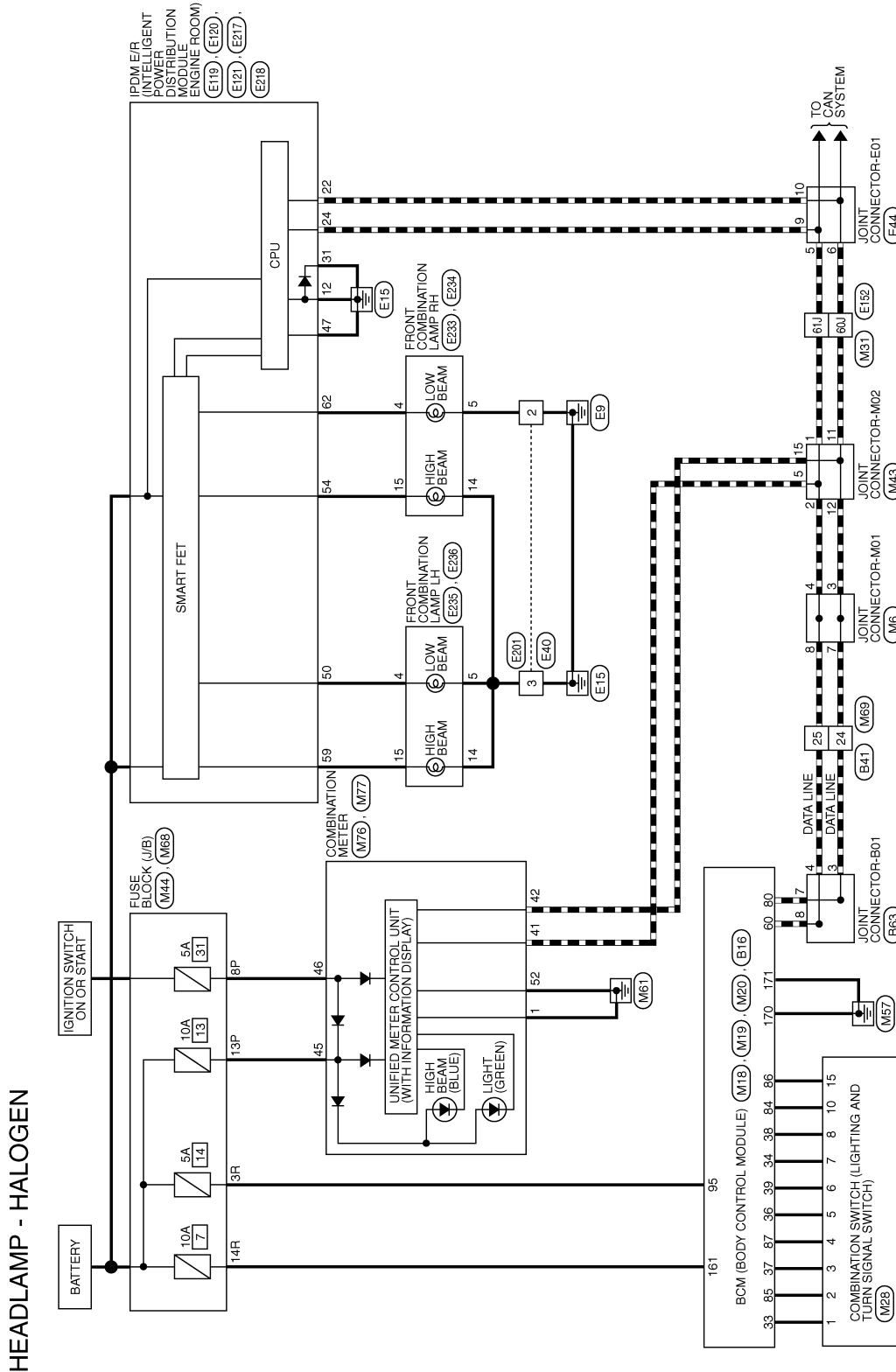
< WIRING DIAGRAM >

## WIRING DIAGRAM

### HEADLAMP

#### Wiring Diagram

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# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## HEADLAMP CONNECTORS - HALOGEN

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
33	LG	ICSW 5
34	Y	OCSW 5
36	G	ICSW 3
37	GR	ICSW 4
38	V	ICSW 1
39	W	ICSW 2

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	OCSW 2
85	SB	OCSW 1
86	P	OCSW 3
87	BG	OCSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	163	162	161
176	175	174	173	172	171	170
169	168					

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-

Terminal No.	Color of Wire	Signal Name
4	BG	-
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

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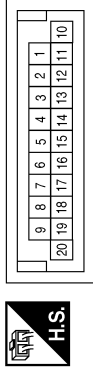
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

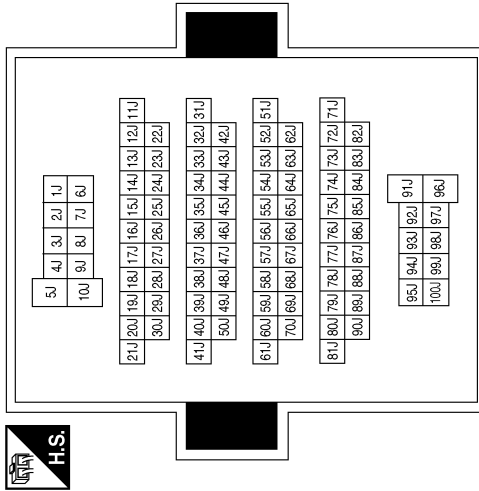
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



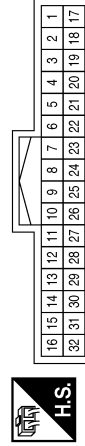
Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
5	L	-
11	P	-
12	P	-
15	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



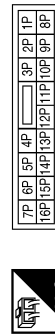
Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8P	LA/BR	-
13P	LA/G	-

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# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
3	4

Terminal No.	Color of Wire	Signal Name
2	GR	-
3	B	-

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	M76
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	B	GND

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	5	4	3		
18	17	16	15	14	13	12	11	10

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

Terminal No.	Color of Wire	Signal Name
12	B	SIGNAL GROUND

Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-
9	L	-
10	P	-

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

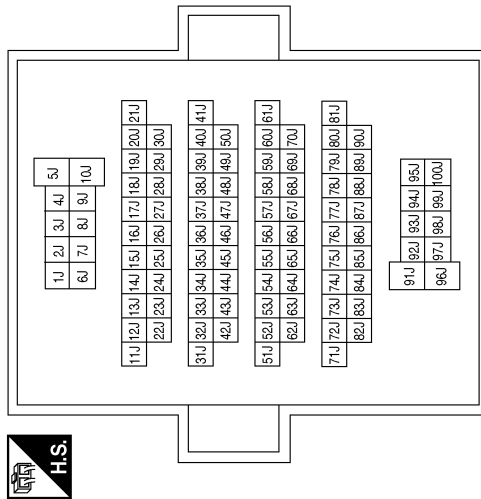
# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Terminal No.	Color of Wire	Signal Name
60J	P	—
61J	L	—

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
59	G	O LIGHT HBEAM LH
62	SB	O LIGHT LBEAM RH

Terminal No.	Color of Wire	Signal Name
50	L	O LIGHT LBEAM LH
54	LG	O LIGHT HBEAM RH

Terminal No.	Color of Wire	Signal Name
2	B	—
3	B	—

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# HEADLAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E235
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK



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

Connector No.	E234
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY



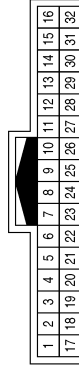
Terminal No.	Color of Wire	Signal Name
14	B	-
15	LG	-

Connector No.	E233
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
4	SB	-
5	B	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	E236
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	B	-
15	G	-

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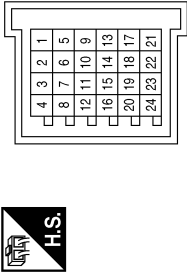
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HEADLAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

AALIA2137GB

# DAYTIME RUNNING LIGHT SYSTEM

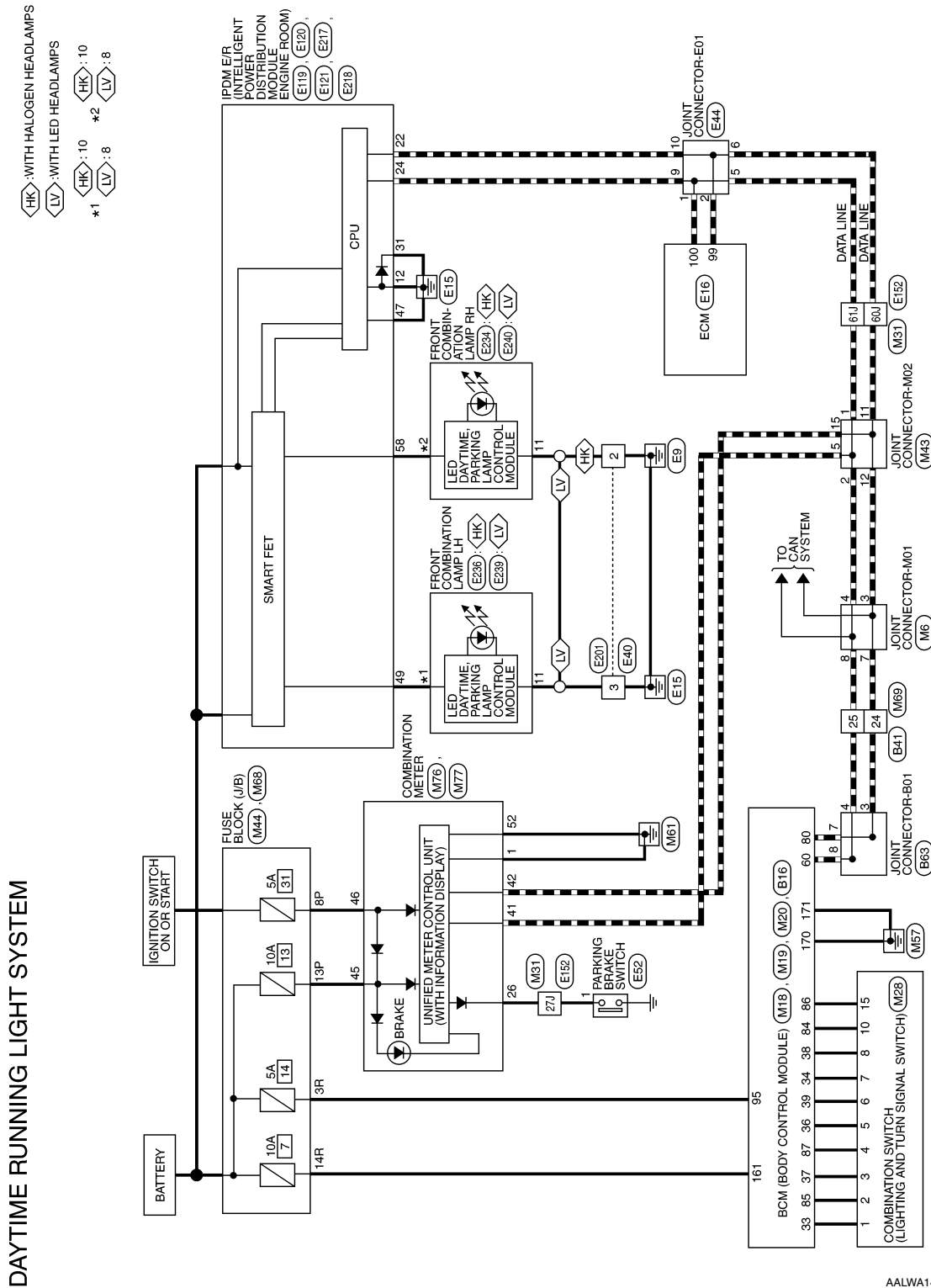
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## DAYTIME RUNNING LIGHT SYSTEM

### Wiring Diagram

INFOID:0000000012422981



AALWA1424GB

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## DAYTIME RUNNING LIGHT SYSTEM CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164
178	175	174	173
172	171	170	169
168	163	162	161

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-

Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
8P	LA/BR	—
13P	LA/G	—

Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

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



Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
5	L	—
11	P	—
12	P	—
15	P	—

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

5J	4J	3J	2J	1J
10J	9J	8J	7J	6J



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

Terminal No.	Color of Wire	Signal Name
27J	G	—
60J	P	—
61J	L	—

Connector No.	M76
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	B	GND
26	G	PBK SW

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

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



Terminal No.	Color of Wire	Signal Name
3R	V	—
14R	W	—

AALIA2954GB

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

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
3	4

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK



97	100	105	108	113	117	121	125
98	102	106	110	114	118	122	126
99	103	107	111	115	119	123	127
100	104	108	112	116	120	124	128

Terminal No.	Color of Wire	Signal Name
2	GR	—
3	B	—

Terminal No.	Color of Wire	Signal Name
99	P	CAN-L
100	L	CAN-H

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	5	4	3
18	17	16	15	14	13	12
11	10					

Connector No.	E52
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



1
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Terminal No.	Color of Wire	Signal Name
12	B	SIGNAL GROUND

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	L	—
2	P	—
5	L	—
6	P	—
9	L	—
10	P	—

AALIA2955GB



DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

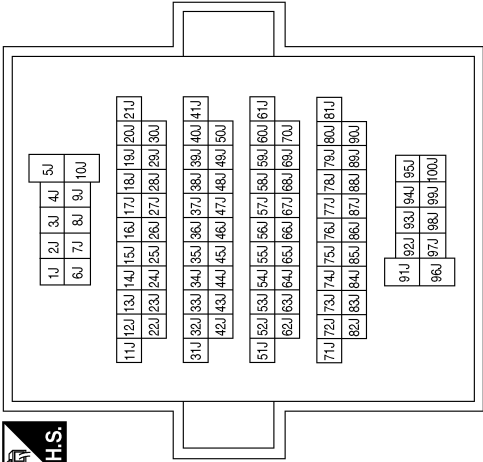
Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



45	44	43
48	47	46

Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
27J	G	-
60J	P	-
61J	L	-

Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



2	1
4	3

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

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

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

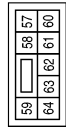
[HALOGEN HEADLAMP]

Connector No.	E234
Connector Name	FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
10	R	–
11	GR	–

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



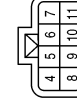
Terminal No.	Color of Wire	Signal Name
58	R	O LIGHT DTRL RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



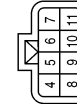
Terminal No.	Color of Wire	Signal Name
49	R	O LIGHT DTRL LH

Connector No.	E240
Connector Name	FRONT COMBINATION LAMP RH (WITH LED HEADLAMPS)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	R	–
11	B	–

Connector No.	E239
Connector Name	FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	R	–
11	B	–

Connector No.	E236
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
10	R	–
11	GR	–

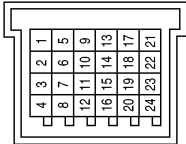
AALIA2125GB

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

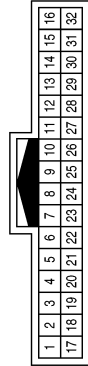
[HALOGEN HEADLAMP]

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



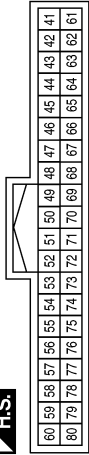
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

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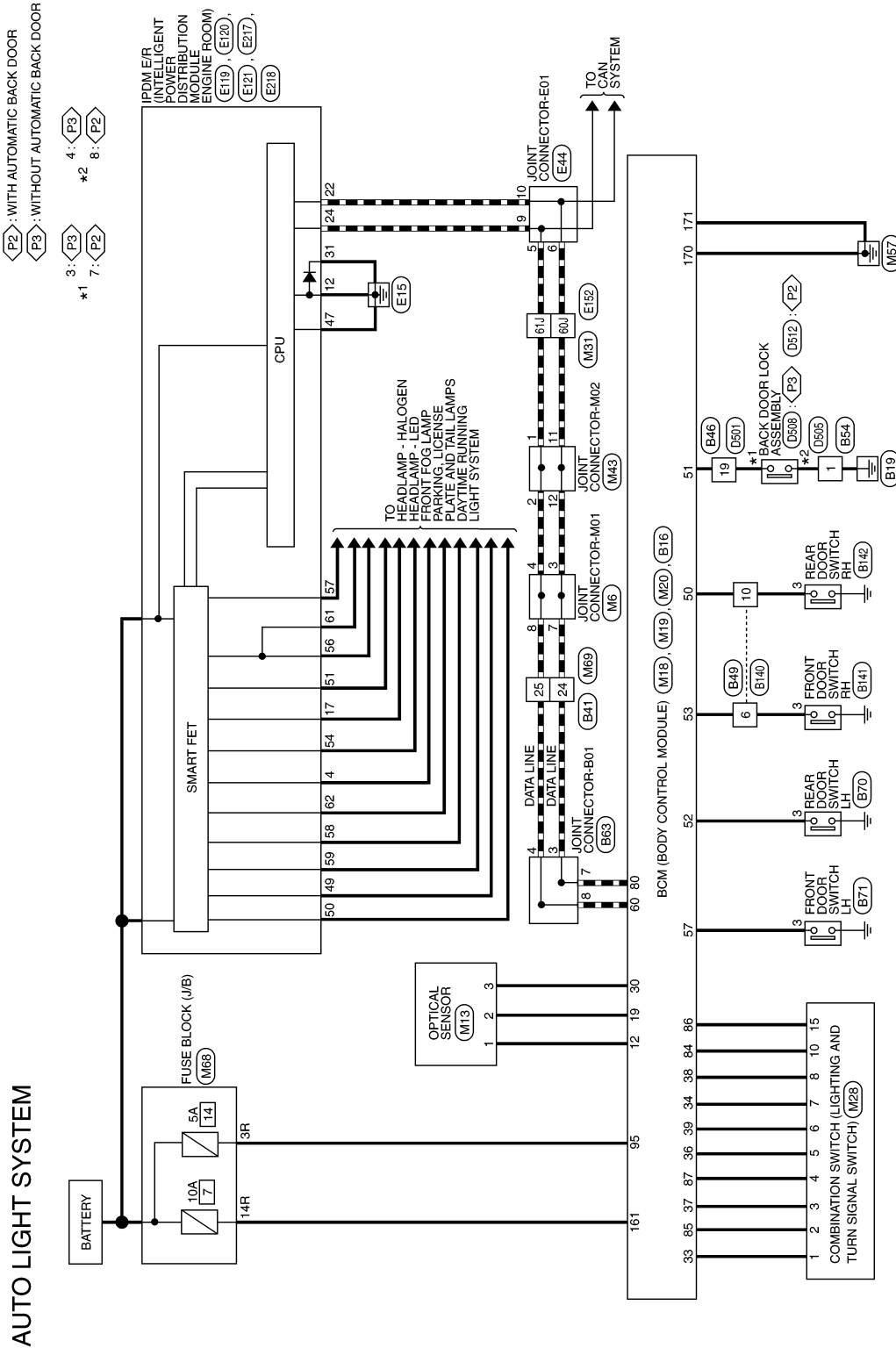
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

EXL

### AUTO LIGHT SYSTEM

#### Wiring Diagram

INFOID:0000000012422982



AALWA1423GB

## AUTO LIGHT SYSTEM CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M13
Connector Name	OPTICAL SENSOR
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	W	-
2	LG	-
3	V	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
12	W	O PWR AUTOLIGHT SENSOR
19	LG	I AUTOLIGHT SENSOR
30	V	O GND AUTOLIGHT SENSOR
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	163	162	161
176	175	174	173	172	171	170
169	168	167	166	165	164	163

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

AALIA2112GB

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

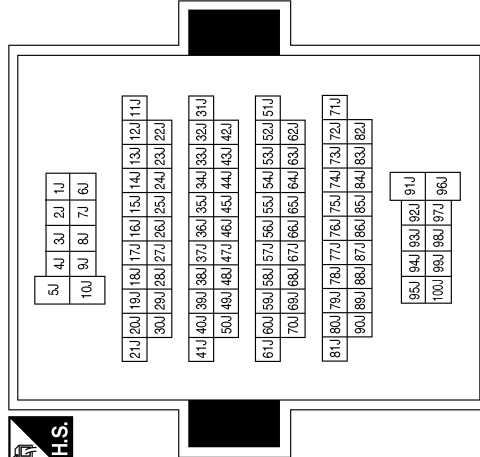
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



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Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
11	P	-
12	P	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

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# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



30	28	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

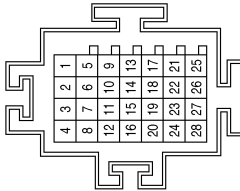
Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	<div></div>	5	4	3	
18	17	16	15	14	13	12	11	10

Terminal No.	Color of Wire	Signal Name
4	Y	O LIGHT POSITION REAR LH
12	B	SIGNAL GROUND
17	W	O LIGHT POSITION REAR RH

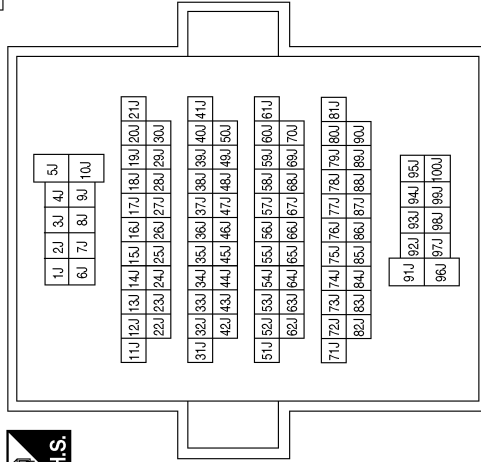
Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-
9	L	-
10	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



45	44	43
48	47	46

Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

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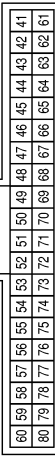
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
EXL  
M  
N  
O  
P

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >


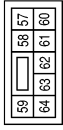
[HALOGEN HEADLAMP]

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN


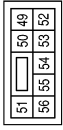
Terminal No.	Color of Wire	Signal Name
50	W	I RR DOOR SW
51	LG	I TGATE SW
52	R	I RL DOOR SW
53	SB	I AS DOOR2 SW
57	SB	I DR DOOR2 SW
60	L	CAN-H
80	P	CAN-L

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
57	W	O LIGHT FR FOG LAMPS RH
58	R	O LIGHT DTRL RH
59	G	O LIGHT HBEAM LH
61	GR	O LIGHT CLEARANCE FR RH
62	SB	O LIGHT LBEAM RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

Terminal No.	Color of Wire	Signal Name
49	R	O LIGHT DTRL LH
50	L	O LIGHT LBEAM LH
51	V	O LIGHT FR FOG LAMPS LH
54	LG	O LIGHT HBEAM RH
56	BG	O LIGHT CLEARANCE FR LH

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
6	SB	—
10	W	—

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
19	LG	—

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

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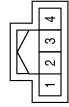


# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

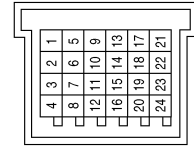
[HALOGEN HEADLAMP]

Connector No.	B70
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	-

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



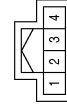
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Color	WHITE



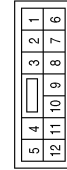
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	B141
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



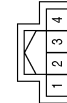
Terminal No.	Color of Wire	Signal Name
3	GR	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	GR	-
10	W	-

Connector No.	B71
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	SB	-

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# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

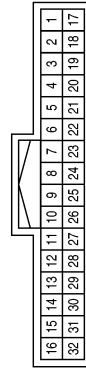
[HALOGEN HEADLAMP]

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



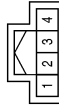
Terminal No.	1	Color of Wire	B	Signal Name	—
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Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	19	Color of Wire	W	Signal Name	—
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Connector No.	B142
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	3	Color of Wire	W	Signal Name	—
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Connector No.	D512
Connector Name	BACK DOOR LOCK ASSEMBLY (WITH AUTOMATIC BACK DOOR SYSTEM)
Connector Color	WHITE



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

Connector No.	D508
Connector Name	BACK DOOR LOCK ASSEMBLY (WITHOUT AUTOMATIC BACK DOOR SYSTEM)
Connector Color	WHITE



Terminal No.	3	Color of Wire	W	Signal Name	—
Terminal No.	4	Color of Wire	GR	Signal Name	—

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FRONT FOG LAMP SYSTEM

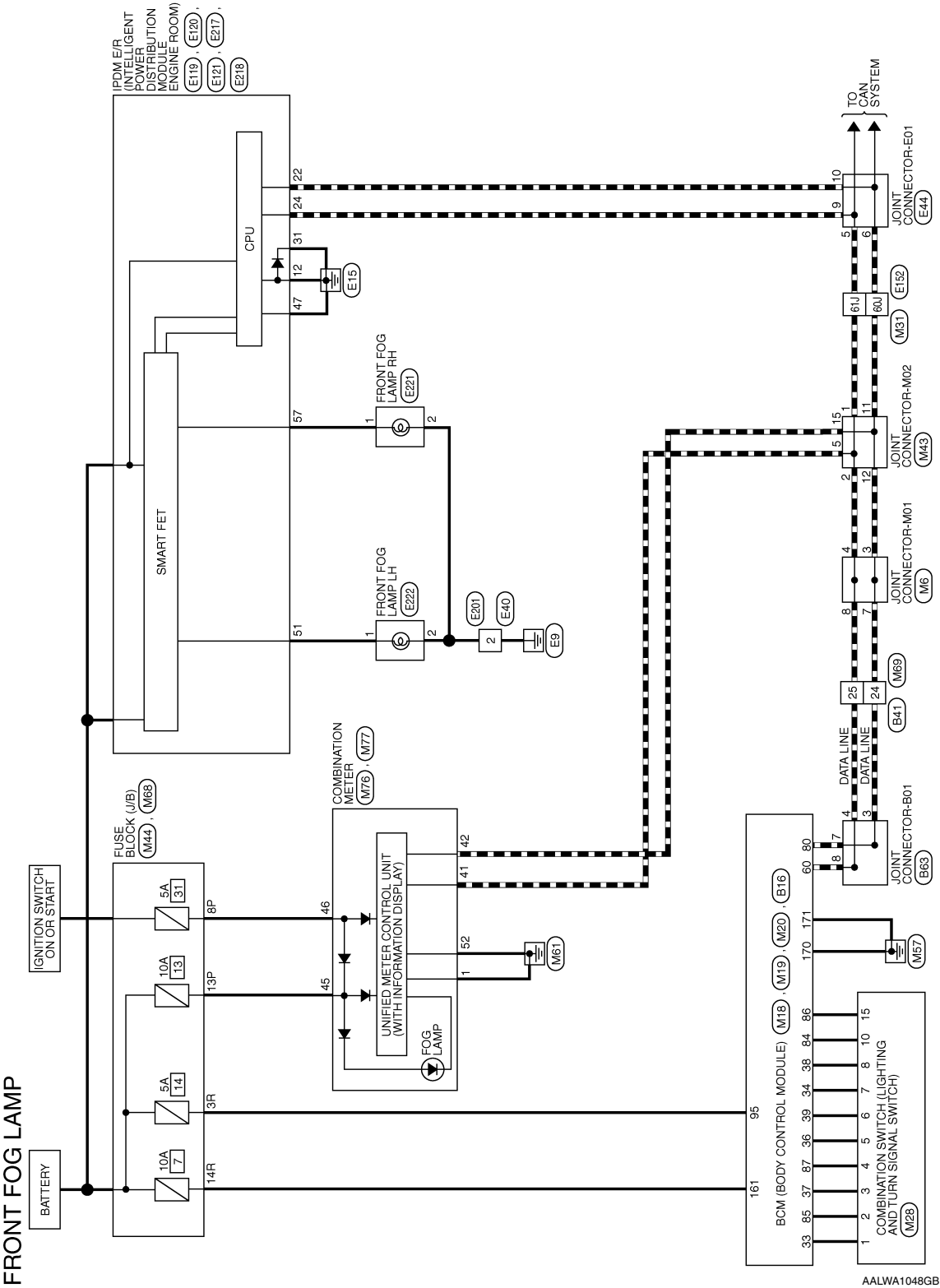
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

FRONT FOG LAMP SYSTEM

Wiring Diagram

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# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## FRONT FOG LAMP CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	168	165	164
176	175	174	173
172	171	170	169
161	162	163	166

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-
5	G	-

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

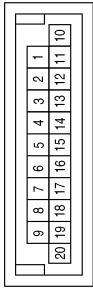
Terminal No.	Color of Wire	Signal Name
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

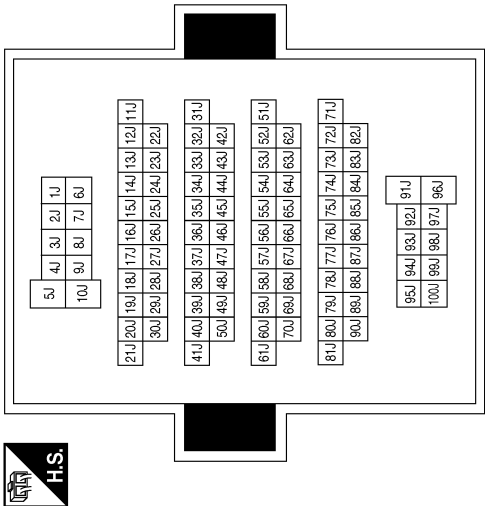
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



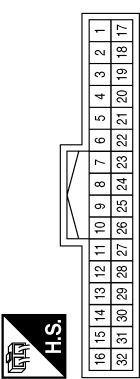
Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
5	L	-
11	P	-
12	P	-
15	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8P	LA/BR	-
13P	LA/G	-

AALIA2967GB

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

# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
3	4

Terminal No.	Color of Wire	Signal Name
2	GR	—

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	M76
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	B	GND

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	<div></div>	5	4	3	
18	17	16	15	14	13	12	11	10

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

Terminal No.	Color of Wire	Signal Name
12	B	SIGNAL GROUND

Terminal No.	Color of Wire	Signal Name
5	L	—
6	P	—
9	L	—
10	P	—

AALIA2968GB

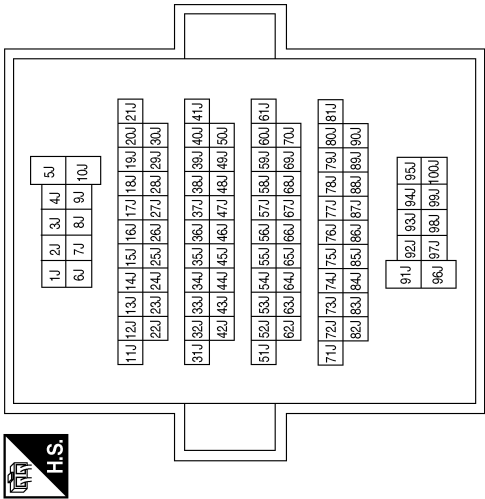
FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

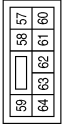


Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED

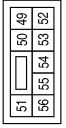


Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
57	W	O LIGHT FR FOG LAMPS RH

Terminal No.	Color of Wire	Signal Name
51	V	O LIGHT FR FOG LAMPS LH

Terminal No.	Color of Wire	Signal Name
2	B	-

AALIA2969GB

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



EXL

# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >



[HALOGEN HEADLAMP]

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	E222
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK


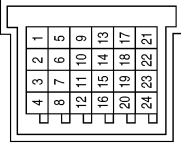
Terminal No.	Color of Wire	Signal Name
1	V	-
2	GR	-

Connector No.	E221
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK


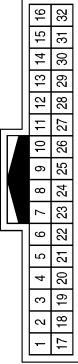
Terminal No.	Color of Wire	Signal Name
1	W	-
2	GR	-

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

AALIA2131GB



# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

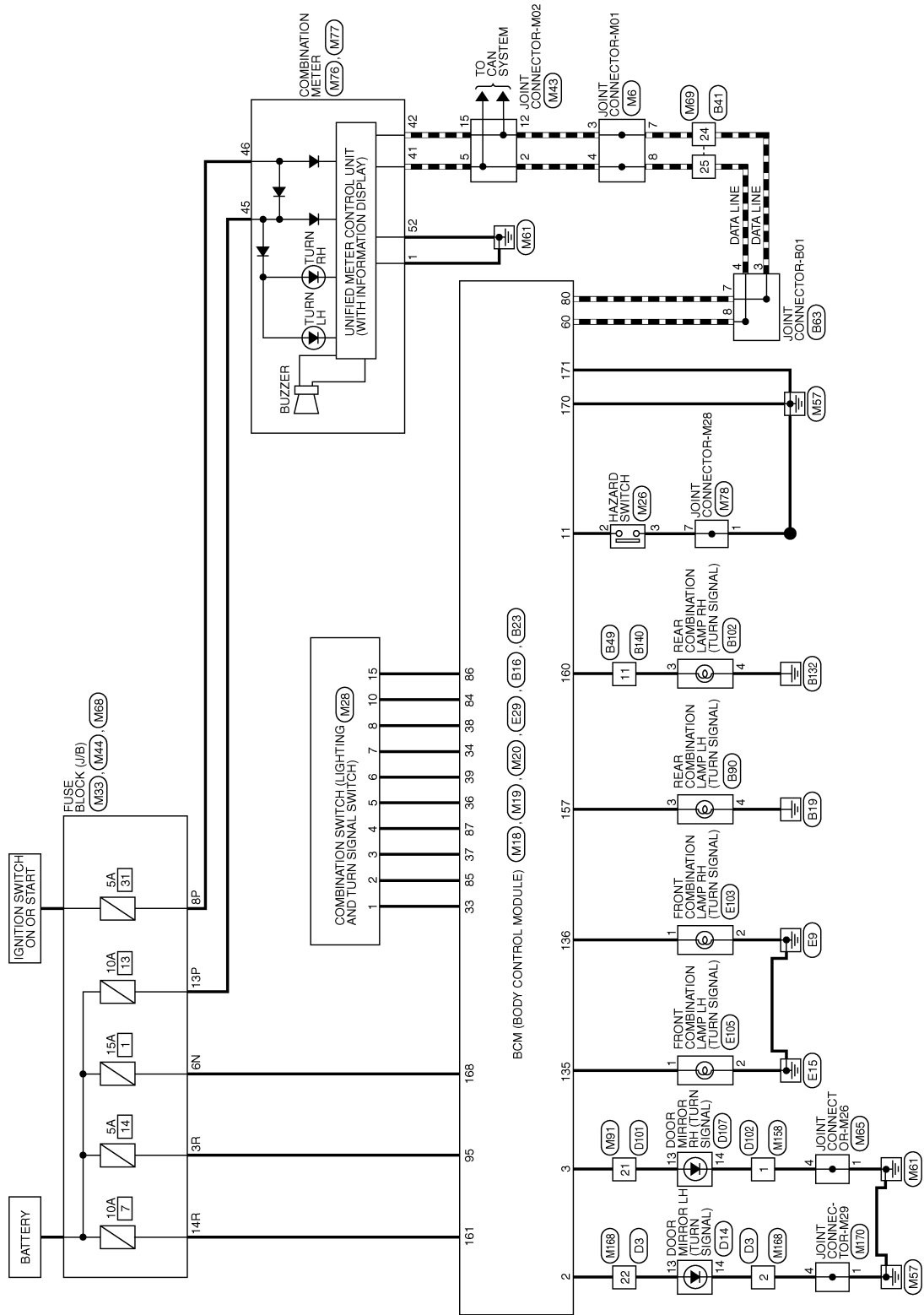
[HALOGEN HEADLAMP]

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

### Wiring Diagram

INFOID:0000000012422984

### TURN SIGNAL AND HAZARD WARNING LAMPS



# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
3	P	—
4	L	—
7	P	—
8	L	—

Terminal No.	Color of Wire	Signal Name
2	LA/G	O DI FR LEFT D
3	LA/Y	O DI FR RIGHT D
11	Y	I HAZARD SW D
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	163	162	161
176	175	174	173	172	171	170
169	168	167	166	165	164	163

Connector No.	M26
Connector Name	HAZARD SWITCH
Connector Color	WHITE



4	3	2	1
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Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
168	BG	I PWR FLASHERS
170	B	I GND1
171	B	I GND2

Terminal No.	Color of Wire	Signal Name
2	Y	—
3	GR	—

AALJA2949GB

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



	</									

Terminal No.	Color of Wire	Signal Name
2	L	-
5	L	-
12	P	-
15	P	-

Connector No.	M33
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



3N		2N	1N
8N		7N	6N
		5N	4N

Terminal No.	Color of Wire	Signal Name
6N	BG	-

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Connector No.	M65
Connector Name	JOINT CONNECTOR-M26
Connector Color	WHITE



8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

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

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
8P	LA/BR	-
13P	LA/G	-

AALIA2950GB

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

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LAVBR	IGN
52	B	G1

Connector No.	M76
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	B	GND

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	M91
Connector Name	WIRE TO WIRE
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

Connector No.	M78
Connector Name	JOINT CONNECTOR-M28
Connector Color	WHITE



8	7	6	5	4	3	2	1
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Terminal No.	Color of Wire	Signal Name
1	B	—

Terminal No.	Color of Wire	Signal Name
21	LAY	—

Terminal No.	Color of Wire	Signal Name
1	GR	—
7	GR	—

AALIA2980GB

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



132	131	130	129	128	127	126	125	124	123	122	121
144	143	142	141	140	139	138	137	136	135	134	133

Terminal No.	Color of Wire	Signal Name
135	BR	DI FR LEFT E
136	GR	O DI FR RIGHT E

Connector No.	M170
Connector Name	JOINT CONNECTOR-M29
Connector Color	WHITE



8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

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

Connector No.	M168
Connector Name	WIRE TO WIRE
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

Terminal No.	Color of Wire	Signal Name
2	B	-
22	LA/G	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	E105
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY



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

Connector No.	E103
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR	-

AALIA2165GB

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

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5
6	7	8	9	10
11	12			

Terminal No.	Color of Wire	Signal Name
11	P	—

Connector No.	B41
Connector Name	WIRE TO WIRE
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

Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

Connector No.	B23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



151	150	149	148	147	146	145
160	159	158	157	156	155	154
153	152					

Terminal No.	Color of Wire	Signal Name
157	GR	O DI RR LEFT B
160	P	O DI RR RIGHT B

Connector No.	B102
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



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

Connector No.	B90
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE



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

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	LA/V	—
4	B	—

Terminal No.	Color of Wire	Signal Name
3	GR	—
4	B	—

Terminal No.	Color of Wire	Signal Name
3	P	—
4	L	—
7	P	—
8	L	—

AALIA2166GB

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	D14
Connector Name	DOOR MIRROR LH
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
13	LA/G	–
14	LA/B	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
2	LA/B	–
22	LA/G	–

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



5	4			3	2	1
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
11	LAV	–

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



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

Terminal No.	Color of Wire	Signal Name
13	LA/G	–
14	LA/B	–

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



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

Terminal No.	Color of Wire	Signal Name
1	LA/B	–

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



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

Terminal No.	Color of Wire	Signal Name
21	LA/G	–

AALIA2239GB

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

**[HALOGEN HEADLAMP]**

INFOID:0000000012422985

AALWA1431GB

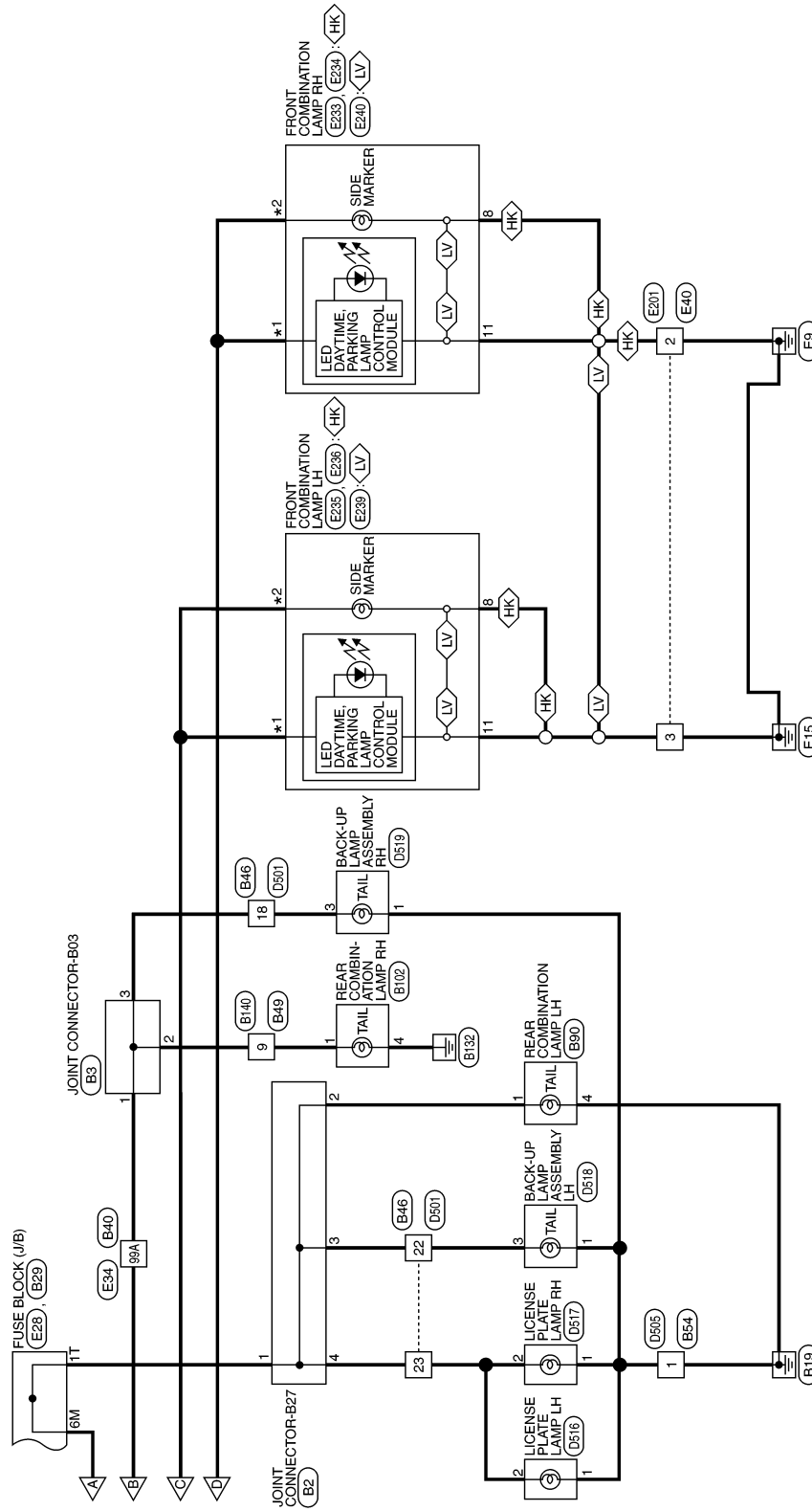


# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

HK : WITH HALOGEN HEADLAMPS  
 LV : WITH LED HEADLAMPS  
 \*1 HK : 12 LV : 9  
 \*2 HK : 9 LV : 10



AALWA1432GB

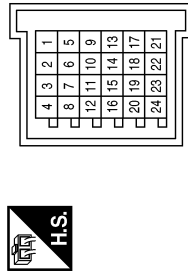
# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

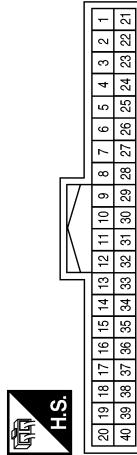
[HALOGEN HEADLAMP]

## PARKING, LICENSE AND TAIL LAMPS CONNECTORS

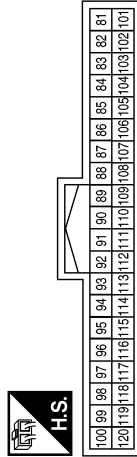
Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



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



Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

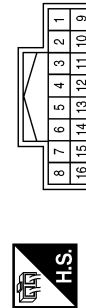
Terminal No.	Color of Wire	Signal Name
33	LG	ICSW 5
34	Y	OCSW 5
36	G	ICSW 3
37	GR	ICSW 4
38	V	ICSW 1
39	W	ICSW 2

Terminal No.	Color of Wire	Signal Name
84	BR	OCSW 2
85	SB	OCSW 1
86	P	OCSW 3
87	BG	OCSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-

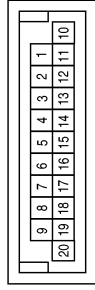
AALIA2957GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

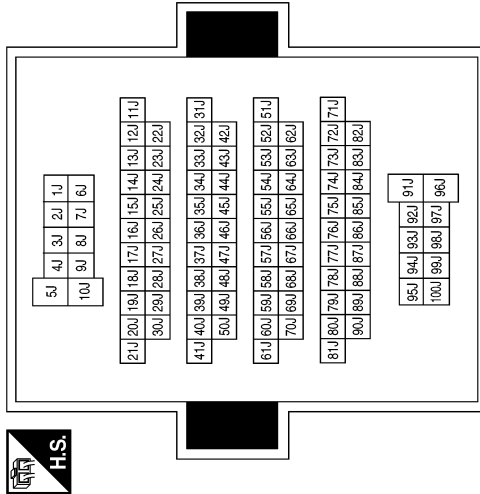
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
11	P	-
12	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6M	Y	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

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A  
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EXL  
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## < WIRING DIAGRAM >

## < WIRING DIAGRAM >

	2	4
	1	3



9	8	7	6	5	4	3
18	17	16	15	14	13	12
						11
						10



Diagram illustrating a 10000-acre land area divided into four 5x5 grids (quadrants) by a central horizontal and vertical road, each 100 acres wide. The quadrants are labeled 1A, 2A, 3A, 4A (top-left), 5A, 6A, 7A, 8A (top-right), 9A, 10A, 11A, 12A (bottom-left), and 13A, 14A, 15A, 16A (bottom-right). Each quadrant contains a 4x4 grid of smaller squares, each representing 625 acres. The squares are numbered 1 through 1600, with the numbering starting from the top-left of each quadrant and proceeding row by row. The central roads are labeled '100' and '100' respectively.



PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

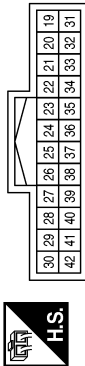
[HALOGEN HEADLAMP]

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

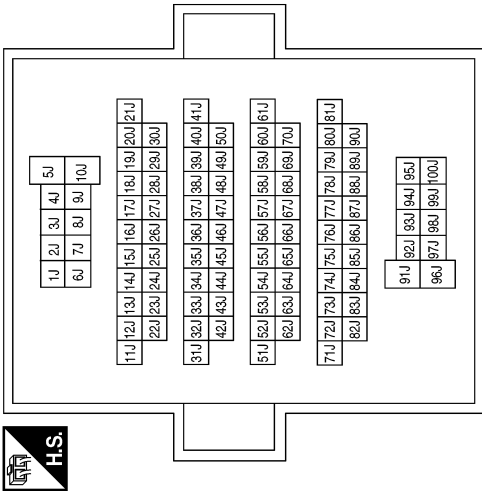
Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



AALIA2960GB

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EXL

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

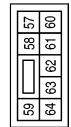
[HALOGEN HEADLAMP]

Connector No.	E233
Connector Name	FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color	BLACK



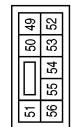
Terminal No.	Color of Wire	Signal Name
8	B	—
9	W	—

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
61	GR	O LIGHT CLEARANCE FR RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
56	BG	O LIGHT CLEARANCE FR LH

Connector No.	E236
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
11	GR	—
12	BG	—

Connector No.	E235
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	B	—
9	P	—

Connector No.	E234
Connector Name	FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
11	GR	—
12	GR	—

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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

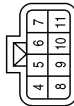
[HALOGEN HEADLAMP]

Connector No.	B2
Connector Name	JOINT CONNECTOR-B27
Connector Color	WHITE



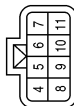
Terminal No.	Color of Wire	Signal Name
1	LA/R	-
2	LA/R	-
3	LA/R	-
4	LA/R	-

Connector No.	E240
Connector Name	FRONT COMBINATION LAMP RH (WITH LED HEADLAMPS)
Connector Color	BLACK



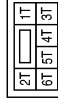
Terminal No.	Color of Wire	Signal Name
9	GR	-
10	W	-
11	B	-

Connector No.	E239
Connector Name	FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)
Connector Color	BLACK

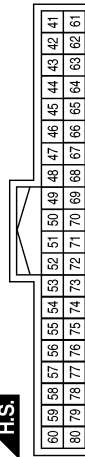


Terminal No.	Color of Wire	Signal Name
9	BG	-
10	P	-
11	B	-

Connector No.	B29
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	B3
Connector Name	JOINT CONNECTOR-B03
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LA/BR	-
2	LA/BR	-
3	LA/BR	-

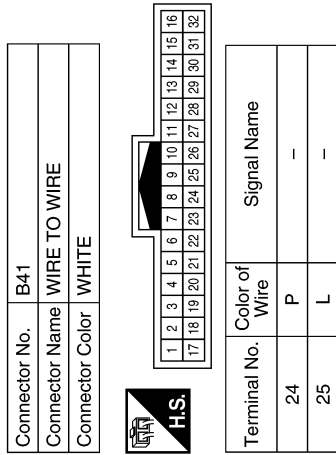
AALIA2962GB

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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

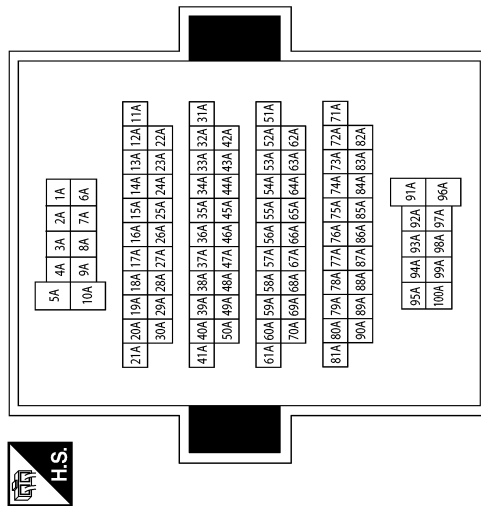
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]



Terminal No.	Color of Wire	Signal Name
99A	LA/BR	-

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LA/BR	-

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
18	LA/BR	-
22	LA/R	-
23	LA/R	-

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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	B102
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



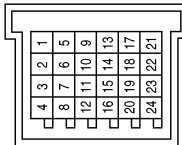
Terminal No.	Color of Wire	Signal Name
1	LA/BR	-
4	B	-

Connector No.	B90
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LA/R	-
4	B	-

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



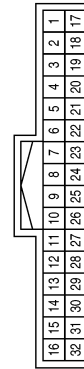
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
18	LA/R	-
22	LA/Y	-
23	P	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LA/BR	-

AALIA2964GB

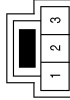
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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	D518
Connector Name	BACK-UP LAMP ASSEMBLY LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
3	LA/Y	-

Connector No.	D517
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN



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

Connector No.	D516
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN



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

Connector No.	D519
Connector Name	BACK-UP LAMP ASSEMBLY RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
3	LA/R	-

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STOP LAMP

< WIRING DIAGRAM >

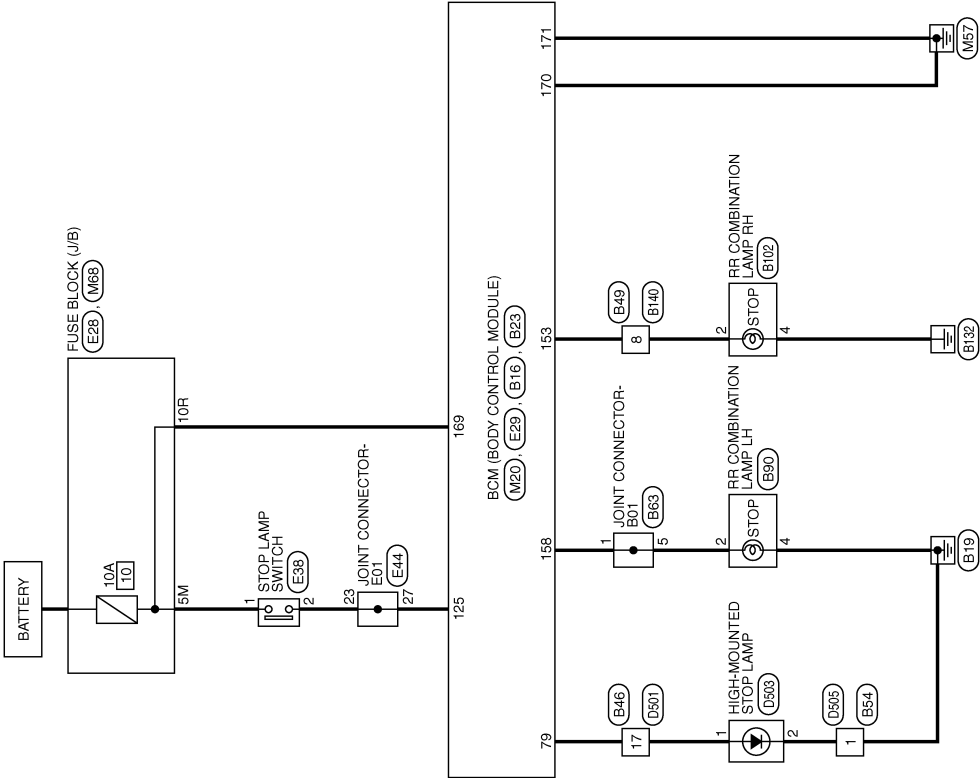
[HALOGEN HEADLAMP]

STOP LAMP

Wiring Diagram

INFOID:000000012422986

STOP LAMP



AALWA1427GB

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EXL

# STOP LAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

## STOP LAMP CONNECTORS

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN

167	166	165	164	163	162	161
176	175	174	173	172	171	170
169	168					



Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

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



Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

4M	3M	2M	1M
10M	9M	8M	7M
6M	5M		



Terminal No.	Color of Wire	Signal Name
169	GR	I PWR STOP LAMP
170	B	I GND1
171	B	I GND2

Terminal No.	Color of Wire	Signal Name
10R	GR	-

Terminal No.	Color of Wire	Signal Name
5M	V	-

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

132	131	130	129	128	127	126	125	124	123	122	121
144	143	142	141	140	139	138	137	136	135	134	133



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

3	4
1	2



Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
125	LG	I BRAKE SW2

Terminal No.	Color of Wire	Signal Name
1	V	-
2	LG	-

Terminal No.	Color of Wire	Signal Name
23	LG	-
27	LG	-

AALIA2158GB

# STOP LAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	B46
Connector Name	WIRE TO WIRE
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

Terminal No.	Color of Wire	Signal Name
17	LA/W	—

Connector No.	B23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



151	150	149	148	147	146	145
160	159	158	157	156	155	154
153	152					

Terminal No.	Color of Wire	Signal Name
153	LA/W	O STOP LAMP 1
158	LA/Y	O STOP LAMP 2 NISSAN EUR

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
79	LA/W	O STOP LAMP 3

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
1	LA/Y	—
5	LA/Y	—

Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
---	---

Terminal No.	Color of Wire	Signal Name
1	B	—

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5
6	7	8	9	10
11	12			

Terminal No.	Color of Wire	Signal Name
8	LA/W	—

AALIA2159GB

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P

# STOP LAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



5	4	<div></div>	3	2	1	
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
8	LA/Y	—

Connector No.	B102
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



4	3	2	1
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Terminal No.	Color of Wire	Signal Name
2	LA/Y	—
4	B	—

Connector No.	B90
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE



4	3	2	1
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Terminal No.	Color of Wire	Signal Name
2	LA/Y	—
4	B	—

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
---	---

Connector No.	D503
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	B	—

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
17	Y	—

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BACK-UP LAMP

< WIRING DIAGRAM >

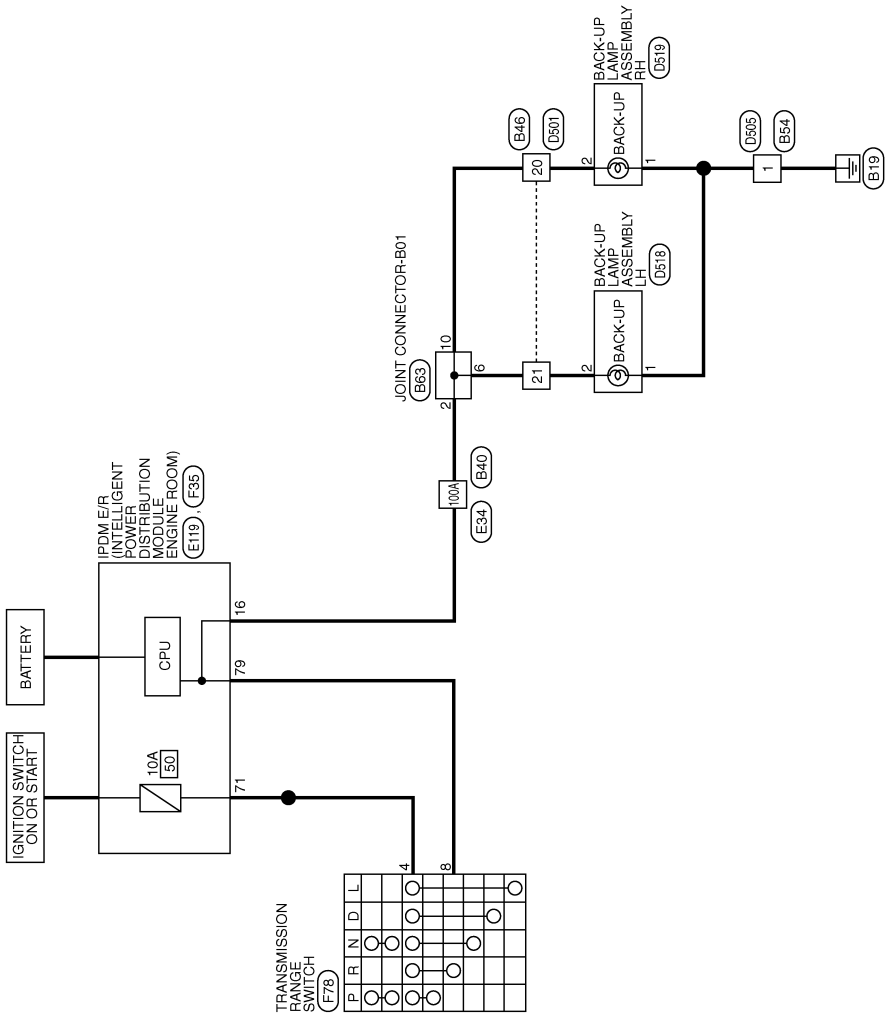
[HALOGEN HEADLAMP]

BACK-UP LAMP

Wiring Diagram

INFOID:000000012422987

BACK-UP LAMP



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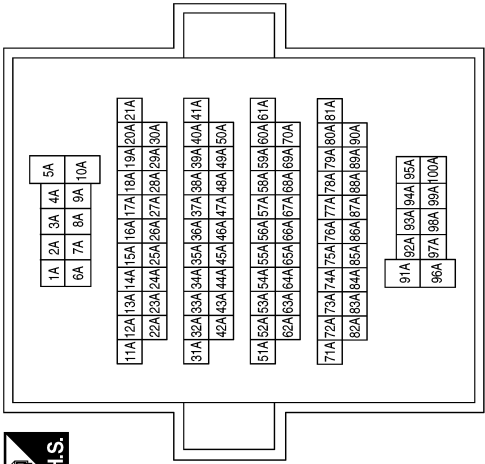
BACK-UP LAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

BACK-UP LAMP CONNECTORS

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	GRAY



1A	2A	3A	4A	5A
6A	7A	8A	9A	10A

11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
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22A	23A	24A	25A	26A	27A	28A	29A	30A
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31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A
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42A	43A	44A	45A	46A	47A	48A	49A	50A
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51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

62A	63A	64A	65A	66A	67A	68A	69A	70A
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71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

82A	83A	84A	85A	86A	87A	88A	89A	90A
-----	-----	-----	-----	-----	-----	-----	-----	-----

91A	92A	93A	94A	95A
96A	97A	98A	99A	100A

71	70	69	68	<div></div>	67	66	65	
80	79	78	77	76	75	74	73	72



Connector No.	F35
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
100A	G	—

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	5	4	3		
18	17	16	15	14	13	12	11	10

Terminal No.	Color of Wire	Signal Name
16	G	O LIGHT REVERSE LAMP

Connector No.	F78
Connector Name	TRANSMISSION RANGE SWITCH
Connector Color	BLACK



6	5	4	3	2	1
10	9	8	7		

Terminal No.	Color of Wire	Signal Name
4	W	—
8	G	—

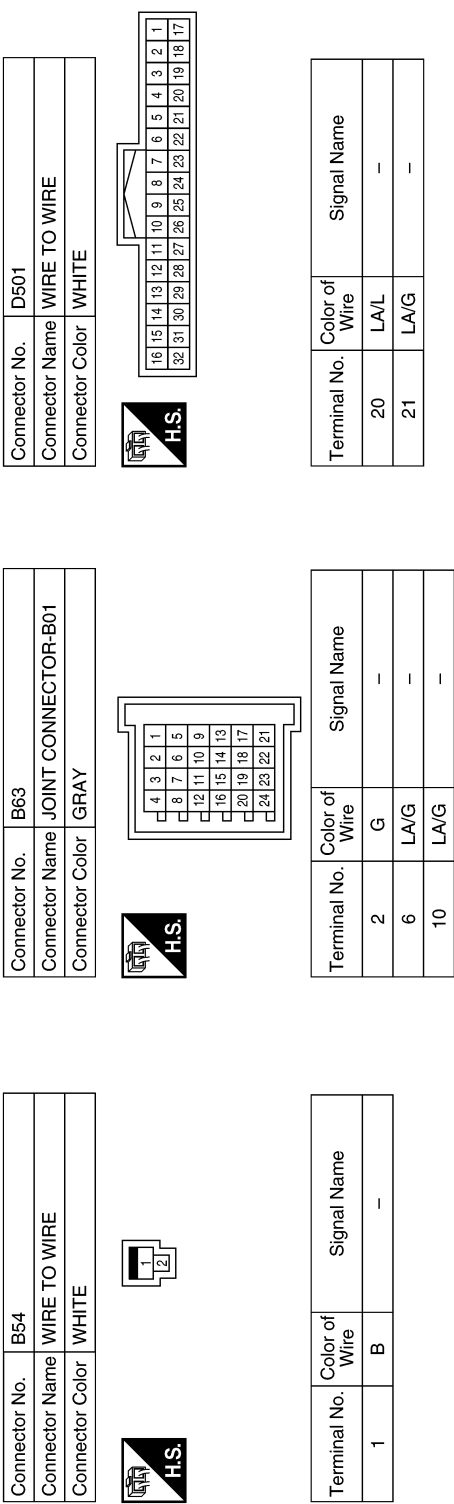
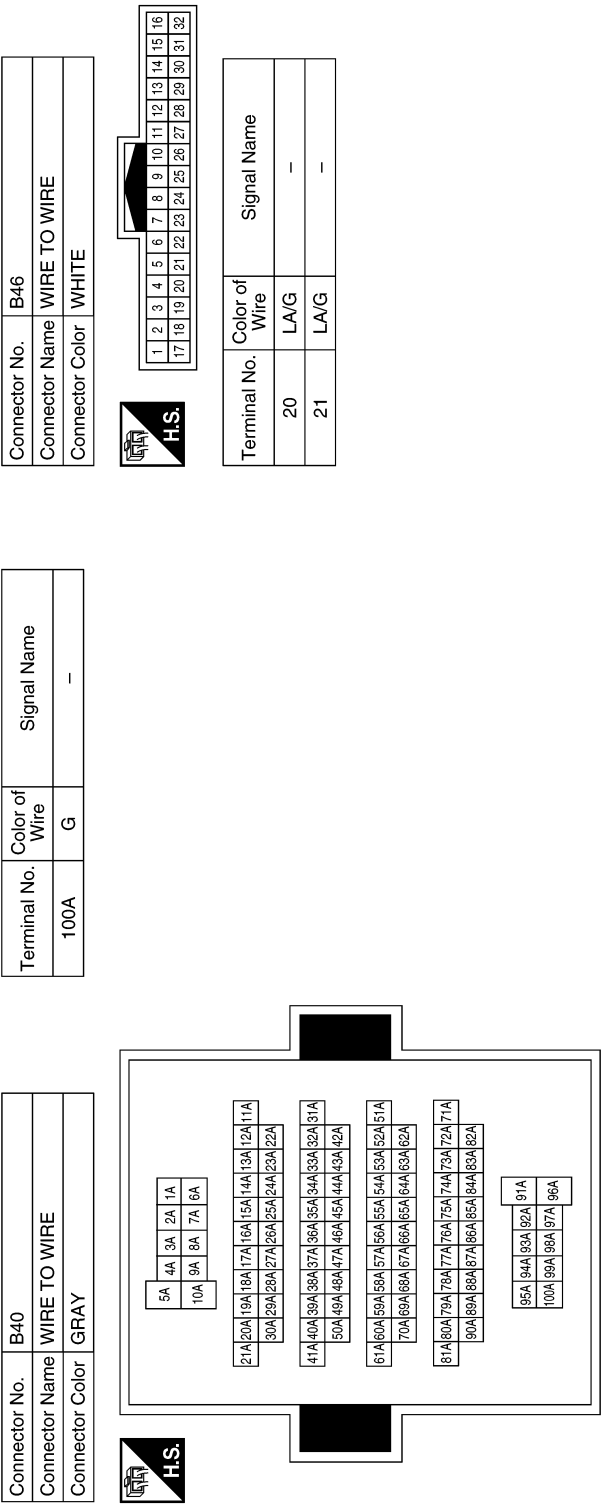
Terminal No.	Color of Wire	Signal Name
71	SB	O IGN REVERSE SW AC VALVE
79	G	LI LIGHT REVERSE SW



BACK-UP LAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

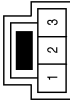


BACK-UP LAMP

< WIRING DIAGRAM >

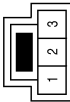
[HALOGEN HEADLAMP]

Connector No.	D519
Connector Name	BACK-UP LAMP ASSEMBLY RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	LA/L	-

Connector No.	D518
Connector Name	BACK-UP LAMP ASSEMBLY LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	LA/G	-

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

AALIA2120GB

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

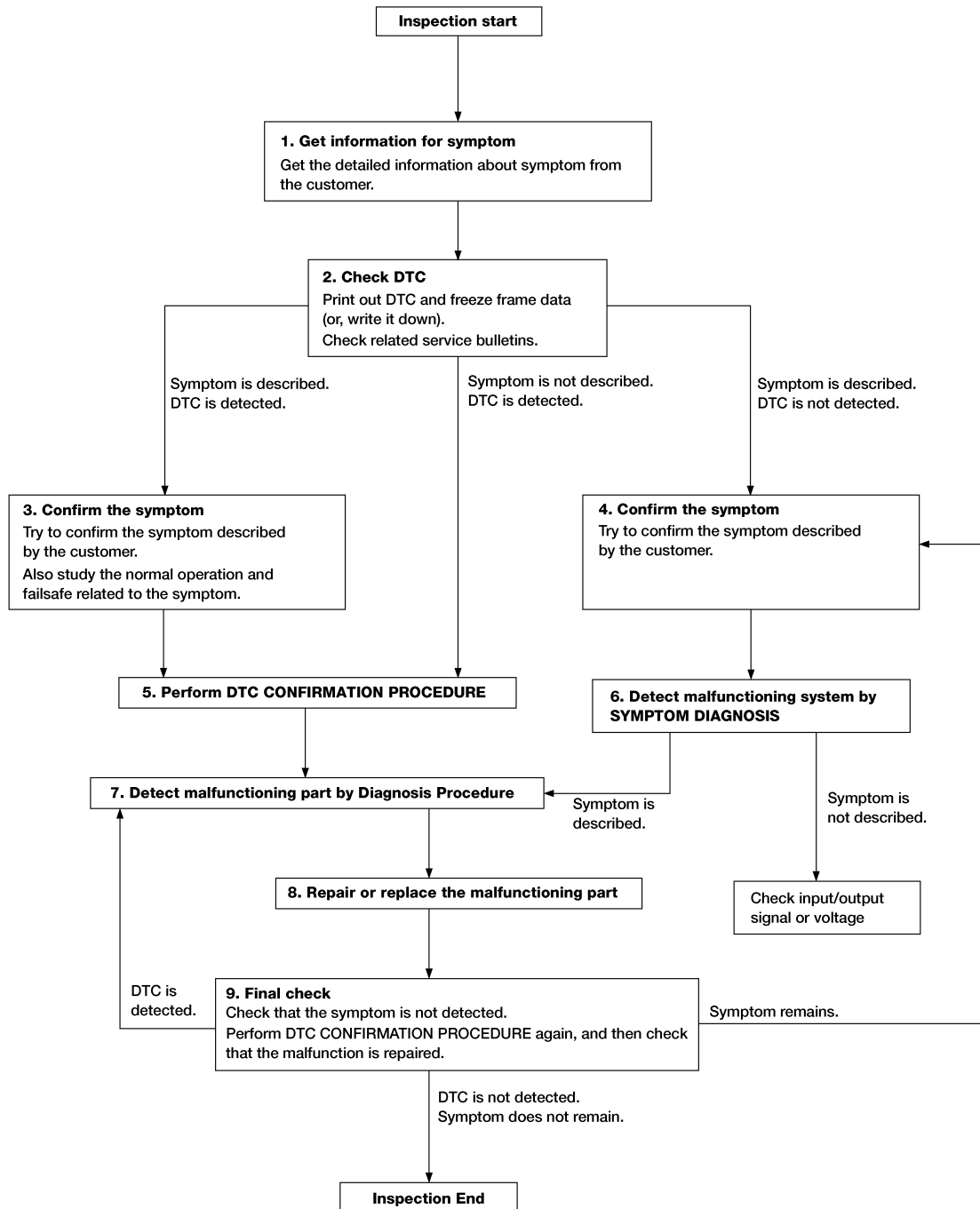
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:0000000012422988

#### OVERALL SEQUENCE



#### DETAILED FLOW

Revision: September 2015

EXL-83

2016 Rogue NAM

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

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## 1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

## 2.CHECK DTC

---

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

Are any symptoms described and any DTC detected?

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

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

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

## 3.CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

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

>> GO TO 6.

## 5.PERFORM DTC CONFIRMATION PROCEDURE

---

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-47, "DTC Inspection Priority Chart"](#) (BCM) (with Intelligent Key System) or [BCS-109, "DTC Inspection Priority Chart"](#) (BCM) (without Intelligent Key System) or [PCS-17, "Reference Value"](#) (IPDM E/R), and determine trouble diagnosis order.

### NOTE:

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

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-45, "Intermittent Incident"](#).

## 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

---

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

Is the symptom described?

YES >> GO TO 7.

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

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

### 7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-45, "Intermittent Incident"](#).

### 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

### 9. FINAL CHECK

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

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

Is DTC detected and does symptom remain?

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

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

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

A  
B  
C  
D  
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H  
I  
J  
K  
L  
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O  
P

EXL

## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### DTC/CIRCUIT DIAGNOSIS

#### POWER SUPPLY AND GROUND CIRCUIT

#### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM)

#### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000012735181

Regarding Wiring Diagram information, refer to [BCS-51, "Wiring Diagram"](#).

#### 1. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

##### Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

#### 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.

2. Check voltage between BCM connector M20 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M20	161	—	Battery voltage

##### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

#### 3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	170	—	Yes
	171		

##### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM)

#### BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000012735182

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

#### 1. CHECK FUSE

## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

Is the fuse blown?

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

### 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.
2. Check voltage between BCM connector M20 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M20	161	—	Battery voltage

Is the inspection result normal?

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

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	170	—	Yes
	171		

Is the inspection result normal?

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

A  
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P

EXL

## OPTICAL SENSOR

## Component Function Check

INFOID:0000000012422995

## 1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

## CONSULT DATA MONITOR

1. Turn ignition switch ON.
2. Select "OPTICAL SENSOR" in "Data Monitor" of "BCM (HEADLAMP)".
3. Turn lighting switch AUTO.
4. With the optical sensor illuminating, check the monitor status.

Monitor item	Condition		Voltage (Approx.)
OPTICAL SENSOR	Optical sensor	When illuminating	3.1 V or more *
		When shutting off light	0.6 V or less

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

Is the inspection result normal?

- YES >> Optical sensor is normal.  
 NO >> Refer to [EXL-88, "Diagnosis Procedure"](#).

## Diagnosis Procedure

INFOID:0000000012422996

## 1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(+) <div><div></div></div>		(-)	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M13	1	Ground	5 V

Is the inspection result normal?

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

## 2.CHECK OPTICAL SENSOR GROUND INPUT

Check voltage between optical sensor harness connector and ground.

(+) <table data-bbox="129 1449 735 1577"><tr><td colspan="2">Optical sensor</td></tr><tr><td>Connector</td><td>Terminal</td></tr><tr><td>M13</td><td>3</td></tr></table>		Optical sensor		Connector	Terminal	M13	3	(-)	Voltage (Approx.)
Optical sensor									
Connector	Terminal								
M13	3								
		Ground	0 V						

Is the inspection result normal?

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

## 3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

With illuminating the optical sensor, check voltage between optical sensor harness connector and ground.



# OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

(+) Optical sensor		(-)	Condition		Voltage (Approx.)
Connector	Terminal				
M13	2	Ground	Optical sensor	When illuminating	3.1 V or more *
				When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace the optical sensor.

## 4.CHECK OPTICAL SENSOR OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M13	1	M18	12	Yes

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M13	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace harness.

## 6.CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M13	3	M18	30	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace harness.

## 7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

## OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M13	2	M18	19	Yes

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

### 8.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M13	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137. "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace harness.

# HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## HAZARD SWITCH

### Component Function Check

INFOID:0000000012422997

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

##### CONSULT DATA MONITOR

1. Turn ignition switch ON.
2. Select "HAZARD SW" in "Data Monitor" of "BCM (FLASHER)".
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 inspection result normal?

- YES >> Hazard switch circuit is normal.  
NO >> Refer to [EXL-91, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000012422998

#### 1.CHECK HAZARD SWITCH SIGNAL INPUT

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

(+)		(-)	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M26	2	Ground	Battery voltage

Is the inspection result normal?

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

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

1. Disconnect BCM connector.
2. Check continuity between hazard switch harness connector and BCM harness connector.

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M26	2	M18	11	Yes

Is the inspection result normal?

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

#### 3.CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M26	2		No

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).  
NO >> Repair or replace harness.

## HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### 4.CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M26	3		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to [EXL-126, "Removal and Installation"](#).  
NO >> Repair or replace harness.

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## TURN SIGNAL LAMP CIRCUIT

### Description

INFOID:0000000012422999

The BCM monitors inputs from the combination switch (lighting and turn signal 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:0000000012423000

#### 1.CHECK TURN SIGNAL LAMP

##### CONSULT

1. Select "FLASHER" in "Active Test" of "BCM (FLASHER)".
2. While operating the test items, check that the turn signal lamp blinks.

**LH** : Turn signal lamps (LH) ON

**RH** : Turn signal lamps (RH) ON

**Off** : Turn signal lamps OFF

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to [EXL-93, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000012423001

Regarding Wiring Diagram information, refer to [EXL-57, "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

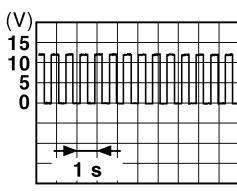
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp harness connector, door mirror harness connector or the side turn signal harness connector or the rear combination lamp harness connector in question.
3. Turn the ignition switch ON.
4. Operate the turn signal switch.
5. While the turn signal is operating, check the voltage between the front combination lamp harness connector and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		

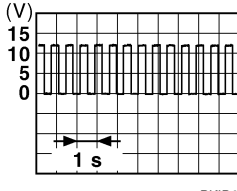
# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

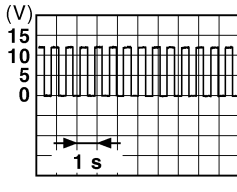
[HALOGEN HEADLAMP]

LH	E105			
RH	E103	1	Ground	

6. While the turn signal is operating, check the voltage between the door mirror harness connector and ground.

(+) Connector		Terminal	(-)	Voltage (Approx.)
LH	D14			
RH	D107	13	Ground	

7. While the turn signal is operating, check the voltage between the rear combination lamp harness connector and ground.

(+) Connector		Terminal	(-)	Voltage (Approx.)
LH	B90			
RH	B102	3	Ground	

Are the inspection results normal?

YES >> GO TO 5.

NO >> GO TO 3.

## 3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect BCM harness connector E29, M18 or B23.
- Check continuity between the BCM harness connector E29 and the front combination lamp harness connector.

BCM			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	E29	135	E105	1	Yes
RH		136	E103		

4. Check continuity between the BCM harness connector B23 and the door mirror harness connector.

BCM			Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
LH	M18	2	D14	13	Yes
RH		3	D107		

# TURN SIGNAL LAMP CIRCUIT

[HALOGEN HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

- Check continuity between the BCM harness connector B23 and the rear combination lamp harness connector.

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	B23	157	B90	3	Yes
RH		160	B102		

Are the inspection results normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

## 4.CHECK TURN SIGNAL LAMP SHORT CIRCUIT

- Check continuity between the BCM harness connector E29 and ground.

BCM			Ground	Continuity
Connector		Terminal		
LH	E29	135		No
RH		136		

- Check continuity between the BCM harness connector M18 and ground.

BCM			Ground	Continuity
Connector		Terminal		
LH	B18	2		No
RH		3		

- Check continuity between the BCM harness connector M23 and ground.

BCM			Ground	Continuity
Connector		Terminal		
LH	B23	157		No
RH		160		

Are the inspection results normal?

YES >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace the harness or connectors.

## 5.CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- Turn the ignition switch OFF.
- Check continuity between the front combination lamp harness connector, the door mirror connector or the rear combination lamp harness connector in question and ground.

Front combination lamp			(-)	Continuity
Connector		Terminal		
LH	E105	2	Ground	Yes
RH	E103			

- Check continuity between the door mirror harness connector and ground.

Door mirror			(-)	Continuity
Connector		Terminal		

## TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

LH	D14	14	Ground	Yes
RH	D107			

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

Rear combination lamp		(-)	Continuity
Connector	Terminal		
LH	B90	4	Ground
RH	B102		

Are the inspection results normal?

YES >> Replace the malfunctioning lamp.

NO >> Repair or replace the harness or connectors.



# B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423002

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B121A	FR FOG LAMP LH PWR SPLY CIRC [CIRC SHORT TO GROUND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

Ⓐ With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

#### Is DTC B121A detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-97, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423003

#### 1.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

1. Disconnect fog lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	51		No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between fog lamp harness connector and ground.

Fog lamp		Ground	Continuity
Connector	Terminal		
LH	E222	1	No

#### Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423004

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B1231	DTRL RH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground in the daytime running lamp circuit is detected.	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

#### Is DTC B1231 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-98, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423005

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	58		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E234	10		No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423006

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B1256	FR FOG LAMP RH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground is detected.	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

Ⓐ With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

#### Is DTC B1256 detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-99, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423007

#### 1.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

1. Disconnect fog lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	57		No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between fog lamp harness connector and ground.

Fog lamp		Ground	Continuity
Connector	Terminal		
RH	E221	1	No

#### Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

### DTC Logic


INFOID:0000000012423008

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B02CB	DTRL LH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground is detected.	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

#### Is DTC B02CB detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-100, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423009

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	49		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between fog lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
LH	E236	10		No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423010

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20CE	DTRL LH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>IPDM E/R</li><li>Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B20CE detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-101, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423011

#### 1.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	59		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
LH	E236	15		No

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

### DTC Logic


INFOID:0000000012423012

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20CF	HL (HI) RH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

#### Is DTC B20CF detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-102, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423013

#### 1.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	54		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E234	15		No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

### DTC Logic


INFOID:0000000012423014

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D0	HI (LO) RH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B20D0 detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-103. "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423015

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	50		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp		Ground	Continuity
Connector	Terminal		
LH E235	4		No

Is the inspection result normal?

YES >> Refer to [GI-45. "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44. "Removal and Installation"](#).

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

#### DTC Logic


INFOID:0000000012423016

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D1	HL (LO) RH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

##### Is DTC B20D1 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-104, "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423017

##### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	62		No

##### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between fog lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E233	4		No

##### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).



## B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

#### DTC Logic

INFOID:0000000012423018

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D2	PARKING LAMP PWR SPLY CIRC [CIRC SHORT TO GROUND]	When a short to ground is detected in the parking lamp power supply circuit.	• Short to ground

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

ⓘ With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

Is DTC B20D2 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-105. "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423019

##### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connectors and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R			Ground	Continuity
Connector		Terminal		
LH	E217	56	Ground	No
RH	E218	61		

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp harness connector and ground.

IPDM E/R			Ground	Continuity
Connector		Terminal		
LH	E236 (parking lamp)	12	Ground	No
	E235 (side marker lamp)	9		
RH	E234 (parking lamp)	12		
	E233 (side marker lamp)	9		

Is the inspection result normal?

- YES >> Refer to [GI-45. "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44. "Removal and Installation"](#).

## B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

#### DTC Logic

INFOID:0000000012423020

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D4	TAIL LAMP LH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

##### Is DTC B20D4 detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-106, "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423021

##### 1.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Disconnect rear combination lamp (LH), license plate lamps, back up lamp connectors and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E119	4		No

##### Is the inspection result normal?

YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
LH	B90	1		No

##### Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

## B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

### B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

#### DTC Logic

INFOID:0000000012423022

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D5	TAIL LAMP RH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground is detected in the tail lamp supply voltage circuit.	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

Ⓐ With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B20D5 detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-107, "Diagnosis Procedure"](#).

NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423023

##### 1.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Disconnect rear combination lamp (RH), back up lamp connectors and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E119	17		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

##### 2.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
RH	B102	1		No

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## SYMPTOM DIAGNOSIS

### EXTERIOR LIGHTING SYSTEM SYMPTOMS

#### Symptom Table

INFOID:0000000012423024

#### CAUTION:

Perform the “Self Diagnostic Result” with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON.	One side	<ul style="list-style-type: none"><li>• Fuse</li><li>• Halogen bulb (HI)</li><li>• Harness between IPDM E/R and headlamp (HI)</li><li>• Harness between headlamp (HI) and ground</li><li>• IPDM E/R</li></ul>	Headlamp (HI) circuit Refer to <a href="#">EXL-101, "DTC Logic"</a> (LH) or <a href="#">EXL-102, "DTC Logic"</a> (RH).
	Both sides	<b>Symptom diagnosis</b> “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to <a href="#">EXL-101, "DTC Logic"</a> (LH) or <a href="#">EXL-102, "DTC Logic"</a> (RH).	
High beam indicator lamp is not turned ON. [Headlamp (HI) is turned ON.]		Combination meter	<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 (LO) is not turned ON.	One side	<ul style="list-style-type: none"><li>• Fuse</li><li>• Halogen bulb (LO)</li><li>• Harness between IPDM E/R and headlamp lamp (LO)</li><li>• Harness between headlamp (LO) and ground</li><li>• IPDM E/R</li></ul>	Headlamp (LO) circuit Refer to <a href="#">EXL-103, "DTC Logic"</a> (LH) or <a href="#">EXL-104, "DTC Logic"</a> (RH).
	Both sides	<b>Symptom diagnosis</b> “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to <a href="#">EXL-103, "DTC Logic"</a> (LH) or <a href="#">EXL-104, "DTC Logic"</a> (RH).	
Each lamp is not turned ON/OFF with lighting switch AUTO.		<ul style="list-style-type: none"><li>• Combination switch</li><li>• Harness between combination switch and BCM</li><li>• BCM</li></ul>	Combination switch Refer to <a href="#">BCS-74, "Symptom Table"</a> (with Intelligent Key system) or <a href="#">BCS-135, "Symptom Table"</a> (without Intelligent Key system).
		<ul style="list-style-type: none"><li>• Optical sensor</li><li>• Harness between optical sensor and BCM</li><li>• BCM</li></ul>	Optical sensor Refer to <a href="#">EXL-88, "Component Function Check"</a> .
Daytime running light is not turned ON. [Headlamp (HI) is turned ON.]		<ul style="list-style-type: none"><li>• Fuse</li><li>• Harness between IPDM E/R and front combination lamp</li><li>• IPDM E/R</li><li>• BCM</li><li>• ECM</li><li>• Combination meter</li></ul>	<ul style="list-style-type: none"><li>• Daytime running light circuit Refer to <a href="#">EXL-98, "DTC Logic"</a>.</li><li>• BCM (HEADLAMP) “Data Monitor” “ENGINE STATE”</li><li>• Combination meter “Data Monitor” “PKB SW”</li><li>• BCM (HEADLAMP) “Active Test” “DAYTIME RUNNING LIGHT”</li></ul>
Parking lamp is not turned ON.		<ul style="list-style-type: none"><li>• Fuse</li><li>• Parking lamp bulb</li><li>• Harness between IPDM E/R and front combination lamp</li><li>• IPDM E/R</li></ul>	Parking lamp circuit Refer to <a href="#">EXL-105, "DTC Logic"</a> .

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

## < SYMPTOM DIAGNOSIS >

## [HALOGEN HEADLAMP]

Symptom		Possible cause	Inspection item
Front side marker lamp is not turned ON.		<ul style="list-style-type: none"> <li>Front side marker lamp bulb</li> <li>Harness between IPDM E/R and front side marker lamp</li> <li>Harness between front side marker lamp and ground</li> <li>IPDM E/R</li> </ul>	Front side marker lamp circuit Refer to <a href="#">EXL-105, "DTC Logic"</a> .
License plate lamp is not turned ON.		<ul style="list-style-type: none"> <li>License plate lamp bulb</li> <li>Harness between IPDM E/R and license plate lamp</li> <li>Harness between license plate lamp and ground</li> </ul>	License plate lamp circuit Refer to <a href="#">EXL-106, "DTC Logic"</a> .
Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned ON.		<b>Symptom diagnosis</b> "PARKING, SIDE MARKER, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to <a href="#">EXL-105, "DTC Logic"</a> .	
Tail lamp indicator is not turned ON. (Exterior lamps are turned ON.)		Combination meter	<ul style="list-style-type: none"> <li>Combination meter "Data Monitor" "LIGHT IND"</li> <li>BCM (HEADLAMP) "Active Test" "TAIL LAMP"</li> </ul>
Turn signal lamp does not blink.	Indicator lamp is normal. (Applicable side performs high flasher activation.)	<ul style="list-style-type: none"> <li>Turn signal lamp bulb</li> <li>Door mirror</li> <li>Harness between BCM and each turn signal lamp</li> <li>Harness between each turn signal lamp and ground</li> </ul>	Turn signal lamp circuit Refer to <a href="#">EXL-93, "Component Function Check"</a> .
Turn signal indicator lamp does not blink. (Turn signal lamp is normal.)	One side	Combination meter	—
	Both sides (Always)	<ul style="list-style-type: none"> <li>Turn signal indicator lamp signal</li> <li>BCM</li> <li>Combination meter</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 (Only when activating hazard warning lamp with ignition switch OFF)	<ul style="list-style-type: none"> <li>Combination meter power supply and ground circuit</li> <li>Combination meter</li> </ul>	Combination meter Power supply and ground circuit Refer to <a href="#">MWI-60, "COMBINATION METER : Diagnosis Procedure"</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 hazard switch and BCM</li> <li>Harness between hazard switch and ground</li> <li>BCM</li> </ul>	Hazard switch circuit Refer to <a href="#">EXL-91, "Component Function Check"</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 front fog lamp</li> <li>Harness between front fog lamp and ground</li> <li>IPDM E/R</li> </ul>	Front fog lamp circuit Refer to <a href="#">EXL-97, "DTC Logic"</a> (LH) or <a href="#">EXL-99, "DTC Logic"</a> (RH).
	Both sides	<b>Symptom diagnosis</b> "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to <a href="#">EXL-97, "DTC Logic"</a> (LH) or <a href="#">EXL-99, "DTC Logic"</a> (RH).	

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## NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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### NORMAL OPERATING CONDITION

#### Description

INFOID:0000000012423025

#### AUTO LIGHT SYSTEM

The headlamp may not be turned ON/OFF immediately after passing dark area or bright area (short tunnel, sky bridge, shadowed area, etc.) while using the auto light system. This is caused by the control difference. This is normal.

# BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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

### Description

INFOID:0000000012423026

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

### Diagnosis Procedure

INFOID:0000000012423027

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "HEADLAMP (HI)" in "Data Monitor" of "IPDM E/R".
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HEADLAMP (HI)	Lighting switch (2ND)	HI or PASS	On
		LO	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

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

Check headlamp (HI) circuit. Refer to [EXL-101, "DTC Logic"](#) (LH) or [EXL-102, "DTC Logic"](#) (RH).

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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

### Description

INFOID:0000000012423028

Both side headlamps (LO) are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000012423029

#### 1.CHECK COMBINATION SWITCH

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "HEADLAMP (LO)" in "Data Monitor" of "IPDM E/R".
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HEADLAMP (LO)	Lighting switch	2ND	On
		OFF	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

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

Check headlamp (LO) circuit. Refer to [EXL-103, "DTC Logic"](#) (LH) or [EXL-104, "DTC Logic"](#) (RH).

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning part.



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

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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

### Description

INFOID:0000000012423030

The parking, license plate, side marker, tail lamps and each illumination are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000012423031

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "TAIL LAMP" in "Data Monitor" of "IPDM E/R".
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
TAIL LAMP	Lighting switch	1ST	On
		OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000012423032

The front fog lamps are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000012423033

#### 1.CHECK COMBINATION SWITCH

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "FRONT FOG LAMP REQ" in "Data Monitor" of "IPDM E/R".
2. With operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FRONT FOG LAMP REQ	Front fog lamp switch (With lighting switch 2ND)	ON	On
		OFF	Off

Is the item status normal?

YES >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

## PERIODIC MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT

#### Inspection

INFOID:0000000012423034

#### PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

- Make sure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Make sure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Coolant and engine oil filled to correct level, and fuel tank full.
- Remove cargo and/or luggage to maintain an unloaded vehicle condition.
- Confirm spare tire, jack and tools are properly stowed.
- Carefully wipe off any dirt from headlamp lens.

#### CAUTION:

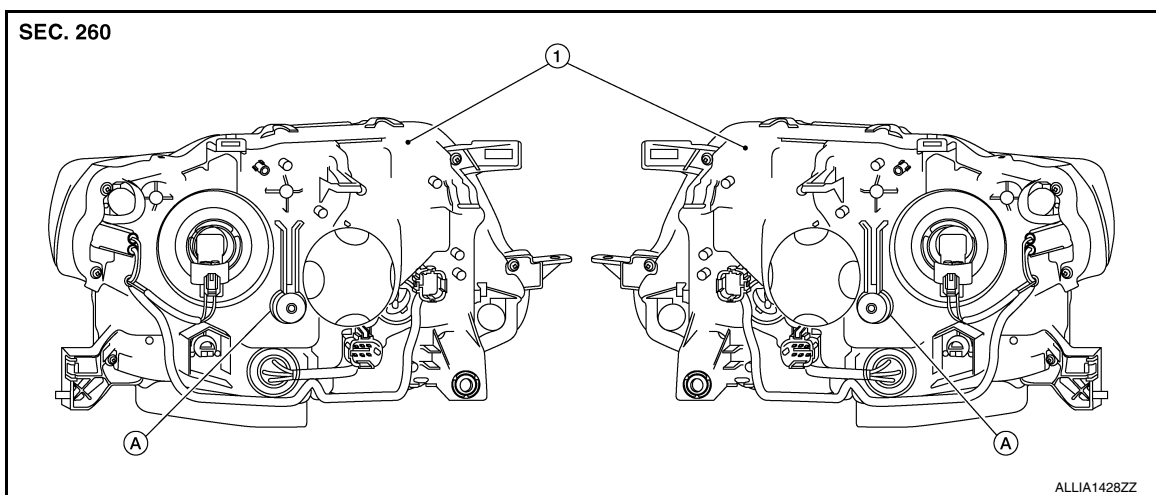
**Do not use organic solvent (thinner, gasoline etc.)**

- Place a driver or equivalent weight of 68.5 kg (150 lb) on the driver seat.
- By hand, bounce the front and rear of the vehicle to settle the suspension and eliminate any static load.
- Place the front tires in the straight ahead position.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

#### NOTE:

- For headlamp aiming details, refer to regulations in your area.
- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Use adjusting screw to perform aiming adjustment.
- Perform headlamp aiming if:
  - The vehicle front body has been repaired;
  - The front combination lamp has been removed or replaced;
  - Any outfitting has been installed;
  - The vehicle's standard load condition has been substantially increased.

#### AIMING ADJUSTMENT SCREW



1. Front combination lamp  
(view from rear)

A. Headlamp HI/LO (UP/DOWN)  
adjustment screw

# HEADLAMP AIMING ADJUSTMENT

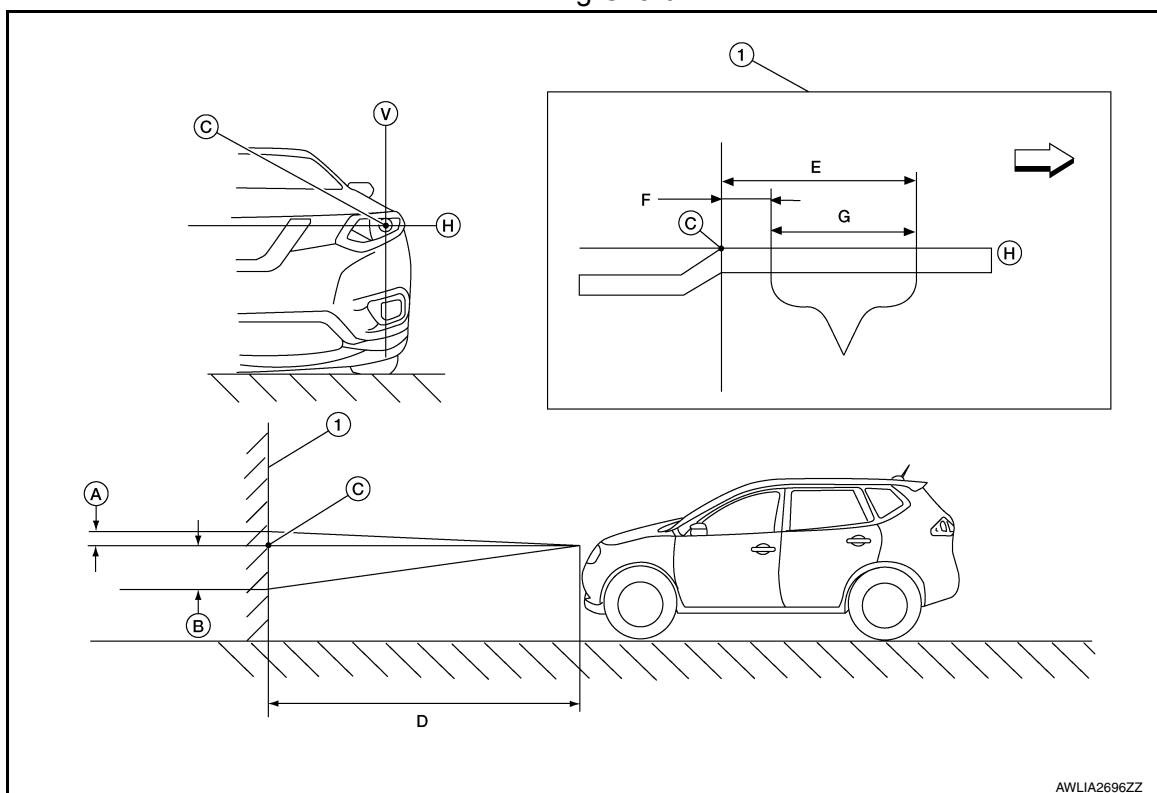
< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

## Aiming Adjustment Procedure

INFOID:000000012423035

Aiming Chart



- |   |   |   |
|---|---|---|
| 1. Adjustment screen  | A. Highest cutoff line height                                     | B. Lowest cutoff line height  |
| C. Headlamp bulb center (H-V point)   | D. Distance of headlamp aiming screen from vehicle 7.62 m (25 ft) | E. Maximum aim evaluation distance from vertical center on aiming screen 399 mm (3°R) |
| F. Minimum aim evaluation distance from vertical center on aiming screen 133 mm (1°R) | G. Aim evaluation area  | H. Horizontal aiming evaluation line  |
| V. Vertical aiming evaluation line  | ↔ Right   |   |

**A (Highest cutoff line height)**

**13.3 mm (0.5 in)**

**0.1° up**

**B (Lowest cutoff line height)**

**53.2 mm (2.1 in)**

**0.4° down**

### LOW BEAM AND HIGH BEAM

#### NOTE:

- Basic illuminating area for evaluation and/or adjustment should be within range shown on aiming chart.

- Use adjustment screw to perform aiming adjustment.

- **Ensure fog lamps are turned off.**

- Block the opposite headlamp from projecting a beam pattern onto the adjustment screen, using a suitable object. Aim each headlamp individually.

#### CAUTION:

**Do not cover the lens surface with a tape etc. The lens is made of resin.**

- Place the screen on the same level and flat surface as the vehicle.

#### NOTE:

Surface should be free of any debris that would cause a difference between the headlamp center and the adjustment screen.

- Face the front of the vehicle to the screen and measure distance between the headlamp center and the screen surface.

# HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

Distance between the headlamp center and the screen (D) : 7.62 m (25 ft)

5. Start the engine. Turn the headlamp on.
6. Determine the preferred vertical aim range dimensions, using the aiming chart.
7. Measure the projected beam within the aim evaluation segment on the screen.
8. Adjust the beam pattern of each headlamp until the aim evaluation segment (the area relative to both the highest and lowest cutoff line height) is positioned within the vertical aim range dimensions shown on the aiming chart.

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# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

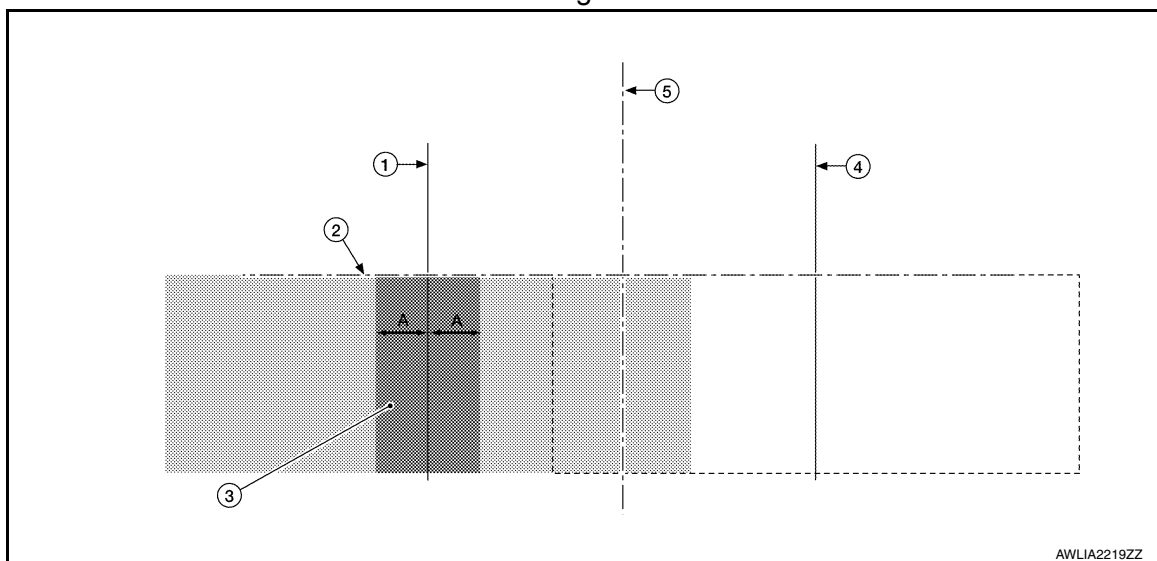
[HALOGEN HEADLAMP]

## FRONT FOG LAMP AIMING ADJUSTMENT

### Aiming Adjustment Procedure

INFOID:0000000012423036

Aiming Chart



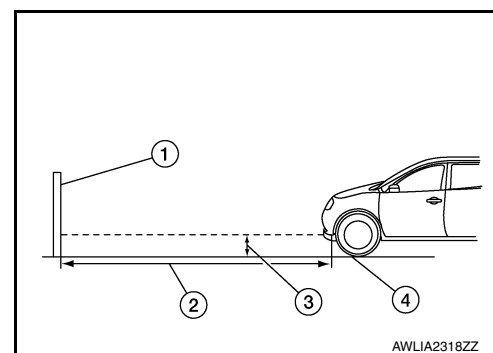
- |  |                             |  |
|--|-----------------------------|--|
| 1. Vertical center line of front fog lamp (LH) | 2. Lamp center above ground | 3. Front fog lamp high intensity area (LH) |
| 4. Vertical center line of front fog lamp (RH) | 5. Vertical center axis     | A. 100mm (4in)                             |

#### NOTE:

- (LH) Front fog lamp aiming specifications shown, (RH) similar.
- Check the following conditions before performing the aiming adjustment.
  - Keep all tires inflated to correct pressure.
  - Place vehicle on level ground.
  - See that 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 driver seat.
  - When performing adjustment, if necessary, cover the headlamps and opposite front fog lamp.

1. Set the distance between the screen and the center of the front fog lamp lens as shown.

- (1) Aiming screen or a matte white surface
- (2) 7.62 m (25 ft)
- (3) Floor to center of front fog lamp lens
- (4) Floor



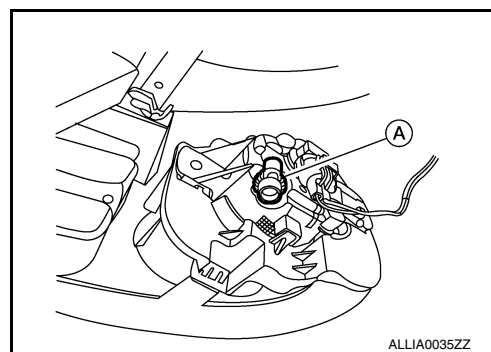
2. Turn front fog lamps ON.

## FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

3. Access adjusting screw (A) from underneath front bumper fascia. Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone is at the front fog lamp centers above ground.



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# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

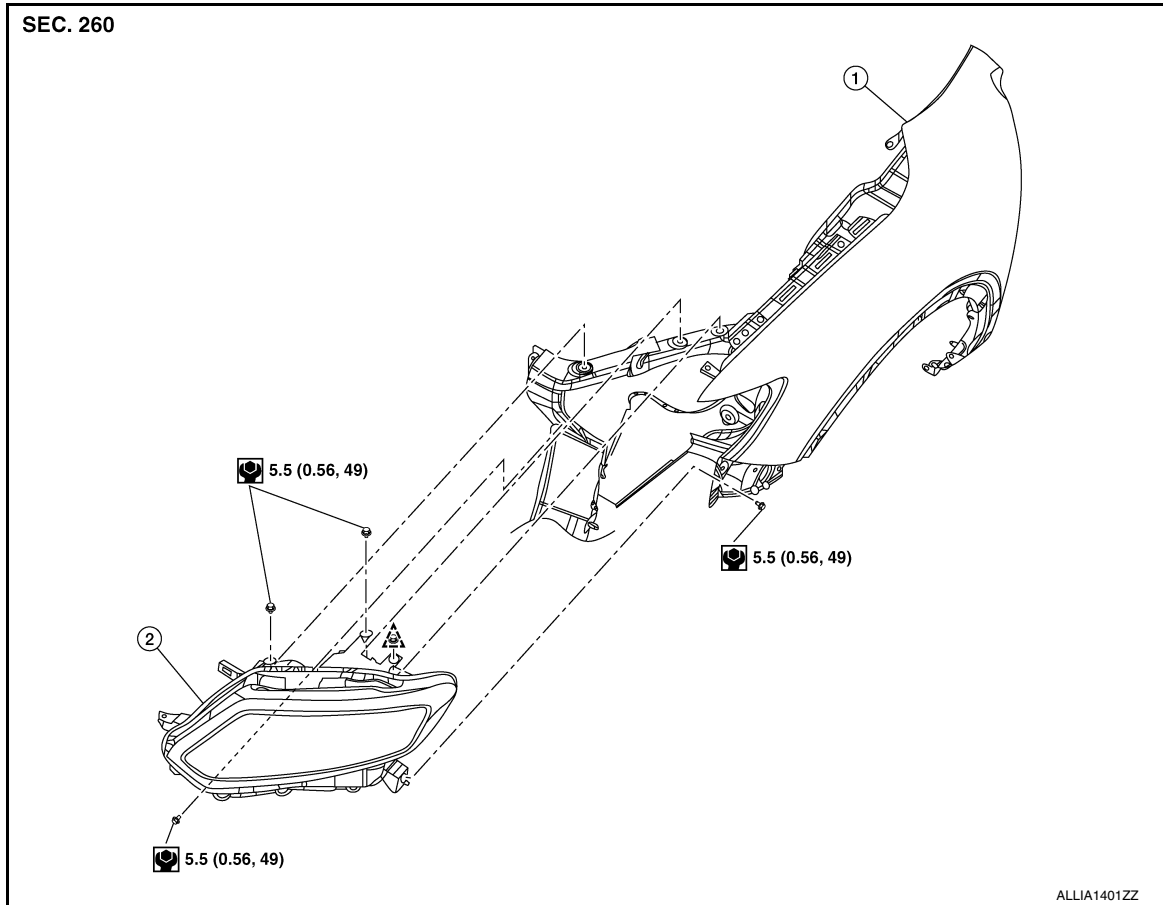
[HALOGEN HEADLAMP]

## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012423037



1. Front fender

2. Front combination lamp

Clip

### Removal and Installation

INFOID:0000000012423038

#### REMOVAL

1. Remove front bumper fascia. Refer to [EXT-16, "Exploded View"](#).
2. Remove front combination lamp bolts and clip.
3. Pull front combination lamp forward.
4. 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-115, "Inspection"](#).

#### Bulb Replacement

INFOID:0000000012423039

#### WARNING:

Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.

#### CAUTION:

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.



# FRONT COMBINATION LAMP

## < REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- 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.

### HEADLAMP (LOW BEAM) BULB

#### Removal

1. Rotate the bulb counterclockwise and remove from the front combination lamp.
2. Disconnect the harness connector from bulb and remove.

#### Installation

Installation is in the reverse order of removal.

#### CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

### HEADLAMP (HIGH BEAM) BULB

#### Removal

1. Remove plastic cover.
2. Rotate the bulb counterclockwise and remove from the front combination lamp.
3. Disconnect the harness connector from bulb and remove.

#### Installation

Installation is in the reverse order of removal.

#### CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

### SIDE MARKER LAMP BULB

#### Removal

1. Rotate the bulb counterclockwise and remove from the front combination lamp.
2. Remove the bulb from the bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

### TURN SIGNAL LAMP BULB

#### Removal

1. Rotate bulb socket counterclockwise and remove from the front combination lamp.
2. Remove the bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

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# FRONT FOG LAMP

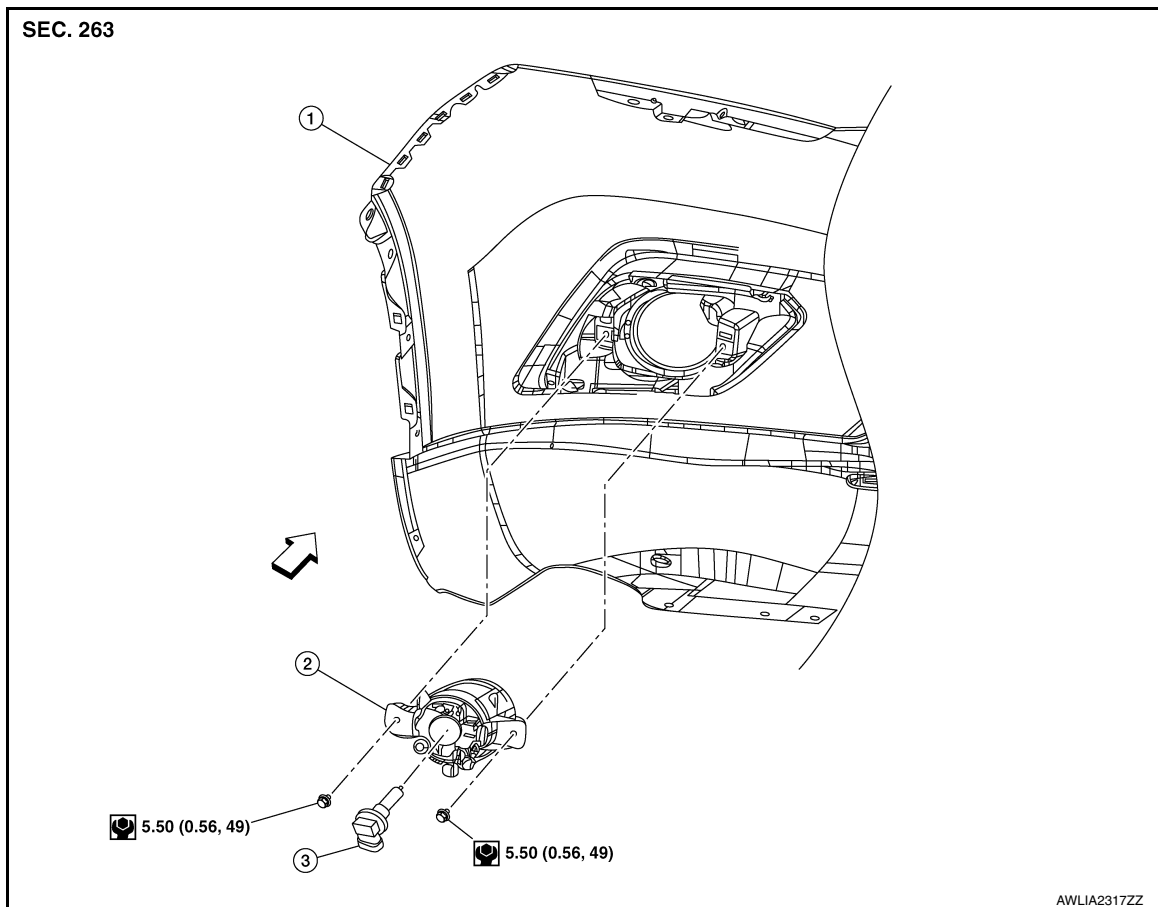
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## FRONT FOG LAMP

Exploded View

INFOID:0000000012423040



1. Front bumper fascia

2. Front fog lamp

3. Front fog lamp bulb

⇐ Front

## Removal and Installation

INFOID:0000000012423041

### REMOVAL

1. Partially remove front fender protector. Refer to [EXT-29. "FENDER PROTECTOR : Exploded View"](#).
2. Disconnect the harness connector from the front fog lamp.
3. Remove front fog lamp bolts and front fog lamp.

### INSTALLATION

Installation in the reverse order of removal.

#### NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to [EXL-118. "Aiming Adjustment Procedure"](#).

### Bulb Replacement

INFOID:0000000012423042

#### WARNING:

Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.

#### CAUTION:

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.

## FRONT FOG LAMP

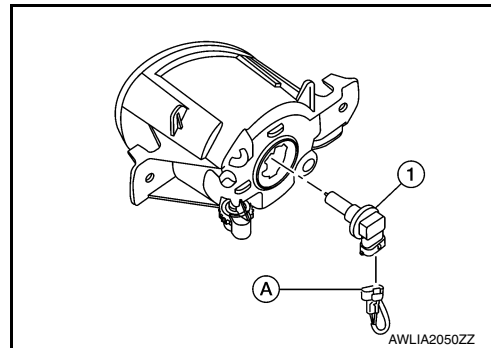
### < REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- 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.

#### REMOVAL

1. Partially remove front fender protector. Refer to [EXT-29. "FENDER PROTECTOR : Exploded View"](#).
2. Disconnect the harness connector (A) from the front fog lamp.
3. Rotate bulb (1) counterclockwise and remove.



#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

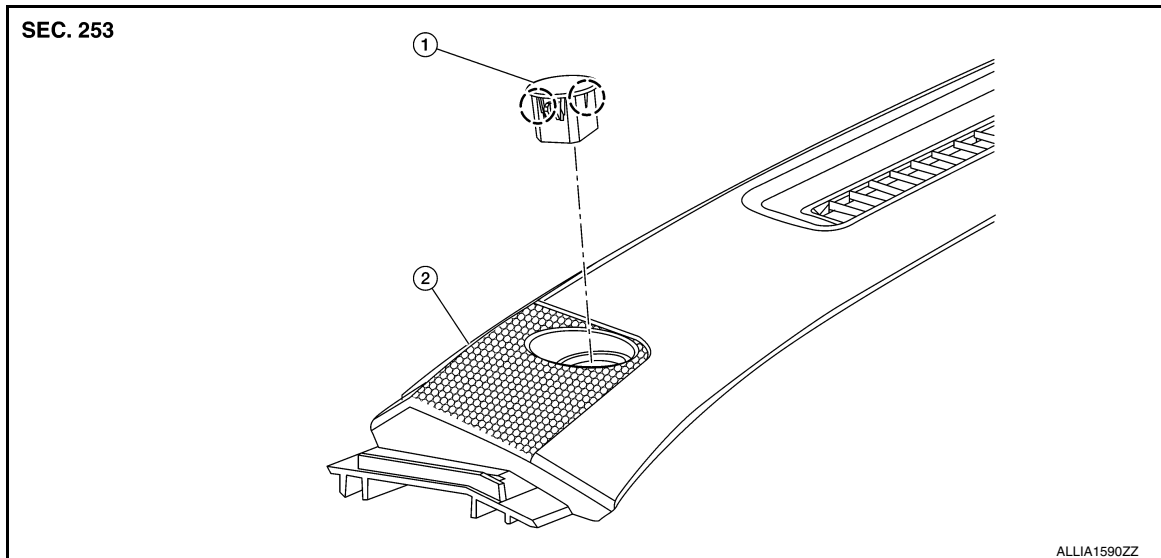
**After installing the bulb, install the bulb socket securely for watertightness.**

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## OPTICAL SENSOR

### Exploded View

INFOID:000000012423043



1. Optical sensor

2. Defroster grille

⊖ Pawl

### Removal and Installation

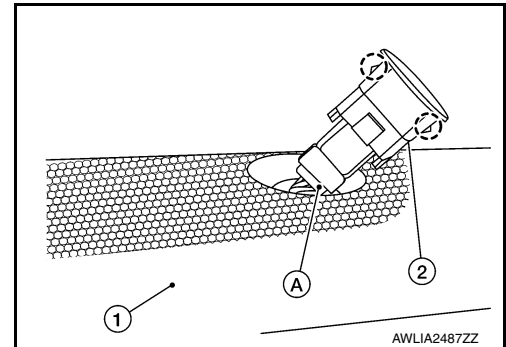
INFOID:000000012423044

#### REMOVAL

1. Release the optical sensor (2) pawls from defroster grille (1) using a suitable tool.

⊖: Pawl

2. Disconnect the harness connector (A) from the optical sensor (2) and remove.



#### INSTALLATION

Installation is in the reverse order of removal.

# COMBINATION SWITCH

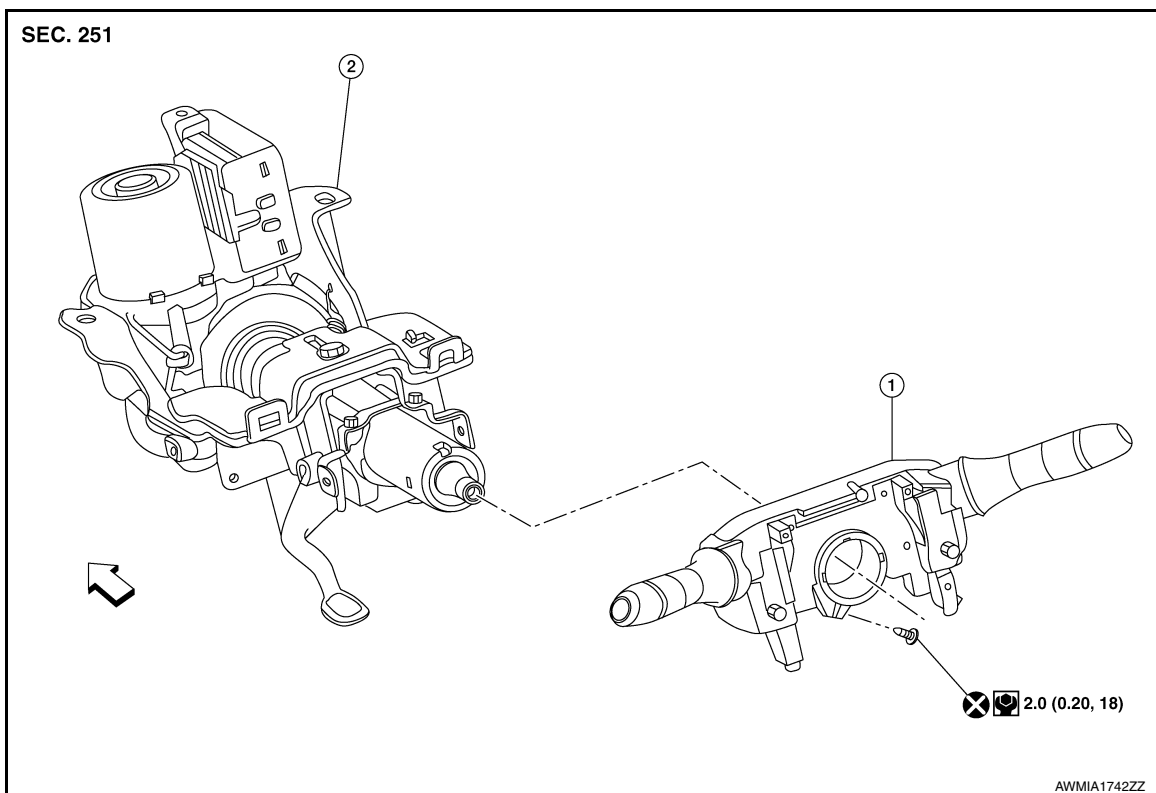
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## COMBINATION SWITCH

### Exploded View

INFOID:0000000012423045



1. Combination switch

2. Steering column

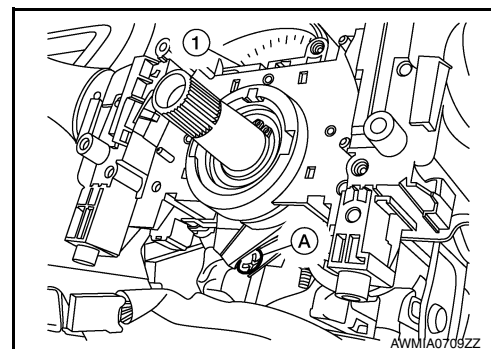
Front

## Removal and Installation

INFOID:0000000012423046

### REMOVAL

1. Remove the steering angle sensor. Refer to [BRC-189, "Removal and Installation"](#).
2. Disconnect harness connector from combination switch.
3. Remove screw (A) and combination switch (1).



### INSTALLATION

Installation is in the reverse order of removal.

## HAZARD SWITCH

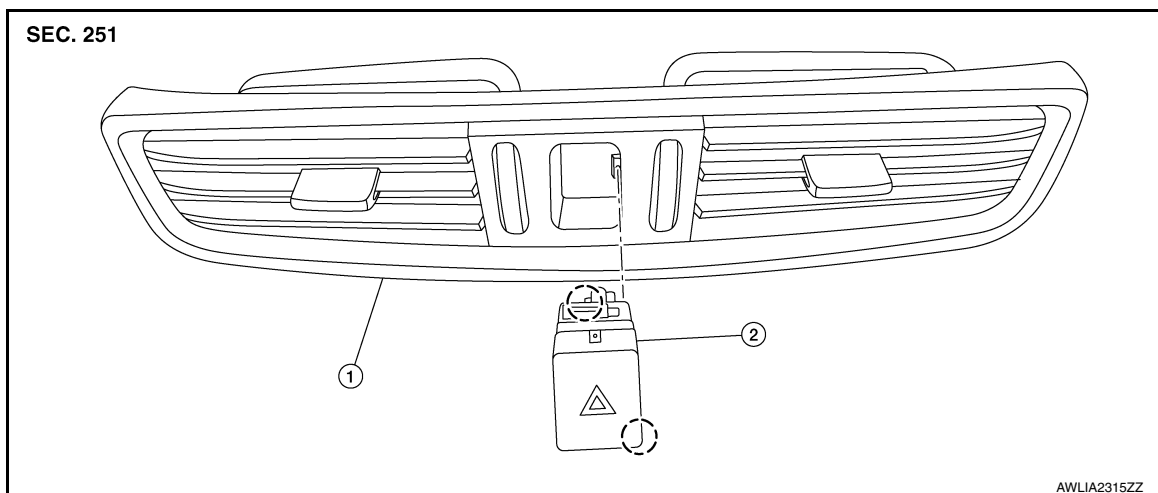
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### HAZARD SWITCH

#### Exploded View

INFOID:0000000012423047



1. Center ventilator grille

2. Hazard switch

 Pawl

#### Removal and Installation

INFOID:0000000012423048

##### REMOVAL

1. Remove center ventilator grille. Refer to [VTL-13, "CENTER VENTILATOR GRILLE : Removal and Installation"](#).
2. Release the pawls and remove the hazard switch.

##### INSTALLATION

Installation is in the reverse order of removal.

## SIDE TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

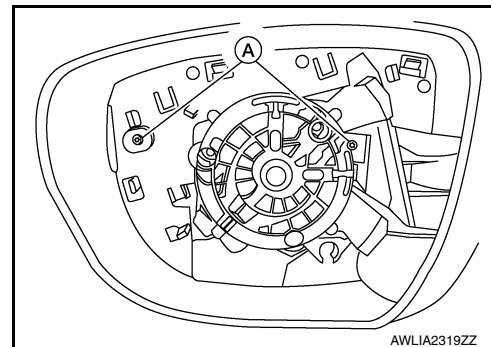
### SIDE TURN SIGNAL LAMP

#### Removal and Installation

INFOID:0000000012423049

#### REMOVAL

1. Remove door mirror rear finisher. Refer to [MIR-26, "Removal and Installation"](#).
2. Remove door mirror glass. Refer to [MIR-24, "Removal and Installation"](#).
3. Remove the screws (A) and reposition side turn signal lamp.



4. Disconnect the harness connector from the side turn signal lamp and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423050

The side turn signal lamp bulb is not serviced separately. Refer to [EXL-127, "Removal and Installation"](#).

## REAR COMBINATION LAMP

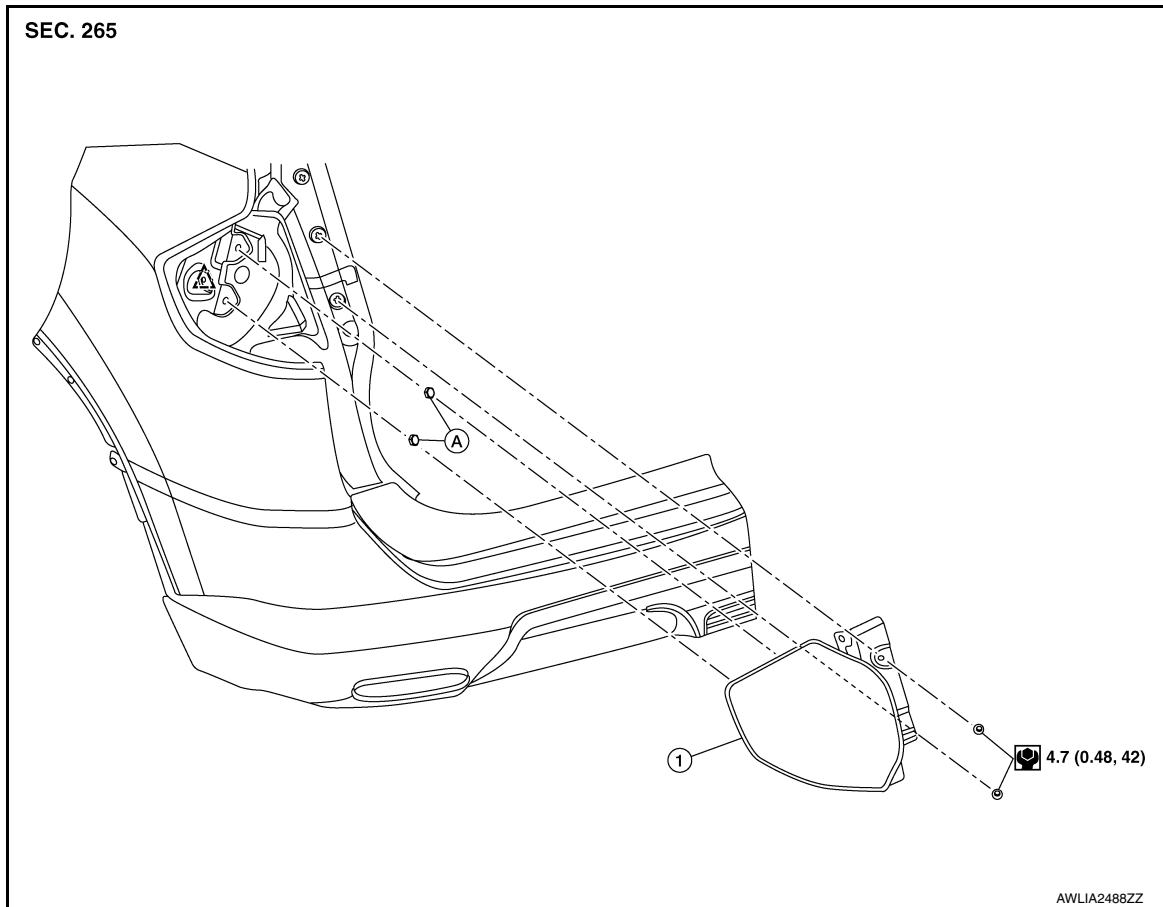
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### REAR COMBINATION LAMP

#### Exploded View

INFOID:0000000012423051



#### Removal and Installation

INFOID:0000000012423052

##### REMOVAL

1. Remove side air spoiler. Refer to [EXT-48. "Removal and Installation"](#).
2. Remove rear combination lamp bolts.
3. Pull rear combination lamp rearward to release from clip and locators.
4. Disconnect the harness connector from the rear combination lamp and remove.

##### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423053

##### **WARNING:**

Do not touch bulb with bare hand while it is lit or right after being turned off. Burning may result.

##### **CAUTION:**

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- 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 LAMP BULB



# REAR COMBINATION LAMP

## < REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### Removal

1. Remove rear combination lamp. Refer to [EXL-128. "Removal and Installation"](#).
2. Rotate stop lamp bulb socket counterclockwise and remove.
3. Remove stop lamp bulb from bulb socket.

### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

### TAIL LAMP BULB

#### Removal

1. Remove rear combination lamp. Refer to [EXL-128. "Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise and remove.
3. Remove tail lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

### TURN SIGNAL LAMP BULB

#### Removal

1. Remove rear combination lamp. Refer to [EXL-128. "Removal and Installation"](#).
2. Rotate turn signal lamp bulb socket counterclockwise and remove.
3. Remove turn signal lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

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## HIGH-MOUNTED STOP LAMP

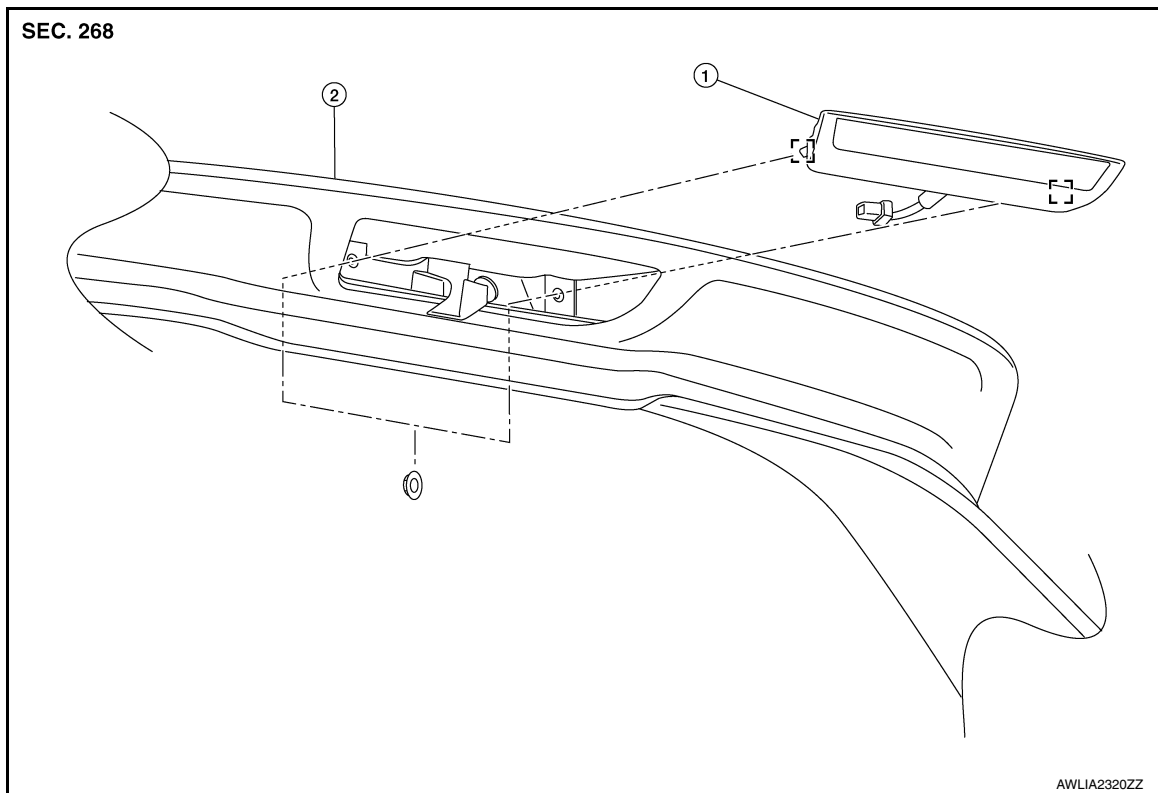
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### HIGH-MOUNTED STOP LAMP

#### Exploded View

INFOID:0000000012423054



1. High-mounted stop lamp

2. Back door

3. Stud

#### Removal and Installation

INFOID:0000000012423055

##### REMOVAL

1. Remove access cover using a suitable tool. Refer to [INT-38, "Exploded View"](#).
2. Remove high-mounted stop lamp nuts.
3. Disconnect the harness connector from high-mounted stop lamp and remove.

##### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423056

##### HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is not serviced separately. Refer to [EXL-130, "Removal and Installation"](#).

# BACK-UP LAMP ASSEMBLY

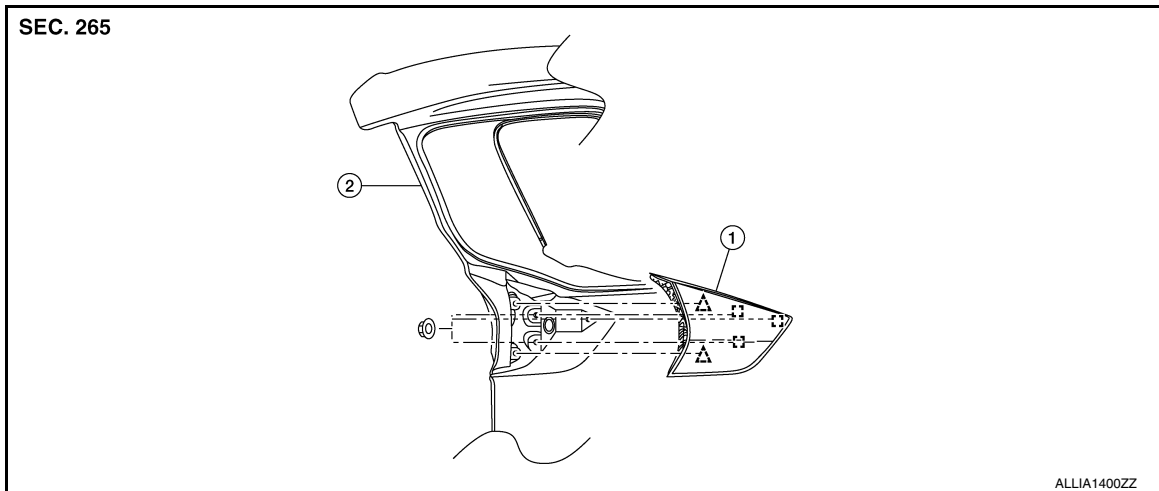
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## BACK-UP LAMP ASSEMBLY

### Exploded View

INFOID:0000000012423057



1. Back-up lamp assembly

2. Back door

△ Clip

□ Stud

### Removal and Installation

INFOID:0000000012423058

#### REMOVAL

1. Remove back door finisher. Refer to [INT-38. "Removal and Installation"](#).
2. Remove back-up lamp assembly nuts.
3. Pull back-up lamp assembly rearward, disconnect the harness connector and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

### Bulb Replacement

INFOID:0000000012423059

#### **WARNING:**

**Do not touch bulb with bare hand while it is lit or right after being turned off. Burning may result.**

#### **CAUTION:**

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- 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.

#### TAIL LAMP BULB

##### Removal

1. Remove back-up lamp assembly. Refer to [EXL-131. "Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise and remove.
3. Remove tail lamp bulb from bulb socket.

##### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

#### BACK-UP LAMP BULB

##### Removal

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## BACK-UP LAMP ASSEMBLY

### < REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

1. Remove back-up lamp assembly. Refer to [EXL-131, "Removal and Installation"](#).
2. Rotate back-up lamp bulb socket counterclockwise and remove.
3. Remove back-up lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

# LICENSE PLATE LAMP

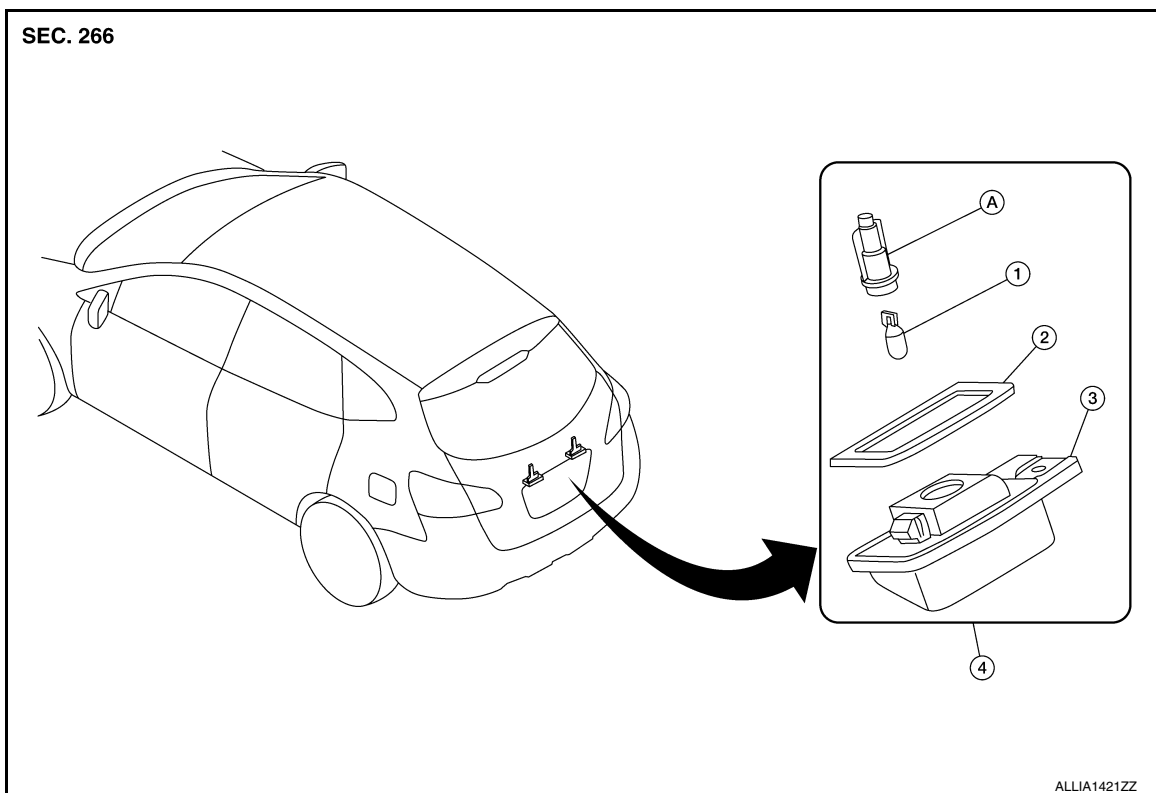
< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

## LICENSE PLATE LAMP

### Exploded View

INFOID:0000000012423060



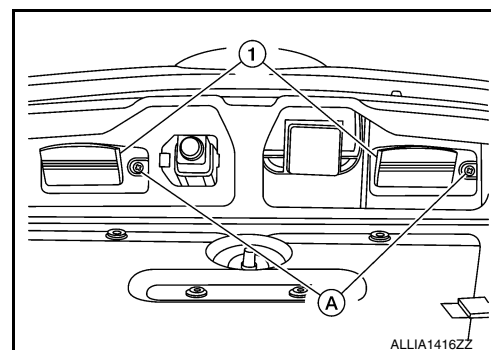
- |                                |                                   |                       |
|--------------------------------|-----------------------------------|-----------------------|
| 1. License plate lamp bulb     | 2. License plate lamp seal        | 3. License plate lamp |
| 4. License plate lamp assembly | A. License plate lamp bulb socket |                       |

### Removal and Installation

INFOID:0000000012423061

#### REMOVAL

1. Release the license lamp finisher. Refer to [EXT-50. "Exploded View"](#).
2. Remove the screw (A) (LH or RH) and pull license plate lamp (1) (LH or RH) downward.



3. Disconnect the harness connector from the license plate lamp and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423062

#### **WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off. Burning may result.**

## LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

### **CAUTION:**

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- 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.

### REMOVAL

1. Remove license plate lamp. Refer to [EXL-133. "Removal and Installation"](#).
2. Rotate license plate lamp bulb socket counterclockwise and remove.
3. Remove license plate lamp bulb from bulb socket.

### INSTALLATION

Installation is in the reverse order of removal.

### **CAUTION:**

**After installing the bulb, install the bulb socket securely for watertightness.**

# FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

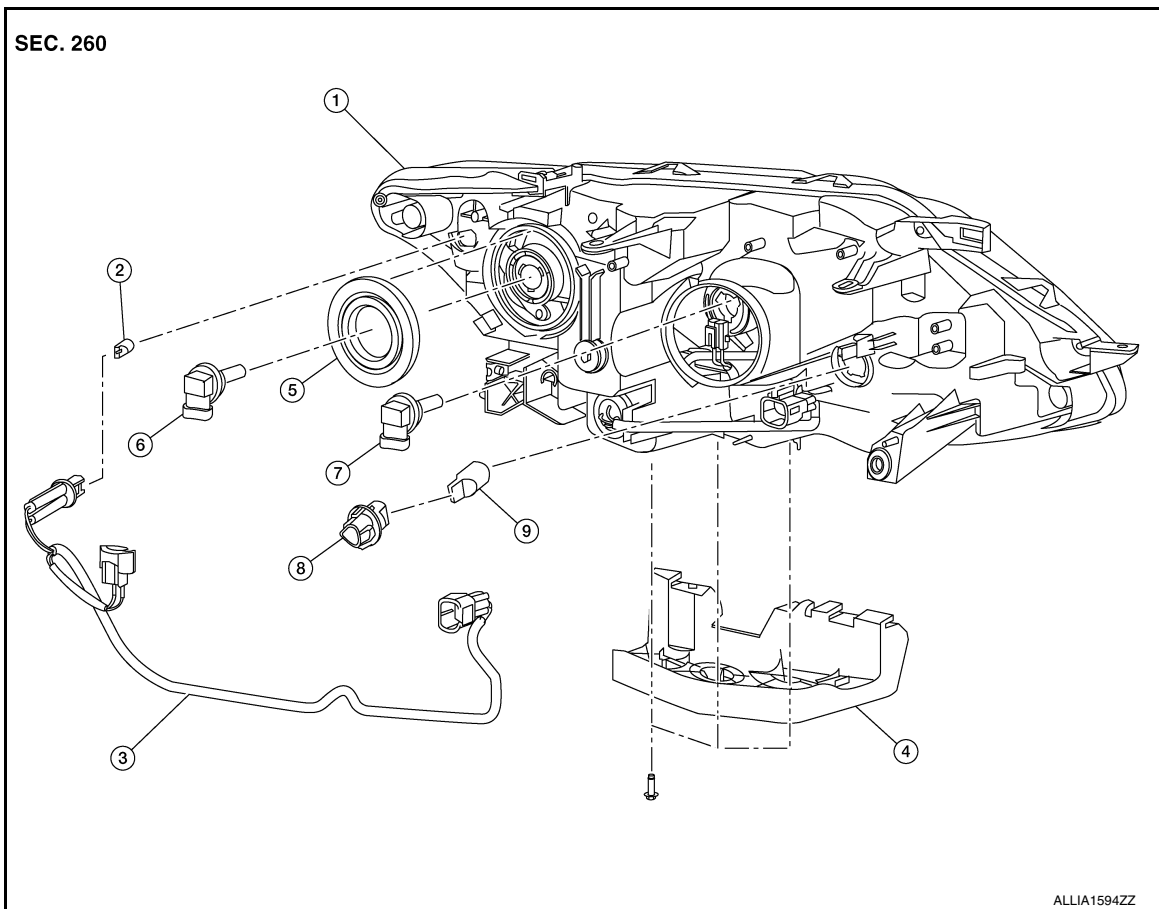
[HALOGEN HEADLAMP]

## UNIT DISASSEMBLY AND ASSEMBLY

### FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012423063



- |  |                                     |                                   |
|--|-------------------------------------|-----------------------------------|
| 1. Front combination lamp                  | 2. Side marker lamp bulb            | 3. Front combination lamp harness |
| 4. Front combination lamp mounting bracket | 5. Headlamp (low beam) socket cover | 6. Headlamp (low beam) bulb       |
| 7. Headlamp (high beam) bulb               | 8. Turn signal lamp bulb socket     | 9. Turn signal lamp bulb          |

### Disassembly and Assembly

INFOID:0000000012423064

#### DISASSEMBLY

1. Remove front combination lamp. Refer to [EXL-120, "Removal and Installation"](#).
2. Rotate the headlamp (low beam) bulb counterclockwise and remove.
3. Disconnect the harness connector from headlamp (low beam) bulb.
4. Remove plastic cover.
5. Rotate the headlamp (high beam) bulb counterclockwise and remove.
6. Disconnect the harness connector from headlamp (high beam) bulb.
7. Rotate the side marker lamp bulb socket counterclockwise and remove.
8. Remove the side marker lamp bulb from the bulb socket.
9. Rotate the turn signal lamp bulb socket counterclockwise and remove.
10. Remove the turn signal lamp bulb from the bulb socket.

#### ASSEMBLY

Assembly is in the reverse order of disassembly.

#### CAUTION:

**After installing, be sure to install the bulb sockets securely to ensure watertightness.**

## REAR COMBINATION LAMP

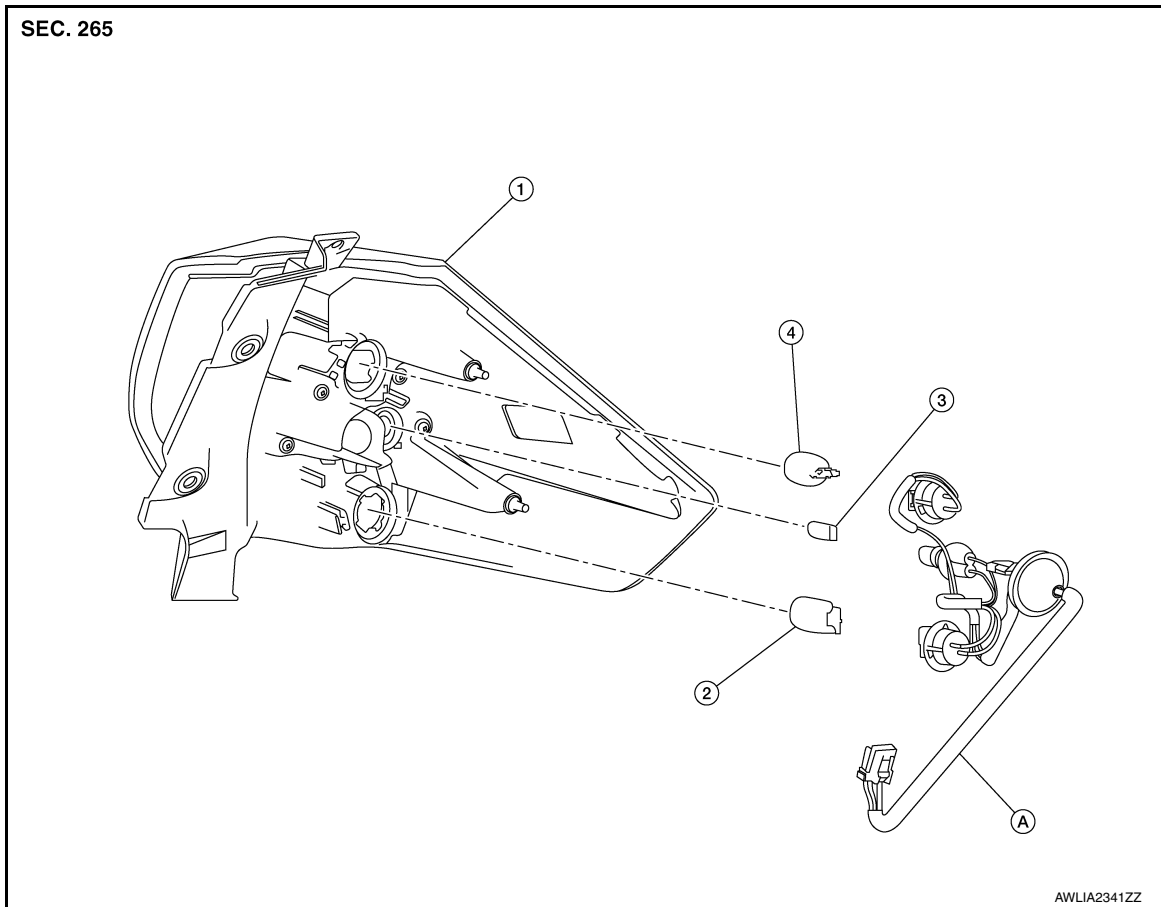
< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN HEADLAMP]

### REAR COMBINATION LAMP

#### Exploded View

INFOID:0000000012423065



- |                          |                                  |                   |
|--------------------------|----------------------------------|-------------------|
| 1. Rear combination lamp | 2. Turn signal lamp bulb         | 3. Tail lamp bulb |
| 4. Stop lamp bulb        | A. Rear combination lamp harness |                   |

#### Disassembly and Assembly

INFOID:0000000012423066

##### DISASSEMBLY

1. Remove rear combination lamp. Refer to [EXL-128, "Removal and Installation"](#).
2. Rotate the stop lamp bulb socket counterclockwise and remove.
3. Remove the stop lamp bulb from the bulb socket.
4. Rotate the tail lamp bulb socket counterclockwise and remove.
5. Remove the tail lamp bulb from the bulb socket.
6. Rotate the turn signal lamp bulb socket counterclockwise and remove.
7. Remove the turn signal lamp bulb from bulb socket.

##### ASSEMBLY

Assembly is in the reverse order of disassembly.

##### **CAUTION:**

**After installing, be sure to install the bulb sockets securely to ensure watertightness.**



## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN HEADLAMP]

# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

### Bulb Specifications

INFOID:0000000012423067

Item		Wattage (W)*
Front combination lamp	High beam	65
	Low beam	55
	Turn signal lamp	28/8
	Side marker lamp	5
	Daytime running lamp	—
Front fog lamp (if equipped)		55
Side turn signal lamp		—
Rear combination lamp	Stop lamp	21
	Tail lamp	5
	Turn signal lamp	21
Back-up lamp	Tail lamp	5
	Back-up lamp	16
License plate lamp		5
High-mounted stop lamp		—

\*: Always check with the Parts Department for the latest parts info.

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

## PRECAUTION

### PRECAUTIONS

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

INFOID:0000000012423068

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

#### Precaution for Work

INFOID:0000000012423069

- 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 >

[LED HEADLAMP]

## PREPARATION

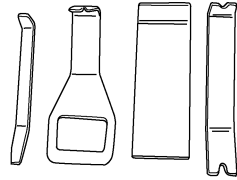
### PREPARATION

#### Special Service Tool

INFOID:0000000012423070

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set	Removing trim components



AWJIA0483ZZ

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

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

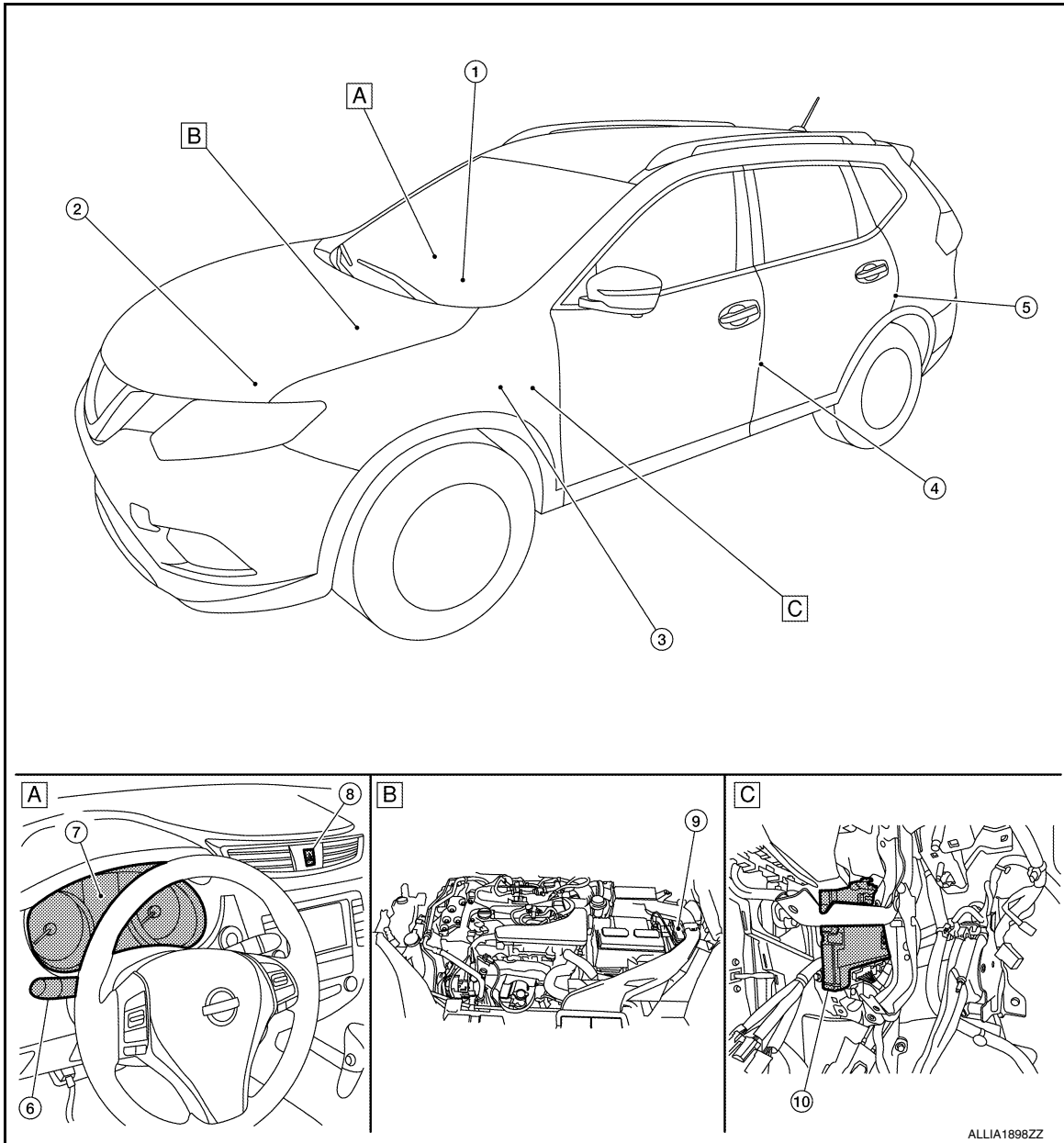
[LED HEADLAMP]

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:0000000012423071



A. Instrument panel

B. Engine compartment

C. Left side of instrument panel (view with trim panel removed)

No.	Part	Function
1.	Optical sensor	Refer to <a href="#">EXL-10, "Optical Sensor"</a> .
2.	LED headlamp control module	Turns the headlamps ON according to the power supply from IPDM E/R.
3.	Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the daytime running light system.
4.	Front door switch LH (RH similar)	Transmits the door open signal to the BCM to operate the autolight system.
5.	Rear door switch LH (RH similar)	

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

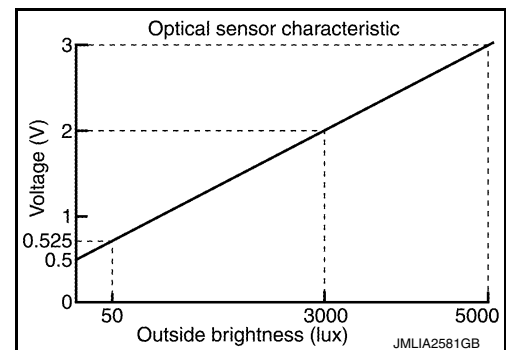
[LED HEADLAMP]

No.	Part	Function
6.	Combination switch (Lighting and turn signal switch)	Refer to <a href="#">BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description"</a> (with Intelligent Key system) or <a href="#">BCS-82, "COMBINATION SWITCH READING SYSTEM : System Description"</a> (without Intelligent Key system).
7.	Combination meter	Refer to <a href="#">MWI-8, "METER SYSTEM : System Description"</a> .
8.	Hazard switch	Refer to <a href="#">EXL-10, "Hazard Switch"</a> .
9.	IPDM E/R	<ul style="list-style-type: none"> <li>Supplies voltage to the load according to the request from BCM (via CAN communication).</li> <li>Refer to <a href="#">PCS-6, "Component Parts Location"</a> for detailed installation location.</li> </ul>
10.	BCM	<ul style="list-style-type: none"> <li>Detects each switch condition by the combination switch reading function.</li> <li>Judges that the exterior lamps are turned ON according to the vehicle condition.</li> <li>Requests the headlamp (HI/LO), tail lamp and front fog lamp ON to IPDM E/R (via CAN communication).</li> <li>Requests high beam indicator lamp ON to the combination meter (via CAN communication).</li> <li>Judges the outside brightness from the optical sensor signal.</li> <li>Judges the ON/OFF timing according to the vehicle condition.</li> <li>Judges the ON/OFF status of the exterior lamp according to the outside brightness and the vehicle condition.</li> <li>Refer to <a href="#">BCS-7, "BODY CONTROL SYSTEM : Component Parts Location"</a> (with Intelligent Key system) or <a href="#">BCS-80, "BODY CONTROL SYSTEM : Component Parts Location"</a> (without Intelligent Key system).</li> </ul>

## Optical Sensor

INFOID:0000000012423072

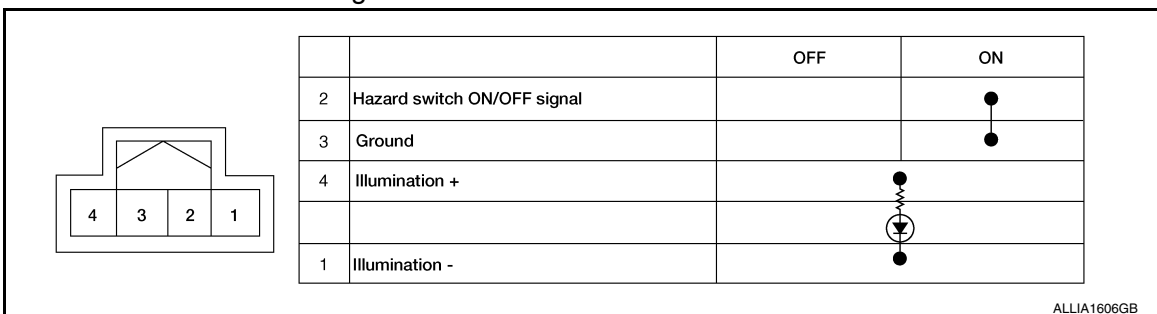
Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.



## Hazard Switch

INFOID:0000000012423073

Inputs the hazard switch ON/OFF signal to BCM.



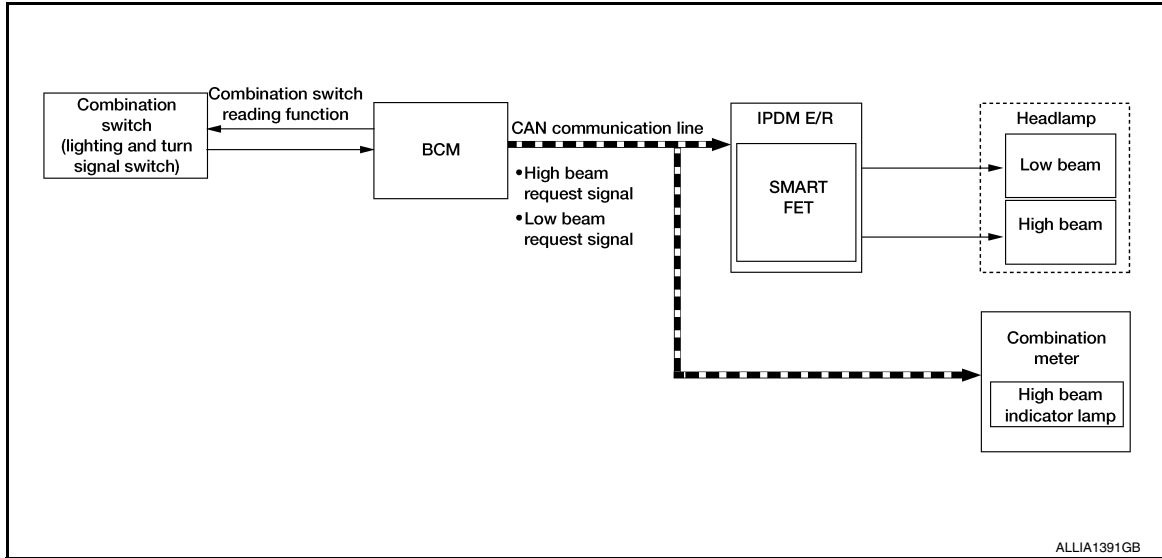
## SYSTEM

## HEADLAMP SYSTEM

## HEADLAMP SYSTEM : System Description

INFOID:0000000012423074

### SYSTEM DIAGRAM



### OUTLINE

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

### HEADLAMP (LO) OPERATION

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

Headlamp (LO) ON condition:

- Lighting switch 2ND
- Lighting switch AUTO (auto light function ON judgment)
- Lighting switch AUTO, with the front fog lamp switch ON and the ignition switch ON
- Lighting switch PASS

### HEADLAMP (HI) OPERATION

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

Headlamp (HI) ON condition:

- Lighting switch HI with the lighting switch 2ND or AUTO (auto light function ON judgment)
- Lighting switch PASS
- Lighting switch AUTO, with the front fog lamp switch ON, the ignition switch ON and lighting switch HI
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the headlamp ON according to the high beam request signal.

### HEADLAMP SYSTEM : Fail-Safe

INFOID:0000000012423075

### CAN COMMUNICATION CONTROL

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

If no CAN communication is available with BCM

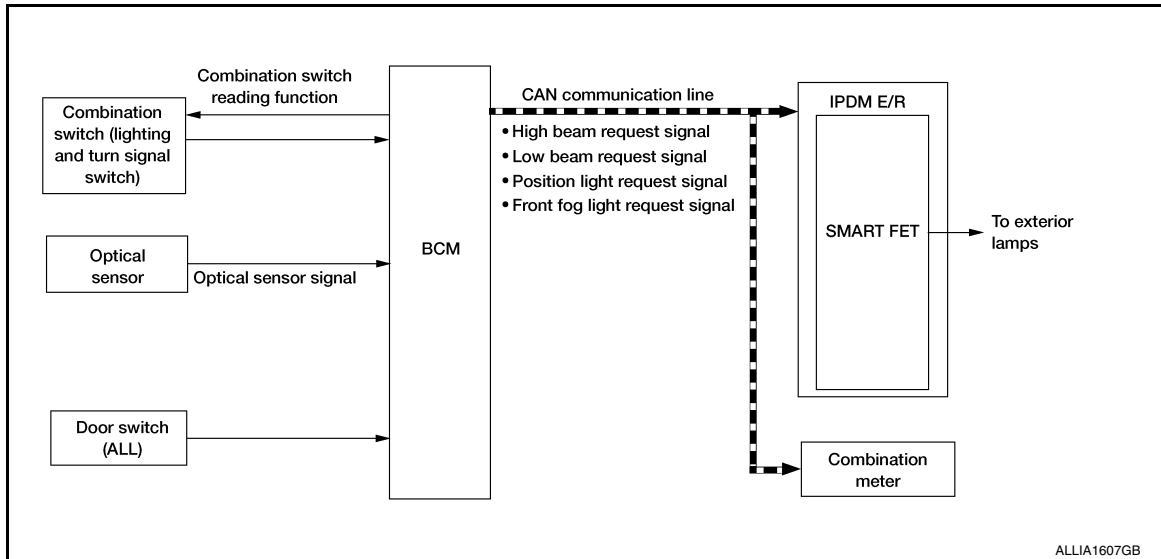
Control part	Fail-safe operation
Headlamp	<ul style="list-style-type: none"> <li>• Turns ON the headlamp low beam when the ignition switch is turned ON</li> <li>• Turns OFF the headlamp low beam when the ignition switch is turned OFF</li> </ul>

## AUTO LIGHT SYSTEM

### AUTO LIGHT SYSTEM : System Description

INFOID:0000000012423076

### SYSTEM DIAGRAM



### OUTLINE

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

Controlled by BCM:

- Combination switch reading function
- Headlamp control function
- Auto light function
- Delay timer function
- Auto light adjustment system

Controlled by IPDM E/R:

- Auto light system has the auto light function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps\* and each illumination automatically, depending on the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns the exterior lamps OFF, depending on the vehicle condition with the auto light function after a certain period of time.

\*: Headlamp (LO/HI), parking lamp, side marker lamp, tail lamp and front fog lamp (Headlamp HI and front fog lamp depend on the combination switch condition).

### AUTO LIGHT FUNCTION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to optical sensor when the ignition switch is turned ON or ACC.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- BCM judges outside brightness from the optical sensor signal and judges ON/OFF condition of the exterior lamp and each illumination according to the outside brightness.
- BCM transmits each request signal to IPDM E/R and combination meter via CAN communication according to ON/OFF condition by the auto light function.

#### NOTE:

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to [BCS-19. "HEAD LAMP : CONSULT Function \(BCM - HEADLAMP\)".](#)

### AUTO LIGHT ADJUSTMENT SYSTEM

### < SYSTEM DESCRIPTION >

The auto light adjustment system automatically dims/brightens the display according to brightness outside the vehicle when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to [EXL-143, "AUTO LIGHT SYSTEM : System Description"](#).

### DELAY TIMER FUNCTION

BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.

- Turns the exterior lamp OFF 5 minutes after detecting that any door opens. (Door switch ON).
- Turns the exterior lamp OFF a certain period of time\* after closing all doors. (Door switch ON→OFF).
- Turns the exterior lamp OFF with the ignition switch ACC or the light switch OFF.

\*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to [BCS-19, "HEAD LAMP : CONSULT Function \(BCM - HEADLAMP\)"](#) (with Intelligent Key system) or [BCS-91, "HEAD LAMP : CONSULT Function \(BCM - HEADLAMP\)"](#) (without Intelligent Key system).

### NOTE:

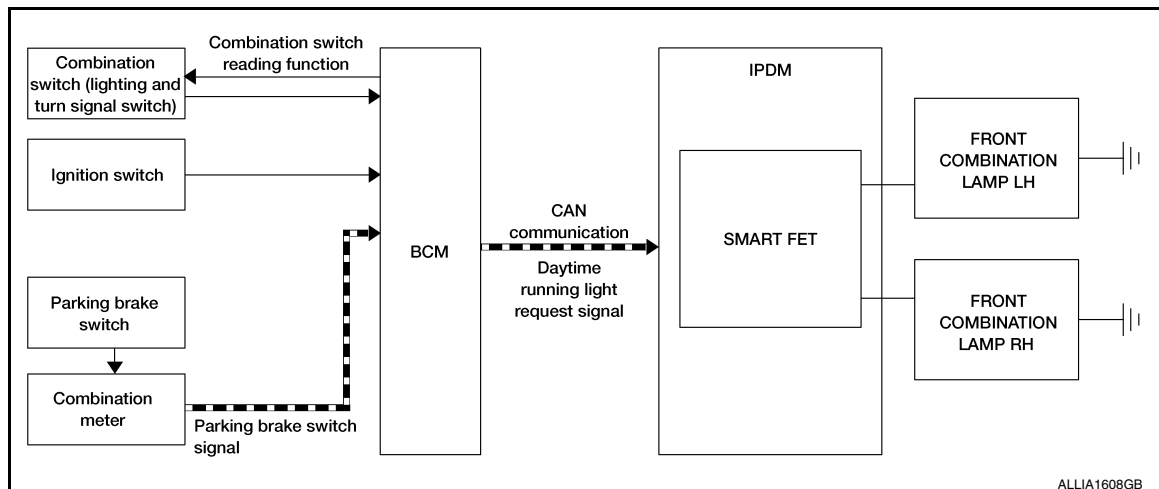
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

## DAYTIME RUNNING LIGHT SYSTEM

### DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000012423077

### SYSTEM DIAGRAM



### OUTLINE

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

### DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects the vehicle condition according to ignition switch
- BCM detects the parking brake condition by the parking brake switch signal received from combination meter using CAN communication.
- BCM transmits the daytime running light request signal to IPDM E/R using CAN communication according to the daytime running light ON condition.

Daytime running light ON condition:

- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO, and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light request signal.
- Power is supplied from the IPDM E/R to the daytime lights.

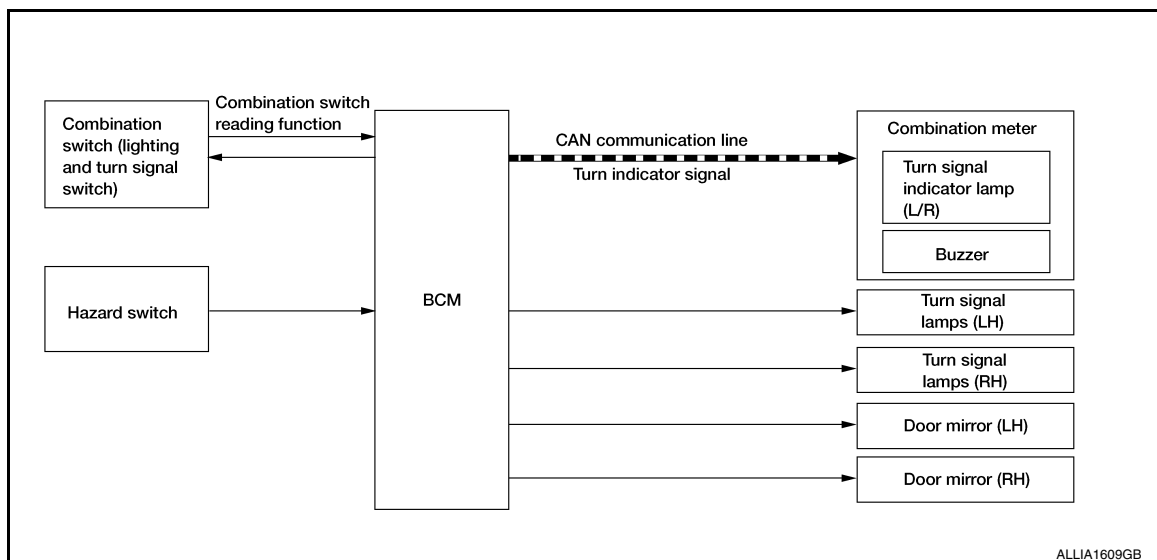
## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM



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

INFOID:000000012423080

## SYSTEM DIAGRAM



## OUTLINE

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

## TURN SIGNAL LAMP OPERATION

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

## HAZARD WARNING LAMP OPERATION

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

## TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL OPERATION

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

## HIGH FLASHER OPERATION

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

**NOTE:**

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

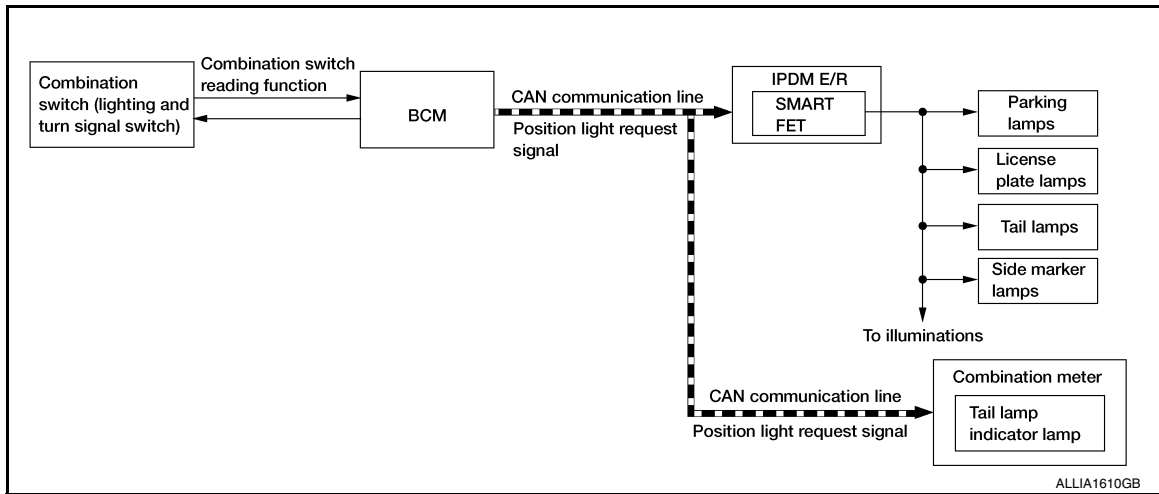
## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System De-

## scription

INFOID:000000012423081

## SYSTEM DIAGRAM



## OUTLINE

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

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS OPERATION

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

Parking, license plate, side marker and tail lamps ON condition:

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment
- Lighting switch AUTO, with the front fog lamp switch ON and the ignition switch ON
- IPDM E/R turns the parking, license plate, side marker and tail lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : Fail-Safe

INFOID:000000012423082

## CAN COMMUNICATION CONTROL

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

If no CAN communication is available with BCM

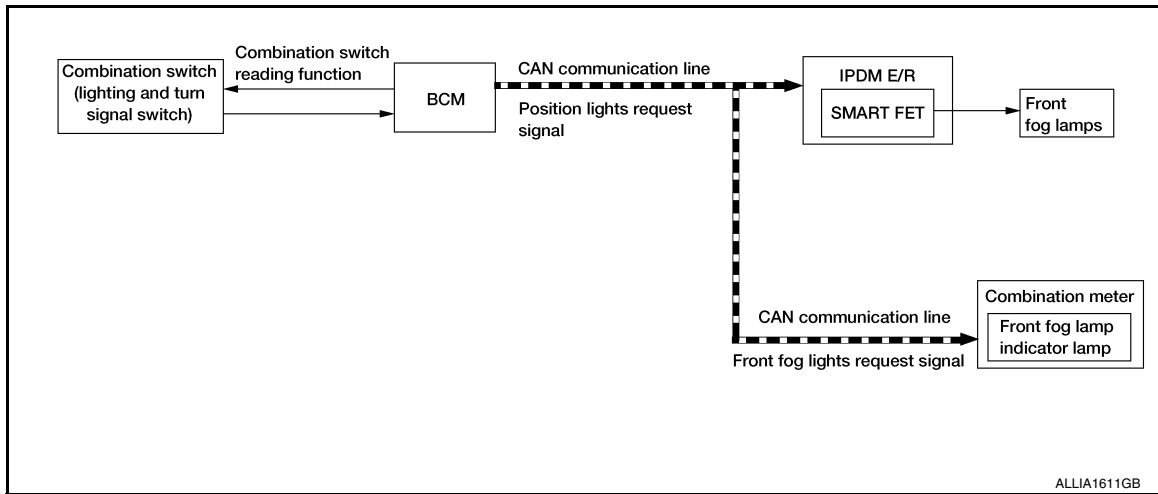
Control part	Fail-safe operation
<ul style="list-style-type: none"> <li>• Parking lamp</li> <li>• License plate lamp</li> <li>• Illumination</li> <li>• Tail lamp</li> <li>• Side marker lamp</li> </ul>	<ul style="list-style-type: none"> <li>• Turns ON the tail lamp when the ignition switch is turned ON</li> <li>• Turns OFF the tail lamp when the ignition switch is turned OFF</li> </ul>

## FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Description

INFOID:000000012423083

SYSTEM DIAGRAM



OUTLINE

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

FRONT FOG LAMP OPERATION

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

Front fog lamp ON condition:

- Front fog lamp switch ON, and any of the following conditions are satisfied (except for the high beam ON):
  - Lighting switch 2ND
  - Lighting switch AUTO and the ignition switch ON

IPDM E/R turns the front fog lamp ON according to the front fog lights request signal.

Combination meter turns the front fog lamp indicator lamp ON according to the front fog lights request signal.

FRONT FOG LAMP SYSTEM : Fail-Safe

INFOID:000000012423084

CAN COMMUNICATION CONTROL

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

If no CAN communication is available with BCM

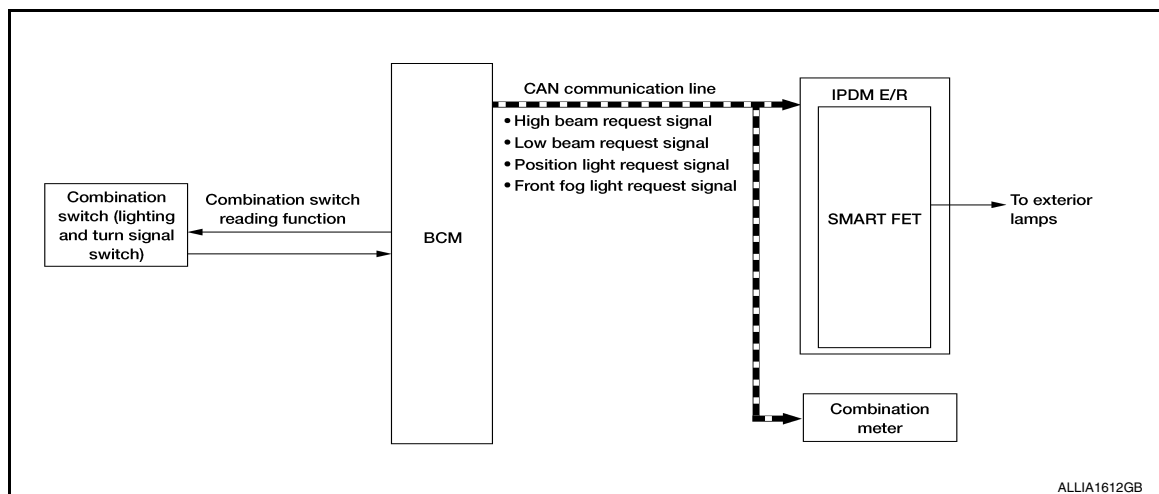
Control part	Fail-safe operation
Front fog lamp	Front fog lamp OFF

EXTERIOR LAMP BATTERY SAVER SYSTEM

## EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:000000012423085

## SYSTEM DIAGRAM



## OUTLINE

- Exterior lamp battery saver system is controlled by each function of BCM and IPDM E/R.

Controlled by BCM:

- Combination switch reading function
- Headlamp control function
- Exterior lamp battery saver function

Controlled by IPDM E/R:

- BCM turns the exterior lamps\* OFF after a period of time to prevent the battery from over-discharge when the ignition switch is turned OFF with the exterior lamps ON.

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

## EXTERIOR LAMP BATTERY SAVER ACTIVATION

BCM activates the timer and turns the exterior lamp OFF 5 minutes after the ignition switch is turned from ON → OFF with the exterior lamps ON.

**NOTE:**

- Headlamp control function turns the exterior lamps ON normally when the ignition switch is turned ACC or set the vehicle to READY (both before and after the exterior lamp battery saver is turned OFF).
- The timer starts at the time that the lighting switch is turned from OFF → 1ST or 2ND with the exterior lamps OFF.

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

## DIAGNOSIS SYSTEM (BCM) WITH INTELLIGENT KEY

### WITH INTELLIGENT KEY : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012742255

#### 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	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing BCM.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

#### 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			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
Air conditioner	AIR CONDITIONER				×			

### WITH INTELLIGENT KEY : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000012742256

#### DATA MONITOR

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

## [LED HEADLAMP]

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.
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 [On/Off]	
LIGHT OFF SW [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	
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 back door switch.
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.

## ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
STOP LAMP 1	This test is able to check rear combination lamp stop lamp operation [On/Off].
STOP LAMP 3	This test is able to check high-mounted stop lamp operation [On/Off].
DAYTIME RUNNING LIGHT	This test is able to check daytime running light operation [On/Off].
ILL DIM SIGNAL	This test is able to check illumination dimmer signal [On/Off].

## WORK SUPPORT

Support Item	Setting	Description
TWILIGHT ON	MODE2*	Autolamp function ON.
	MODE1	Autolamp function OFF.
CUSTOM A/LIGHT SETTING	MODE4	Less sensitive than normal setting (turns ON later).
	MODE3	More sensitive than MODE2.
	MODE2	More sensitive than normal setting (turns ON earlier).
	MODE1*	Normal setting.

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Support Item	Setting	Description
ILL DELAY SET	MODE 8	Autolamp delay timer.
	MODE 7	
	MODE 6	
	MODE 5	
	MODE 4	
	MODE 3	
	MODE 2	
	MODE 1*	
WIPER LINK	MODE 4	This item is displayed but cannot be used
	MODE 3*	With wiper INT, LO and HI
	MODE 2	With wiper LO and HI
	MODE 1	Without wiper linked and auto light function

\*: Initial setting

WITH INTELLIGENT KEY : CONSULT Function (BCM - FLASHER)

INFOID:0000000012742257

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.

WORK SUPPORT

Support Item	Setting	Description
3-TIME FLASHER SETTING	On*	3-time flasher setting ON.
	Off	3-time flasher setting OFF.

\*: Initial setting

WITHOUT INTELLIGENT KEY

WITHOUT INTELLIGENT KEY : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012742258

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	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

[LED HEADLAMP]

Direct Diagnostic Mode	Description
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing BCM.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

## 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			x	x	x		
Rear window defogger	REAR DEFOGGER			x	x	x		
Warning chime	BUZZER			x	x			
Interior room lamp timer	INT LAMP			x	x	x		
Remote keyless entry system	MULTI REMOTE ENT					x		
Exterior lamp	HEADLAMP			x	x			
Wiper and washer	WIPER			x	x	x		
Turn signal and hazard warning lamps	FLASHER			x	x			
Combination switch	COMB SW			x				
BCM	BCM	x	x			x	x	x
Immobilizer	IMMU		x		x			
Interior room lamp battery saver	BATTERY SAVER			x	x			
Back door open	TRUNK			x				
Vehicle security system	THEFT ALM			x	x	x		
RAP system	RETAINED PWR			x				
TPMS	AIR PRESSURE MONITOR		x	x	x	x		

## WITHOUT INTELLIGENT KEY : CONSULT Function (BCM - HEADLAMP) INFOID:0000000012742259

## DATA MONITOR

Monitor Item [Unit]	Description
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 [On/Off]	
LIGHT OFF SW [On/Off]	
PASSING SW [On/Off]	
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.



## DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Monitor Item [Unit]	Description
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.

### ACTIVE TEST

Test Item	Description
DAYTIME RUNNING LIGHT	This test is able to check daytime running lamp operation [On/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].

### WITHOUT INTELLIGENT KEY : CONSULT Function (BCM - FLASHER)

INFOID:0000000012742260

### DATA MONITOR

Monitor Item [Unit]	Description
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].

EXL

## DIAGNOSIS SYSTEM (IPDM E/R)

### CONSULT Function (IPDM E/R)

INFOID:000000012742353

#### 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-26. "DTC Index"](#).

#### DATA MONITOR

Monitor Item [Unit]	Description
REVERSE SIGNAL [Open/Close]	Indicates condition of transmission range switch R (Reverse) position.
IGN RELAY [Open/Close]	Indicates condition of ignition relay-1.
PUSH SW [Open/Close]	Indicates condition of push-button ignition switch.
INTERLOCK/PNP SW [Open/Close]	Indicates condition of transmission range switch P (Park) and N (Neutral) positions.
OIL PRESSURE SW [Open/Close]	Indicates condition of oil pressure switch.
HOOD SW [Open/Close]	Indicates condition of hood switch.
COMPRESSOR [OFF/ON]	Indicates condition of A/C compressor.
HORN RELAY [OFF/ ON]	Indicates condition of horn relay.
COOLING FAN [OFF/ON]	Indicates condition of cooling fan relay-1.
FRONT WIPER HI/LO RELAY [OFF/ON]	Indicates condition of front wiper high relay.
FRONT WIPER RELAY [OFF/ON]	Indicates condition of front wiper relay.
IGN RELAY OFF STATUS [OFF/ON]	Indicates condition of ignition relay-1 OFF status.
IGN RELAY ON STATUS [OFF/ON]	Indicates condition of ignition relay-1 ON status.
COOLING FAN RELAY 1 [OFF/ON]	Indicates condition of cooling fan relay-1.
STARTER RELAY [OFF/ON]	Indicates condition of starter relay.
COMP ECV DUTY [%]	Indicates condition of A/C compressor.
COOLING FAN RELAY 2 [%]	Indicates condition of cooling fan relay-2.
FR FOG LAMP LH [%]	Indicates condition of front fog lamp LH.
FR FOG LAMP RH [%]	Indicates condition of front fog lamp RH.
PARKING LAMP [%]	Indicates condition of parking lamp.
TAIL LAMP LH [%]	Indicates condition of tail lamp LH.
TAIL LAMP RH [%]	Indicates condition of tail lamp RH.
DAYTIME RUNNING LIGHT LH [%]	Indicates condition of daytime running light LH.
DAYTIME RUNNING LIGHT RH [%]	Indicates condition of daytime running light RH.
HEADLAMP (HI) LH [%]	Indicates condition of headlamp high beam LH.

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Monitor Item [Unit]	Description	
HEADLAMP (HI) RH [%]	Indicates condition of headlamp high beam RH.	A
HEADLAMP (LO) LH [%]	Indicates condition of headlamp low beam LH.	
HEADLAMP (LO) RH [%]	Indicates condition of headlamp low beam RH.	B
A/C RELAY STUCK [NG/OK]	Indicates condition of A/C relay.	
A/C RELAY [Off/On]	Indicates condition of A/C relay.	
COMP ECV STATUS [NG/OK]	Indicates condition of A/C compressor.	C
VEHICLE SECURITY HORN [Off/On]	Indicates condition of horn relay.	
BATTERY CURRENT SENSOR [NG/OK]	Indicates condition of battery current sensor.	D
FRONT FOG LAMP [Off/On]	Indicates condition of front fog lamps.	
COMP ECV CURRENT [A]	Indicates condition of A/C compressor current.	
BATTERY VOLTAGE [V]	Indicates condition of battery voltage.	E
COOLING FAN DUTY [%]	Indicates condition of cooling fans.	
HOOD SW (CAN) [OPEN/CLOSE]	Indicates condition of hood switch.	F
FRONT WIPER [STOP/LOW/HIGH]	Indicates condition of front wiper motor.	
FR WIPER STOP POSITION [STOP P/ACTIVE P]	Indicates condition of front wiper motor stop.	
HEADLAMP (HI) [Off/On]	Indicates condition of headlamp high beams.	G
HEADLAMP (LO) [Off/On]	Indicates condition of headlamp low beams.	
IGNITION RELAY STATUS [Off/On]	Indicates condition of ignition relay-1.	
IGN RELAY MONITOR [Off/On]	Indicates condition of ignition relay-1 feedback.	H
IGNITION POWER SUPPLY [Off/On]	Indicates condition of ignition relay-1.	
INTERLOCK/PNP SW (CAN) [Off/On]	Indicates condition of transmission range switch P (Park) and N (Neutral) positions.	I
PUSH-BUTTON IGN SW (CAN) [Off/On]	Indicates condition of push-button ignition switch.	
TAIL LAMP [Off/On]	Indicates condition of tail lamps.	J
REVERSE SIGNAL (CAN) [Off/On]	Indicates condition of transmission range switch R (Reverse) position.	
ST&ST CONT RELAY STATUS [Off/ST R On]	Indicates condition of starter cut and starter relays.	K
STARTER MOTOR STATUS [Off/On]	Indicates condition of starter motor.	
STARTER RELAY (CAN) [LOW/HIGH]	Indicates condition of starter relay.	
IPDM NOT SLEEP [NO RDY/RDY]	Indicates condition of IPDM E/R sleep status.	EXL
AFTER COOLING TIME [No request/Request]	Indicates condition of cooling fan request.	
AFTER COOLING SPEED [%]	Indicates condition of cooling fans.	M
COOLING FAN TYPE [NISSAN/RENAULT]	Indicates cooling fan type.	
COMPRESSOR REQ1 [Off/On]	Indicates condition of A/C compressor request.	
VHCL SECURITY HORN REQ [Off/On]	Indicates condition of horn relay request.	N
DTRL REQ [Off/On]	Indicates condition of daytime running light request.	
SLEEP/WAKE UP [WAKEUP/SLEEP]	Indicates condition of IPDM E/R sleep/wake.	O
CRANKING ENABLE-TCM [NG/OK]	Indicates condition of crank enable from TCM.	
CRANKING ENABLE-ECM [NG/OK]	Indicates condition of crank enable from ECM.	
CAN DIAGNOSIS [NG/OK]	Indicates condition of CAN diagnosis.	P
FRONT FOG LAMP REQ [Off/On]	Indicates condition of front fog lamp request.	
HIGH BEAM REQ [Off/On]	Indicates condition of headlamp high beam request.	
HORN CHIRP [Off/On]	Indicates condition of horn relay request.	
COOLING FAN REQ [%]	Indicates condition of cooling fan request.	
ENGINE STATUS [STOP/RUN/IDLING]	Indicates condition of engine status.	

# DIAGNOSIS SYSTEM (IPDM E/R)

[LED HEADLAMP]

## < SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description
TURN SIGNAL REQ [Off/LH/RH]	Indicates condition of turn signal request.
FR WIPER REQ [RETURN/LOW/HIGH]	Indicates condition of front wiper motor request.
SHIFT POSITION [P/R/N/D/L]	Indicates condition of transmission range switch positions.
LOW BEAM REQ [Off/On]	Indicates condition of headlamp low beam request.
POSITION LIGHT REQ [Off/On]	Indicates condition of parking lamp request.
COMPRESSOR REQ2 [Off/On]	Indicates condition of A/C compressor request.
IGNITION SW [Off/On]	Indicates condition of ignition switch.
VEHICLE SPEED (METER) [mph/km/h]	Indicates vehicle speed.
STARTER OPERATION COUNT	Displays the number of times the starter motor is turned ON.
H/P F/PUMP OPERATN COUNT	Displays the number of times the high pressure fuel pump is turned ON.
BAT DISCHARGE COUNT [—]	Monitor the cumulative discharge value of the battery. <b>NOTE:</b> When 65,000 or more is counted, replace the battery.
P LAMP CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the parking lamp circuit. <b>NOTE:</b> When the number of parking lamp circuit retries count is 20, this item counts 1.
NMB P LAMP CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the parking lamp circuit. <b>NOTE:</b> When the number of short circuits in the parking lamp circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB P LAMP CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the parking lamp circuit.
DTRL LH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (left) circuit. <b>NOTE:</b> When the number of daytime running light (left) circuit retries count is 20, this item counts 1.
NMB DTRL LH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (left) circuit. <b>NOTE:</b> When the number of short circuits in the daytime running light (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB DTRL LH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (left) circuit.
DTRL RH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the daytime running light (right) circuit. <b>NOTE:</b> When the number of daytime running light (right) circuit retries count is 20, this item counts 1.
NMB DTRL RH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the daytime running light (right) circuit. <b>NOTE:</b> When the number of short circuits in the daytime running light (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB DTRL RH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the daytime running light (right) circuit.

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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

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# DIAGNOSIS SYSTEM (IPDM E/R)

[LED HEADLAMP]

## < SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description
NMB HL (LO) LH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (left) circuit. <b>NOTE:</b> When the number of short circuits in the headlamp (LO) (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB HL (LO) LH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (left) circuit.
HL (LO) RH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the headlamp (LO) (right) circuit. <b>NOTE:</b> When the number of headlamp (LO) (right) circuit retries count is 20, this item counts 1.
NMB HL (LO) RH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the headlamp (LO) (right) circuit. <b>NOTE:</b> When the number of short circuits in the headlamp (LO) (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB HL (LO) RH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the headlamp (LO) (right) circuit.
T LAMP LH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (left) circuit. <b>NOTE:</b> When the number of tail lamp (left) circuit retries count is 20, this item counts 1.
NMB T LAMP LH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (left) circuit. <b>NOTE:</b> When the number of short circuits in the tail lamp (left) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB T LAMP LH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (left) circuit.
T LAMP RH CIRC MALFUNCTN [0 – 1]	Monitor the number of times that the smart FET in IPDM E/R reaches the retry upper limit of the tail lamp (right) circuit. <b>NOTE:</b> When the number of tail lamp (right) circuit retries count is 20, this item counts 1.
NMB T LAMP RH CIRC RETRY [0 – 20]	Monitor the number of times that the smart FET in IPDM E/R permits the retry of the tail lamp (right) circuit. <b>NOTE:</b> When the number of short circuits in the tail lamp (right) circuit count is 5 and the ignition switch OFF to ON operation is detected, this item counts 1.
NMB T LAMP RH CIRC SHORT [0 – 5]	Monitor the number of times that the smart FET in IPDM E/R detects the over current of the tail lamp (right) circuit.
BATTERY STATUS [OK/NG]	Monitor the battery status from the battery output.
BAT DISCHARGE COUNT [0-100]	Indicates condition of battery discharge.
BATTERY STATUS [NG/OK]	Indicates battery status.

## ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [Off/On].
FRONT WIPER	This test is able to check wiper motor operation [Off/Low/High].

## DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Test item	Description
COMPRESSOR	This test is able to check A/C compressor operation [Off/On].
COOLING FAN (DUAL)	This test is able to check cooling fan operation [Off/LO/HI].
HEADLAMP (HI)	This test is able to check headlamp high beam operation [Off/3/5].
HEADLAMP (LO)	This test is able to check headlamp low beam operation [Off/3/5].
FRONT FOG LAMP	This test is able to check front fog lamp operation [Off/3/5].
DAYTIME RUNNING LAMP	This test is able to check daytime running lamp operation [Off/3/5].
PARKING LAMP	This test is able to check parking lamp operation [Off/3/5].
TAIL LAMP	This test is able to check tail lamp operation [Off/3/5].

### CAN DIAG SUPPORT MNTR

Refer to [LAN-17, "CAN Diagnostic Support Monitor"](#).

### WORK SUPPORT

Work item	Description
CML B/DCHRG CRNT CLEAR	In this mode, cumulative battery discharge current is cleared.

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EXL  
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**ECU DIAGNOSIS INFORMATION**

## BCM, IPDM E/R

## List of ECU Reference

INFOID:0000000012423093

ECU	Reference
BCM (with Intelligent Key system)	<a href="#">BCS-29, "Reference Value"</a>
	<a href="#">BCS-47, "Fail Safe"</a>
	<a href="#">BCS-47, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-48, "DTC Index"</a>
BCM (without Intelligent Key system)	<a href="#">BCS-97, "Reference Value"</a>
	<a href="#">BCS-108, "Fail Safe"</a>
	<a href="#">BCS-109, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-109, "DTC Index"</a>
IPDM E/R	<a href="#">PCS-17, "Reference Value".</a>
	<a href="#">PCS-25, "Fail-safe"</a>
	<a href="#">PCS-26, "DTC Index"</a>



# HEADLAMP

[LED HEADLAMP]

< WIRING DIAGRAM >

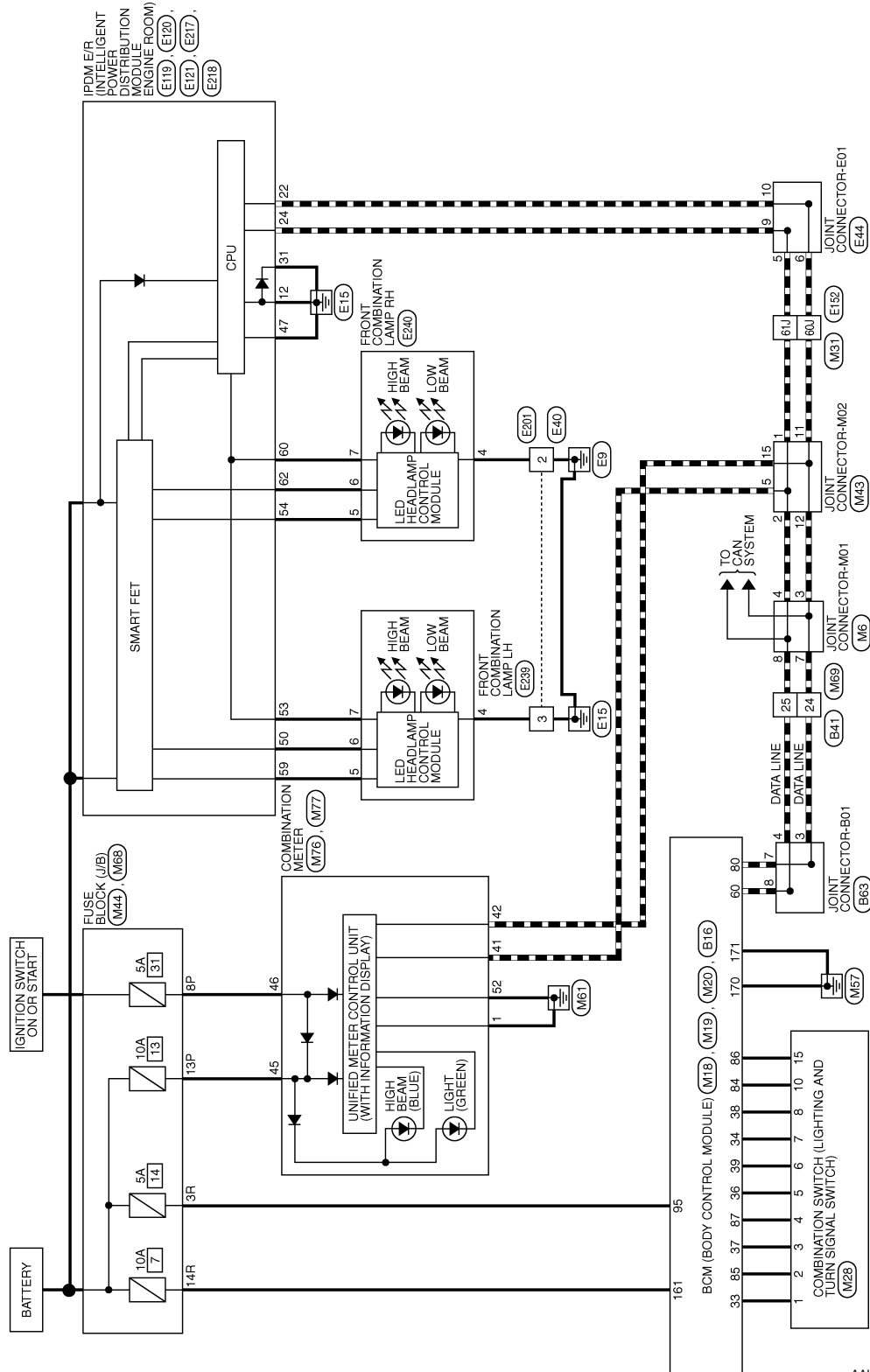
## WIRING DIAGRAM

### HEADLAMP

#### Wiring Diagram

INFOID:0000000012423094

#### HEADLAMP - LED



AALWA1426GB

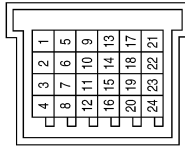
# HEADLAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

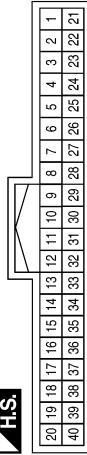
## HEADLAMP CONNECTORS - LED

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



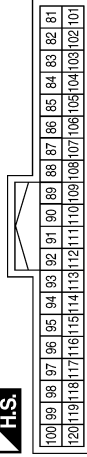
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

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



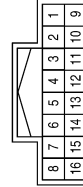
Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-

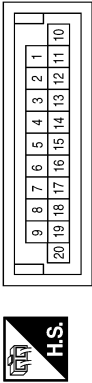
Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

HEADLAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

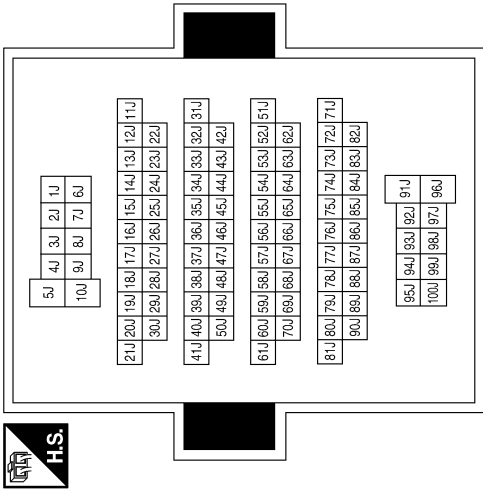
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
5	L	-
11	P	-
12	P	-
15	P	-

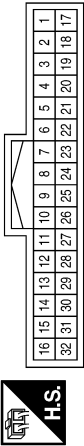
Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



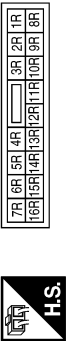
21J	20J	19J	18J	17J	16J	15J	14J	13J	12J	11J
30J	29J	28J	27J	26J	25J	24J	23J	22J		
41J	40J	39J	38J	37J	36J	35J	34J	33J	32J	31J
50J	49J	48J	47J	46J	45J	44J	43J	42J		
61J	60J	59J	58J	57J	56J	55J	54J	53J	52J	51J
70J	69J	68J	67J	66J	65J	64J	63J	62J		
81J	80J	79J	78J	77J	76J	75J	74J	73J	72J	71J
90J	89J	88J	87J	86J	85J	84J	83J	82J		
95J	94J	93J	92J	91J						
100J	99J	98J	97J	96J						

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



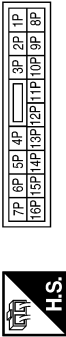
Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8P	LA/BR	-
13P	LA/G	-

AALIA2983GB

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

# HEADLAMP

< WIRING DIAGRAM >

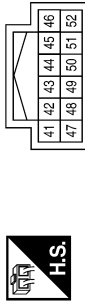
[LED HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



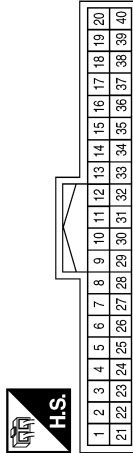
Terminal No.	Color of Wire	Signal Name
2	GR	-
3	B	-

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



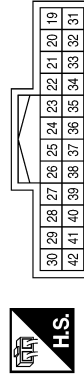
Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	M76
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



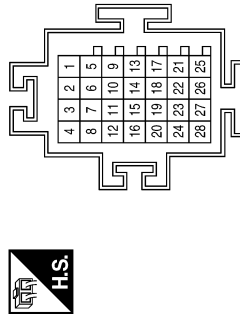
Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
12	B	SIGNAL GROUND

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-
9	L	-
10	P	-

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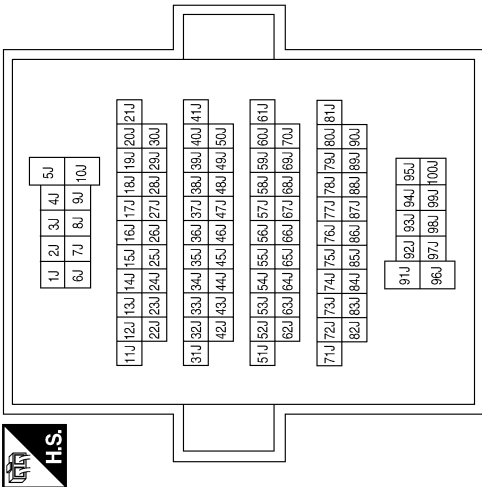
HEADLAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED

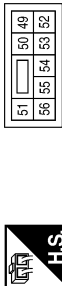


Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
59	G	O LIGHT HBEAM LH
60	Y	LI LED DETECTION 1
62	SB	O LIGHT LBEAM RH

Terminal No.	Color of Wire	Signal Name
50	L	O LIGHT LBEAM LH
53	GR	LI LED DETECTION 2
54	LG	O LIGHT HBEAM RH

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

AALIA2985GB

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

EXL


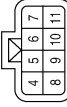

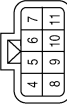

# HEADLAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No. E239	Connector Name FRONT COMBINATION LAMP LH	Connector Color BLACK
Connector No. E240	Connector Name FRONT COMBINATION LAMP RH	Connector Color BLACK
Connector No. B16	Connector Name BCM (BODY CONTROL MODULE)	Connector Color GREEN

				
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Terminal No. 4	Color of Wire B	Signal Name -
Terminal No. 5	Color of Wire G	Signal Name -
Terminal No. 6	Color of Wire L	Signal Name -
Terminal No. 7	Color of Wire GR	Signal Name -


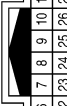


Terminal No. 4	Color of Wire B	Signal Name -
Terminal No. 5	Color of Wire LG	Signal Name -
Terminal No. 6	Color of Wire SB	Signal Name -
Terminal No. 7	Color of Wire Y	Signal Name -

Terminal No. 60	Color of Wire L	Signal Name CAN-H
Terminal No. 80	Color of Wire P	Signal Name CAN-L

Connector No. B41	Connector Name WIRE TO WIRE	Connector Color WHITE
Connector No. B63	Connector Name JOINT CONNECTOR-B01	Connector Color GRAY

			
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Terminal No. 24	Color of Wire P	Signal Name -
Terminal No. 25	Color of Wire L	Signal Name -

Terminal No. 3	Color of Wire P	Signal Name -
Terminal No. 4	Color of Wire L	Signal Name -
Terminal No. 7	Color of Wire P	Signal Name -
Terminal No. 8	Color of Wire L	Signal Name -

AALJA2987GB

# DAYTIME RUNNING LIGHT SYSTEM

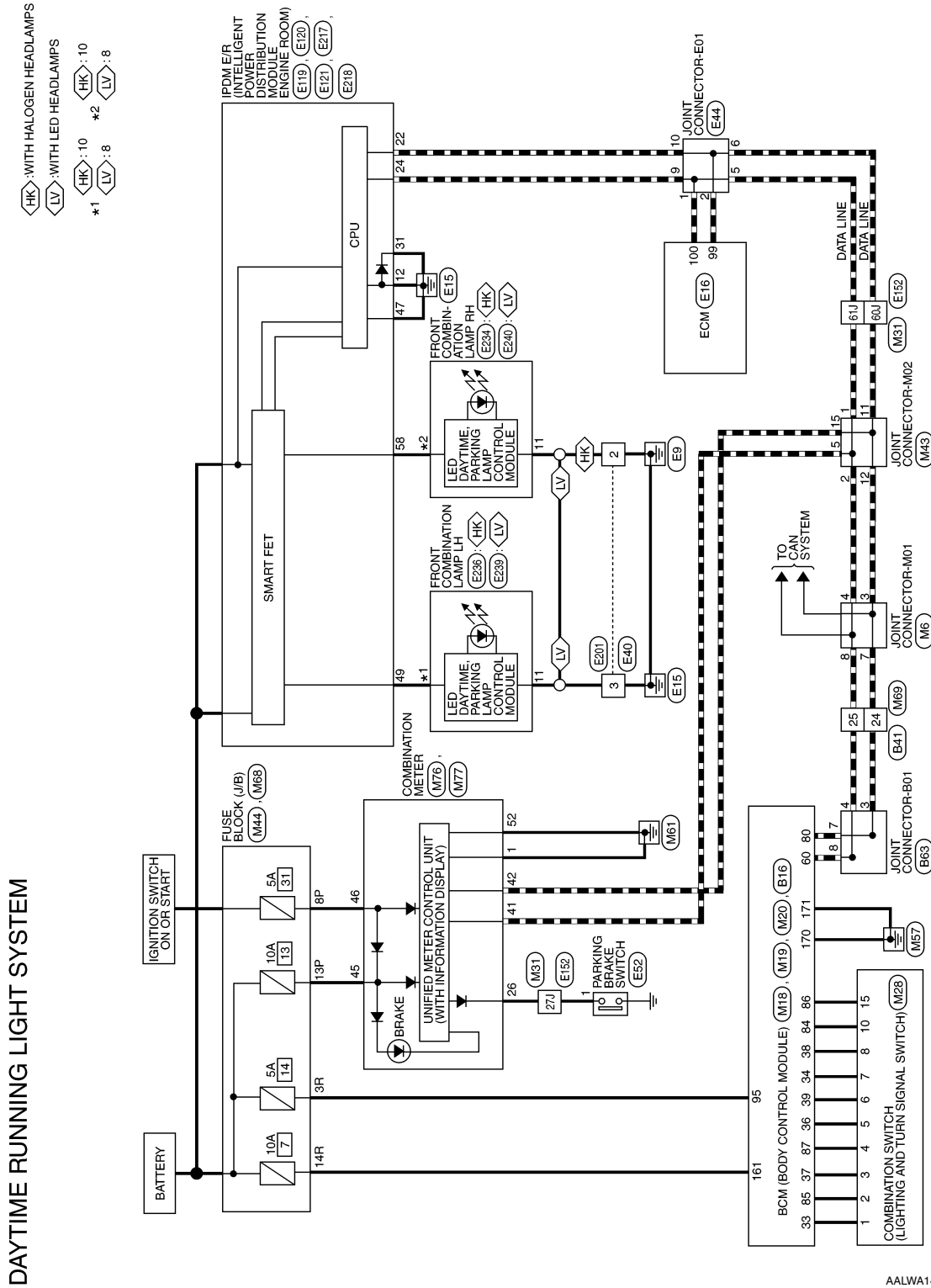
< WIRING DIAGRAM >

[LED HEADLAMP]

## DAYTIME RUNNING LIGHT SYSTEM

### Wiring Diagram

INFOID:0000000012710529



AALWA1424GB

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## DAYTIME RUNNING LIGHT SYSTEM CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Terminal No.	Color of Wire	Signal Name
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164
178	175	174	173
172	171	170	169
168	163	162	161

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-

AALIA2953GB



# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
8P	LA/BR	—
13P	LA/G	—

Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

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



Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
5	L	—
11	P	—
12	P	—
15	P	—

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

5J	4J	3J	2J	1J
10J	9J	8J	7J	6J



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

Terminal No.	Color of Wire	Signal Name
27J	G	—
60J	P	—
61J	L	—

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

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



Terminal No.	Color of Wire	Signal Name
3R	V	—
14R	W	—

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

Connector No.	M76
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	B	GND
26	G	PBK SW

AALIA2954GB

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

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
3	4

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK



97	100	105	108	113	117	121	125
98	102	106	110	114	118	122	126
99	103	107	111	115	119	123	127
100	104	108	112	116	120	124	128

Terminal No.	Color of Wire	Signal Name
2	GR	—
3	B	—

Terminal No.	Color of Wire	Signal Name
99	P	CAN-L
100	L	CAN-H

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	5	4	3
18	17	16	15	14	13	12
11	10					

Connector No.	E52
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



1
---

Terminal No.	Color of Wire	Signal Name
12	B	SIGNAL GROUND

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	L	—
2	P	—
5	L	—
6	P	—
9	L	—
10	P	—

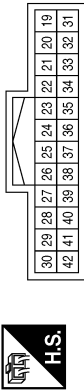
AALIA2955GB

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



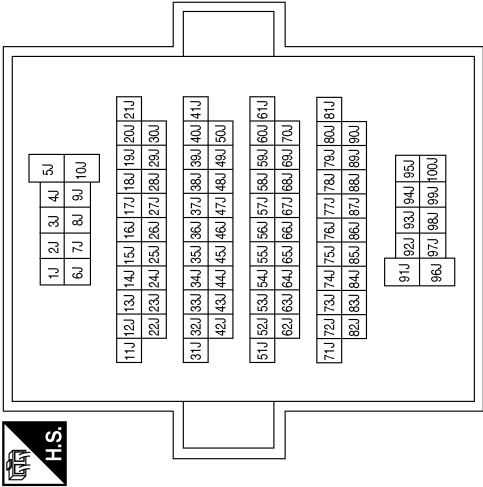
Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
27J	G	-
60J	P	-
61J	L	-

Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

EXL

# DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

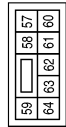
[LED HEADLAMP]

Connector No.	E234
Connector Name	FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
10	R	—
11	GR	—

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



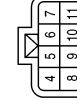
Terminal No.	Color of Wire	Signal Name
58	R	O LIGHT DTRL RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



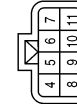
Terminal No.	Color of Wire	Signal Name
49	R	O LIGHT DTRL LH

Connector No.	E240
Connector Name	FRONT COMBINATION LAMP RH (WITH LED HEADLAMPS)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	R	—
11	B	—

Connector No.	E239
Connector Name	FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	R	—
11	B	—

Connector No.	E236
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
10	R	—
11	GR	—

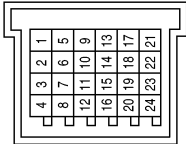
AALIA2125GB

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

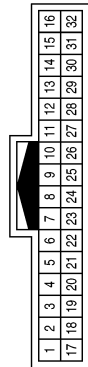
[LED HEADLAMP]

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



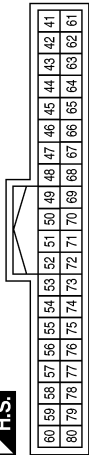
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



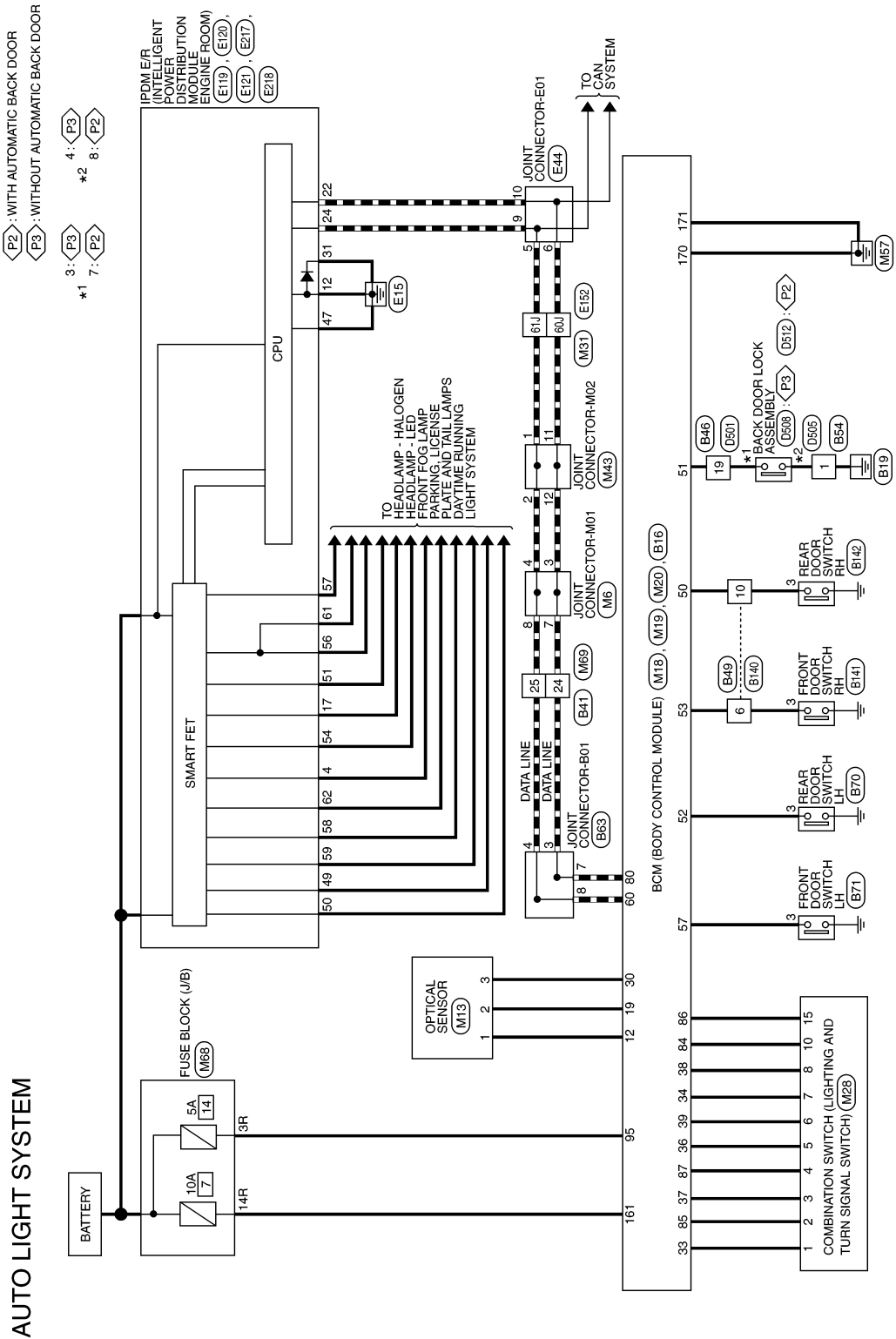
Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

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

AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:0000000012710530



AALWA1423GB

## AUTO LIGHT SYSTEM CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M13
Connector Name	OPTICAL SENSOR
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	W	-
2	LG	-
3	V	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
12	W	O PWR AUTOLIGHT SENSOR
19	LG	I AUTOLIGHT SENSOR
30	V	O GND AUTOLIGHT SENSOR
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	<input type="text"/>	163	162	161	
176	175	174	173	172	171	170	169	168

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

AALIA2112GB

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

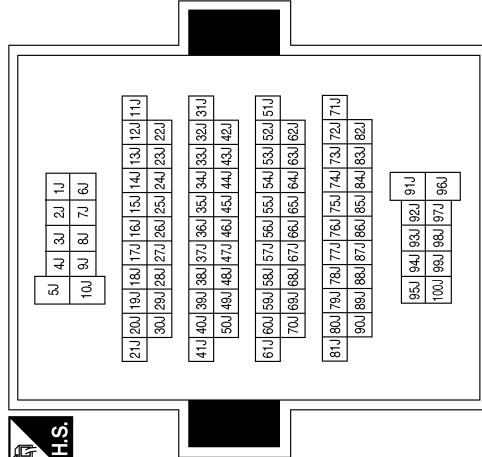
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



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

Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
11	P	-
12	P	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-



# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



30	28	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

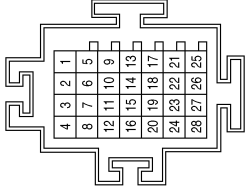
Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	5	4	3
18	17	16	15	14	13	12
11	10					

Terminal No.	Color of Wire	Signal Name
4	Y	O LIGHT POSITION REAR LH
12	B	SIGNAL GROUND
17	W	O LIGHT POSITION REAR RH

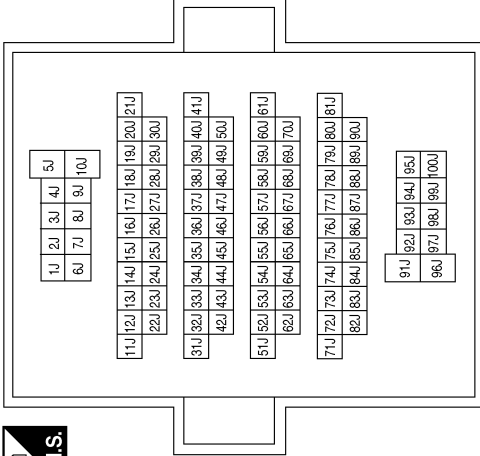
Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-
9	L	-
10	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



45	44	43
48	47	46

Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

AALIA2952GB

A  
B  
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EXL  
M  
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O  
P


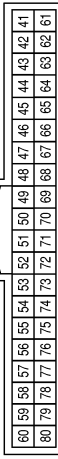
EXL

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >


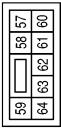
[LED HEADLAMP]

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN


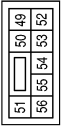
Terminal No.	Color of Wire	Signal Name
50	W	I RR DOOR SW
51	LG	I TGATE SW
52	R	I RL DOOR SW
53	SB	I AS DOOR2 SW
57	SB	I DR DOOR2 SW
60	L	CAN-H
80	P	CAN-L

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
57	W	O LIGHT FR FOG LAMPS RH
58	R	O LIGHT DTRL RH
59	G	O LIGHT HBEAM LH
61	GR	O LIGHT CLEARANCE FR RH
62	SB	O LIGHT LBEAM RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

Terminal No.	Color of Wire	Signal Name
49	R	O LIGHT DTRL LH
50	L	O LIGHT LBEAM LH
51	V	O LIGHT FR FOG LAMPS LH
54	LG	O LIGHT HBEAM RH
56	BG	O LIGHT CLEARANCE FR LH

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
6	SB	-
10	W	-

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
19	LG	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

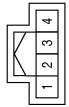
AALIA2115GB

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

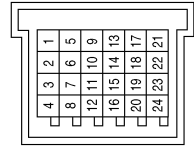
[LED HEADLAMP]

Connector No.	B70
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	-

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



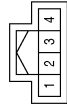
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Color	WHITE



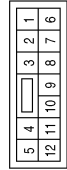
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	B141
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



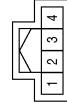
Terminal No.	Color of Wire	Signal Name
3	GR	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	GR	-
10	W	-

Connector No.	B71
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	SB	-

AALIA2116GB

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

EXL

# AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

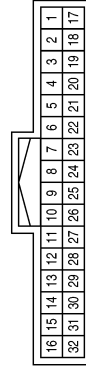
[LED HEADLAMP]

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



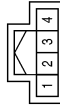
Terminal No.	1	Color of Wire	B	Signal Name	—
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Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	19	Color of Wire	W	Signal Name	—
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Connector No.	B142
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	3	Color of Wire	W	Signal Name	—
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Connector No.	D512
Connector Name	BACK DOOR LOCK ASSEMBLY (WITH AUTOMATIC BACK DOOR SYSTEM)
Connector Color	WHITE



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

Connector No.	D508
Connector Name	BACK DOOR LOCK ASSEMBLY (WITHOUT AUTOMATIC BACK DOOR SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	W	—
4	GR	—

AALIA4250GB

**[LED HEADLAMP]**

## FRONT FOG LAMP SYSTEM

INFOID:0000000012710531



# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## FRONT FOG LAMP CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	168	165	164
176	175	174	173
172	171	170	169
161	162	163	166

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-
5	G	-

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

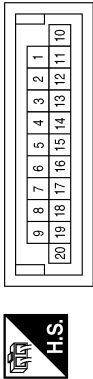
Terminal No.	Color of Wire	Signal Name
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

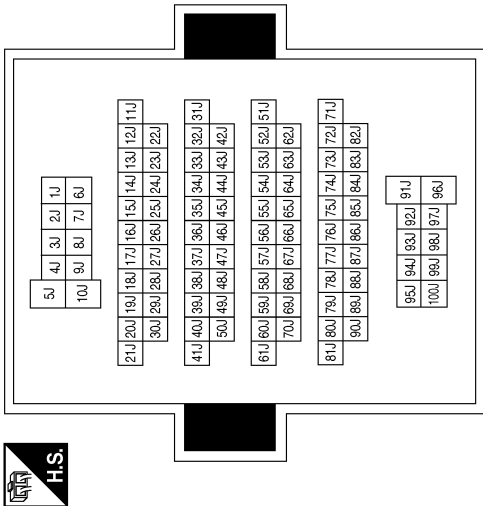
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



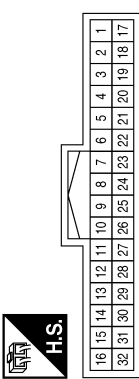
Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
5	L	-
11	P	-
12	P	-
15	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Terminal No.	Color of Wire	Signal Name
8P	LA/BR	-
13P	LA/G	-

AALIA2967GB

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

# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
3	4

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
2	GR	—

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	M76
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	B	GND

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	5	4	3		
18	17	16	15	14	13	12	11	10

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

Terminal No.	Color of Wire	Signal Name
12	B	SIGNAL GROUND

Terminal No.	Color of Wire	Signal Name
5	L	—
6	P	—
9	L	—
10	P	—

AALIA2968GB



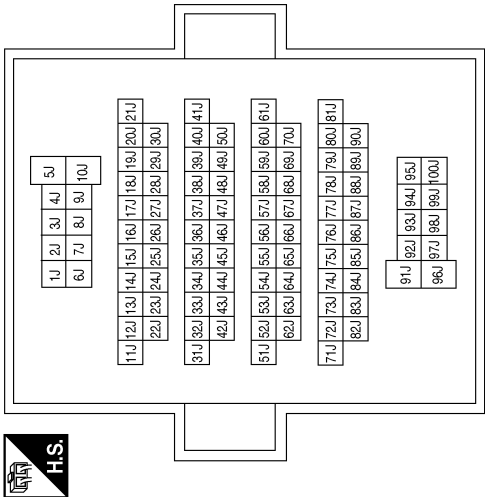
FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

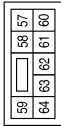


Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED

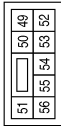


Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
57	W	O LIGHT FR FOG LAMPS RH

Terminal No.	Color of Wire	Signal Name
51	V	O LIGHT FR FOG LAMPS LH

Terminal No.	Color of Wire	Signal Name
2	B	-

AALIA2969GB



A  
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EXL  
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O  
P

# FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >



[LED HEADLAMP]

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	E222
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK


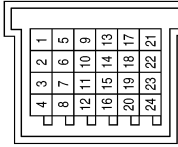
Terminal No.	Color of Wire	Signal Name
1	V	-
2	GR	-

Connector No.	E221
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK


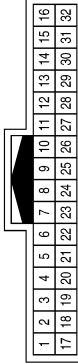
Terminal No.	Color of Wire	Signal Name
1	W	-
2	GR	-

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

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# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

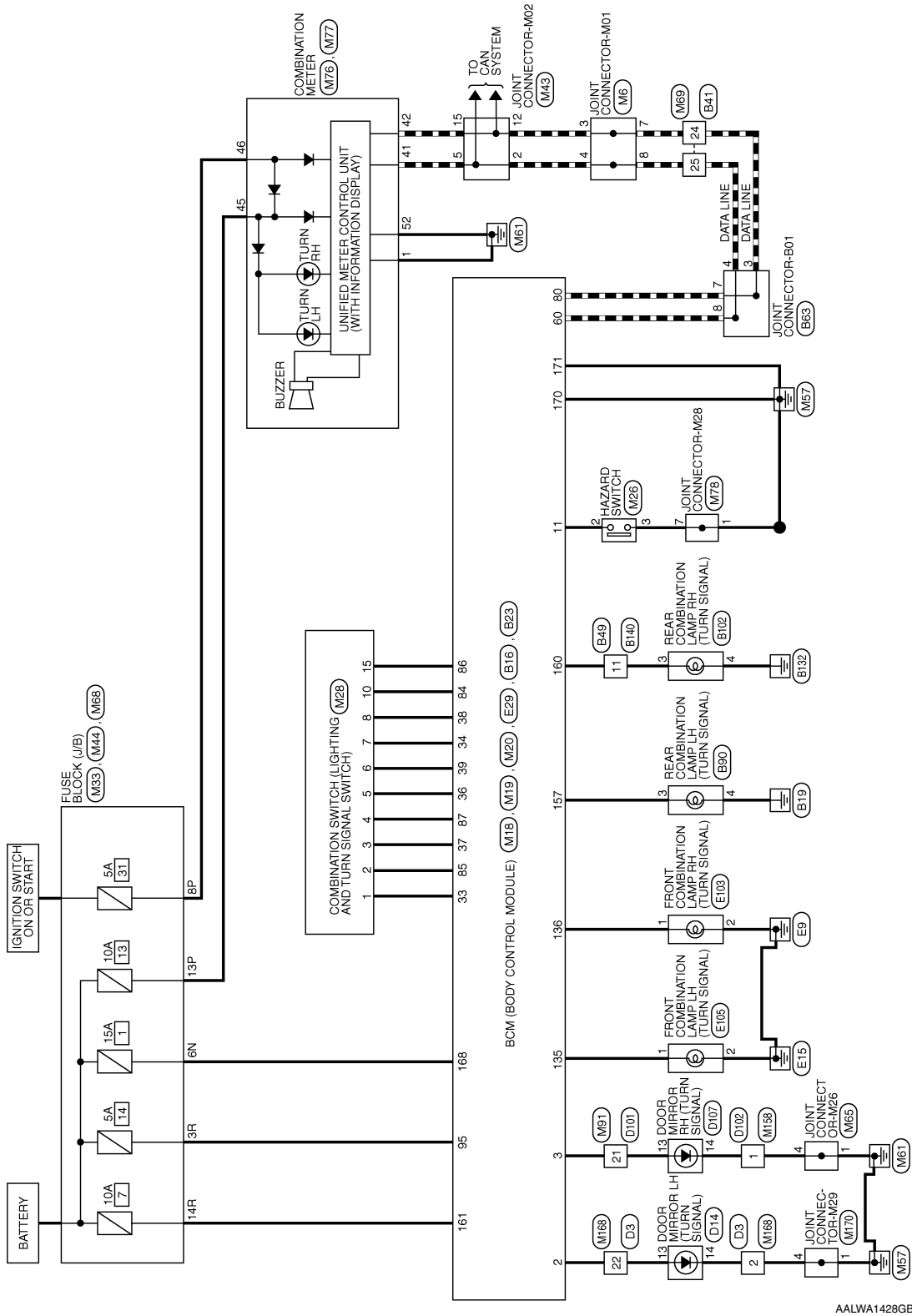
[LED HEADLAMP]

## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

### Wiring Diagram

INFOID:0000000012710532

#### TURN SIGNAL AND HAZARD WARNING LAMPS



AALWA1428GB

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
3	P	—
4	L	—
7	P	—
8	L	—

Terminal No.	Color of Wire	Signal Name
2	LA/G	O DI FR LEFT D
3	LA/Y	O DI FR RIGHT D
11	Y	I HAZARD SW D
33	LG	I CSW 5
34	Y	O CSW 5
36	G	I CSW 3
37	GR	I CSW 4
38	V	I CSW 1
39	W	I CSW 2

Terminal No.	Color of Wire	Signal Name
84	BR	O CSW 2
85	SB	O CSW 1
86	P	O CSW 3
87	BG	O CSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	163	162	161
176	175	174	173	172	171	170
169	168	167	166	165	164	163

Connector No.	M26
Connector Name	HAZARD SWITCH
Connector Color	WHITE



4	3	2	1
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Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
168	BG	I PWR FLASHERS
170	B	I GND1
171	B	I GND2

Terminal No.	Color of Wire	Signal Name
2	Y	—
3	GR	—

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE




Terminal No.	Color of Wire	Signal Name
2	L	-
5	L	-
12	P	-
15	P	-

Connector No.	M33
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



3N		2N	1N
8N		7N	6N
		5N	4N

Terminal No.	Color of Wire	Signal Name
6N	BG	-

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	GR	-
4	BG	-
5	G	-
6	W	-
7	Y	-
8	V	-
10	BR	-
15	P	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Connector No.	M65
Connector Name	JOINT CONNECTOR-M26
Connector Color	WHITE



8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

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

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
8P	LA/BR	-
13P	LA/G	-

AALIA2950GB

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

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE



41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LAVBR	IGN
52	B	G1

Connector No.	M76
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	B	GND

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	M91
Connector Name	WIRE TO WIRE
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

Connector No.	M78
Connector Name	JOINT CONNECTOR-M28
Connector Color	WHITE



8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name
1	B	—

Terminal No.	Color of Wire	Signal Name
21	LAY	—

Terminal No.	Color of Wire	Signal Name
1	GR	—
7	GR	—

AALIA2980GB

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



132	131	130	129	128	127	126	125	124	123	122	121
144	143	142	141	140	139	138	137	136	135	134	133

Terminal No.	Color of Wire	Signal Name
135	BR	DI FR LEFT E
136	GR	O DI FR RIGHT E

Connector No.	M170
Connector Name	JOINT CONNECTOR-M29
Connector Color	WHITE



8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

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

Connector No.	M168
Connector Name	WIRE TO WIRE
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

Terminal No.	Color of Wire	Signal Name
2	B	-
22	LA/G	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	E105
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY



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

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

Connector No.	E103
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR	-

AALIA2165GB

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

# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5
6	7	8	9	10
11	12			

Terminal No.	Color of Wire	Signal Name
11	P	—

Connector No.	B41
Connector Name	WIRE TO WIRE
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

Terminal No.	Color of Wire	Signal Name
24	P	—
25	L	—

Connector No.	B23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



151	150	149	148	147	146	145
160	159	158	157	156	155	154
153	152					

Terminal No.	Color of Wire	Signal Name
157	GR	O DI RR LEFT B
160	P	O DI RR RIGHT B

Connector No.	B102
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



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

Connector No.	B90
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE



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

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	LA/V	—
4	B	—

Terminal No.	Color of Wire	Signal Name
3	GR	—
4	B	—

Terminal No.	Color of Wire	Signal Name
3	P	—
4	L	—
7	P	—
8	L	—

AALIA2166GB



# TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	D14
Connector Name	DOOR MIRROR LH
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
13	LA/G	–
14	LA/B	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
2	LA/B	–
22	LA/G	–

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



5	4			3	2	1
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
11	LAV	–

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



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

Terminal No.	Color of Wire	Signal Name
13	LA/G	–
14	LA/B	–

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



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

Terminal No.	Color of Wire	Signal Name
1	LA/B	–

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



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

Terminal No.	Color of Wire	Signal Name
21	LA/G	–

AALIA2239GB

A  
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EXL  
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P

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

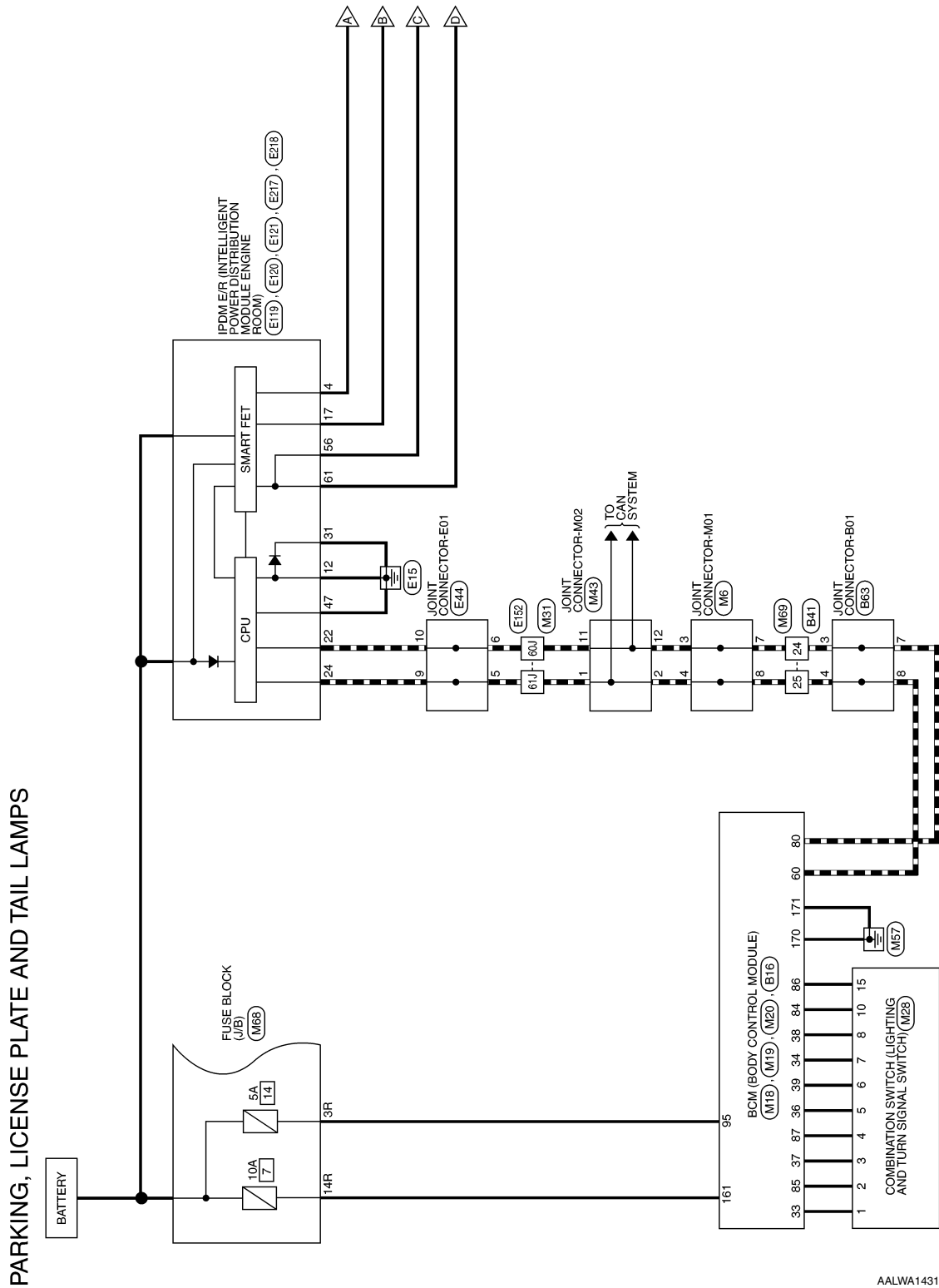
< WIRING DIAGRAM >

[LED HEADLAMP]

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

### Wiring Diagram

INFOID:000000012710533



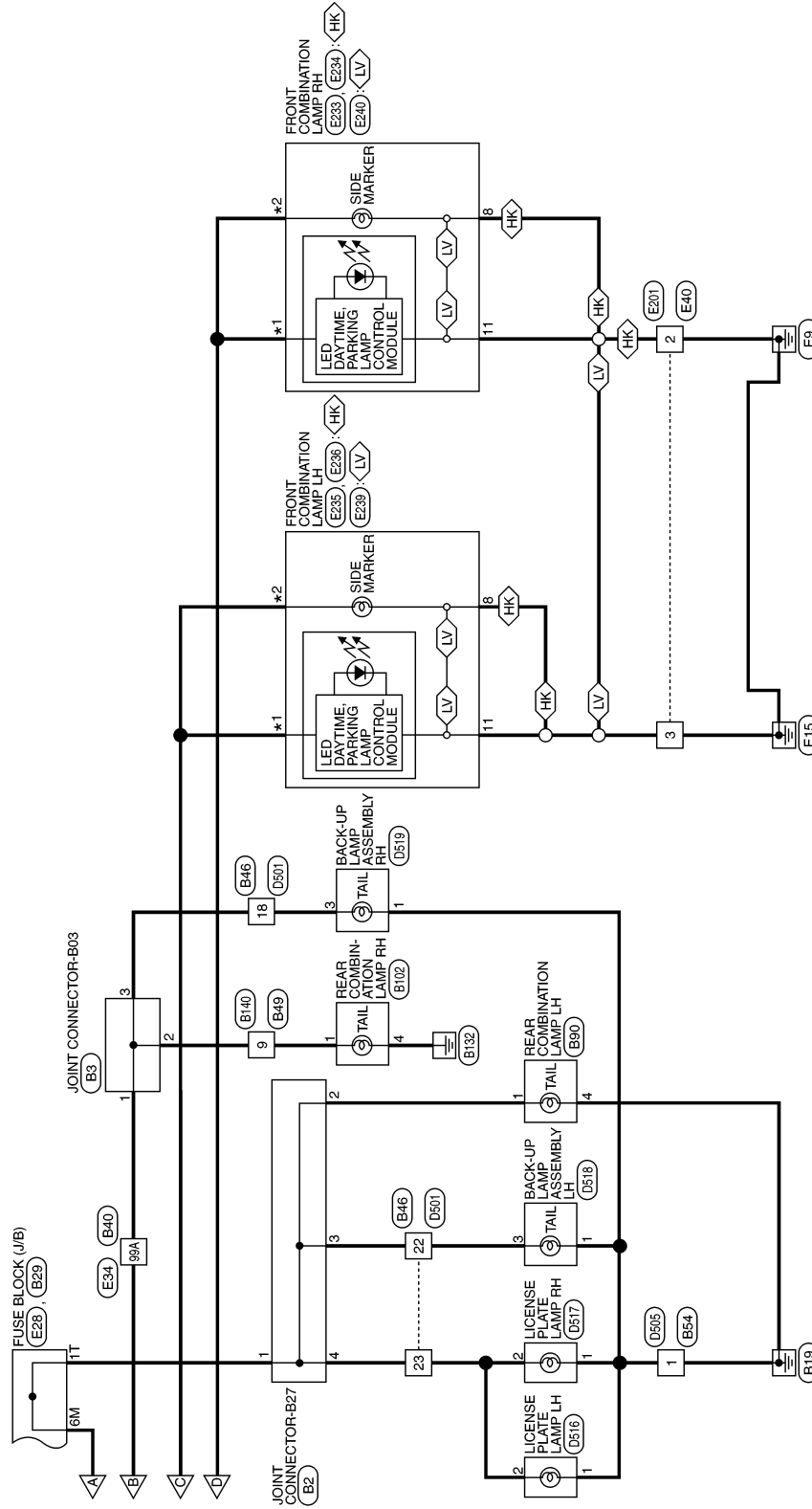
AALWA1431GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

(HK) : WITH HALOGEN HEADLAMPS  
 (LV) : WITH LED HEADLAMPS  
 (HK) : 12 \*1  
 (LV) : 9 \*2  
 (LV) : 10



AALWA1432GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

## PARKING, LICENSE AND TAIL LAMPS CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
3	P	—
4	L	—
7	P	—
8	L	—

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
33	LG	ICSW 5
34	Y	OCSW 5
36	G	ICSW 3
37	GR	ICSW 4
38	V	ICSW 1
39	W	ICSW 2

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



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
84	BR	OCSW 2
85	SB	OCSW 1
86	P	OCSW 3
87	BG	OCSW 4
95	V	I SHORTING PIN

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	163	162	161
178	177	176	175	174	173	172
171	170	169	168	167	166	165

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	—
2	SB	—
3	GR	—
4	BG	—

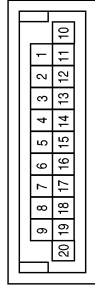
Terminal No.	Color of Wire	Signal Name
5	G	—
6	W	—
7	Y	—
8	V	—
10	BR	—
15	P	—

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

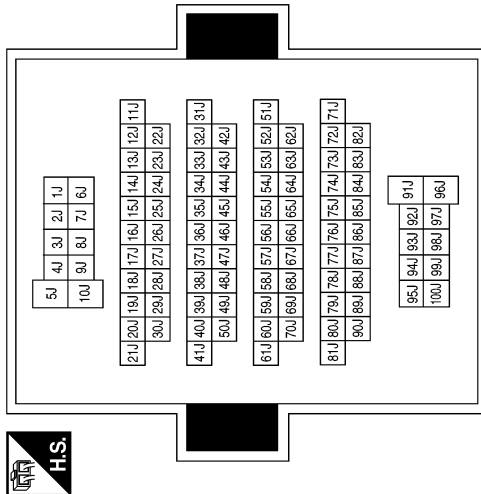
Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
11	P	-
12	P	-

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

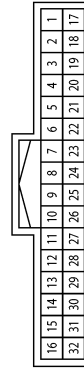


Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6M	Y	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

AALIA2958GB

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

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

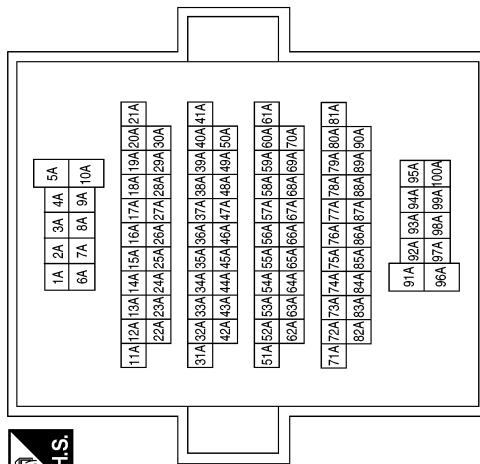
1	2
3	4



Terminal No.	Color of Wire	Signal Name
2	GR	-
3	B	-

Terminal No.	Color of Wire	Signal Name
99A	W	-

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY

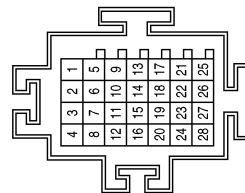
9	8	7	6	5	4	3
18	17	16	15	14	13	12
11	10	9	8	7	6	5



Terminal No.	Color of Wire	Signal Name
4	Y	O LIGHT POSITION REAR LH
12	B	SIGNAL GROUND
17	W	O LIGHT POSITION REAR RH

Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-
9	L	-
10	P	-

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



AALIA2959GB

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

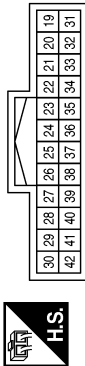
[LED HEADLAMP]

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



Terminal No.	Color of Wire	Signal Name
47	B	POWER GROUND

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

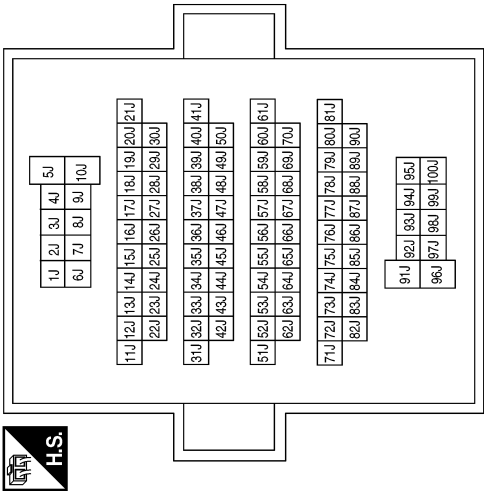
Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	L	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



AALIA2960GB

A  
B  
C  
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F  
G  
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J  
K  
EXL  
M  
N  
O  
P

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

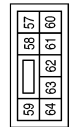
[LED HEADLAMP]

Connector No.	E233
Connector Name	FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color	BLACK



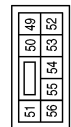
Terminal No.	Color of Wire	Signal Name
8	B	–
9	W	–

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
61	GR	O LIGHT CLEARANCE FR RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
56	BG	O LIGHT CLEARANCE FR LH

Connector No.	E236
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
11	GR	–
12	BG	–

Connector No.	E235
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	B	–
9	P	–

Connector No.	E234
Connector Name	FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
11	GR	–
12	GR	–

AALJA2961GB



# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

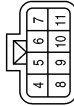
[LED HEADLAMP]

Connector No.	B2
Connector Name	JOINT CONNECTOR-B27
Connector Color	WHITE



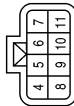
Terminal No.	Color of Wire	Signal Name
1	LA/R	-
2	LA/R	-
3	LA/R	-
4	LA/R	-

Connector No.	E240
Connector Name	FRONT COMBINATION LAMP RH (WITH LED HEADLAMPS)
Connector Color	BLACK



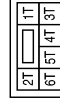
Terminal No.	Color of Wire	Signal Name
9	GR	-
10	W	-
11	B	-

Connector No.	E239
Connector Name	FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)
Connector Color	BLACK



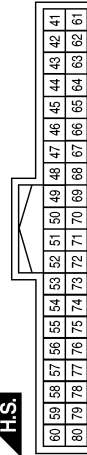
Terminal No.	Color of Wire	Signal Name
9	BG	-
10	P	-
11	B	-

Connector No.	B29
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



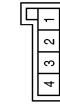
Terminal No.	Color of Wire	Signal Name
1T	LA/R	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	B3
Connector Name	JOINT CONNECTOR-B03
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LA/BR	-
2	LA/BR	-
3	LA/BR	-

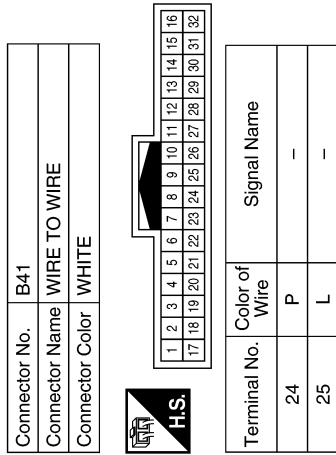
AALIA2962GB

A  
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J  
K  
EXL  
M  
N  
O  
P

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

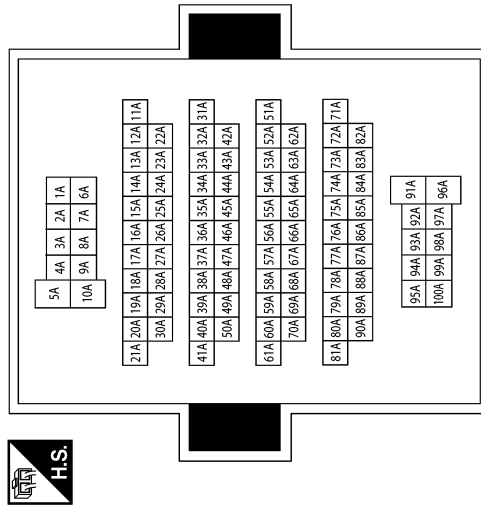
< WIRING DIAGRAM >

[LED HEADLAMP]



Terminal No.	Color of Wire	Signal Name
99A	LA/BR	-

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Color	WHITE



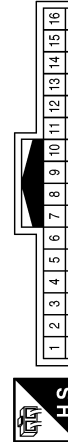
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LA/BR	-

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
18	LA/BR	-
22	LA/R	-
23	LA/R	-

AALIA2963GB

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	B102
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



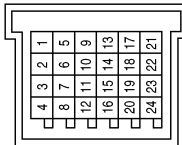
Terminal No.	Color of Wire	Signal Name
1	LA/BR	-
4	B	-

Connector No.	B90
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LA/R	-
4	B	-

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



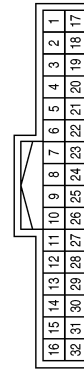
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
18	LA/R	-
22	LA/Y	-
23	P	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LA/BR	-

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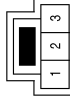
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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	D518
Connector Name	BACK-UP LAMP ASSEMBLY LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
3	LA/Y	-

Connector No.	D517
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN



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

Connector No.	D516
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN



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

Connector No.	D519
Connector Name	BACK-UP LAMP ASSEMBLY RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
3	LA/R	-

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STOP LAMP

< WIRING DIAGRAM >

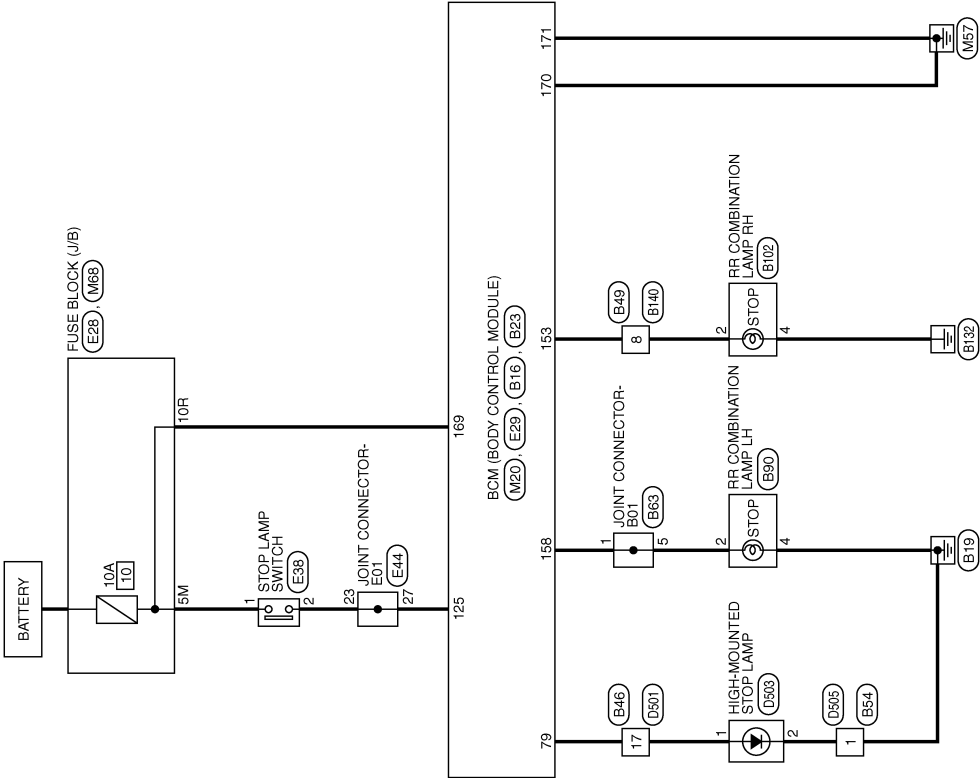
[LED HEADLAMP]

STOP LAMP

Wiring Diagram

INFOID:0000000012710534

STOP LAMP



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EXL

## STOP LAMP CONNECTORS

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN

167	166	165	164	163	162	161
176	175	174	173	172	171	170
169	168					



Terminal No.	Color of Wire	Signal Name
169	GR	I PWR STOP LAMP
170	B	I GND1
171	B	I GND2

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

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



Terminal No.	Color of Wire	Signal Name
10R	GR	–

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

4M	3M	2M	1M
10M	9M	8M	7M
6M	5M		



Terminal No.	Color of Wire	Signal Name
5M	V	–

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

132	131	130	129	128	127	126	125	124	123	122	121
144	143	142	141	140	139	138	137	136	135	134	133



Terminal No.	Color of Wire	Signal Name
125	LG	I BRAKE SW2

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

3	4
1	2



Terminal No.	Color of Wire	Signal Name
1	V	–
2	LG	–

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
23	LG	–
27	LG	–

# STOP LAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	B46
Connector Name	WIRE TO WIRE
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

Terminal No.	Color of Wire	Signal Name
17	LA/W	—

Connector No.	B23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



151	150	149	148	147	146	145
160	159	158	157	156	155	154
153	152					

Terminal No.	Color of Wire	Signal Name
153	LA/W	O STOP LAMP 1
158	LA/Y	O STOP LAMP 2 NISSAN EUR

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
79	LA/W	O STOP LAMP 3

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
1	LA/Y	—
5	LA/Y	—

Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
---	---

Terminal No.	Color of Wire	Signal Name
1	B	—

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5
6	7	8	9	10
11	12			

Terminal No.	Color of Wire	Signal Name
8	LA/W	—

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# STOP LAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



5	4	<div></div>	3	2	1	
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
8	LA/Y	—

Connector No.	B102
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
2	LA/Y	—
4	B	—

Connector No.	B90
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
2	LA/Y	—
4	B	—

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
---	---

Connector No.	D503
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	B	—

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
17	Y	—

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BACK-UP LAMP

< WIRING DIAGRAM >

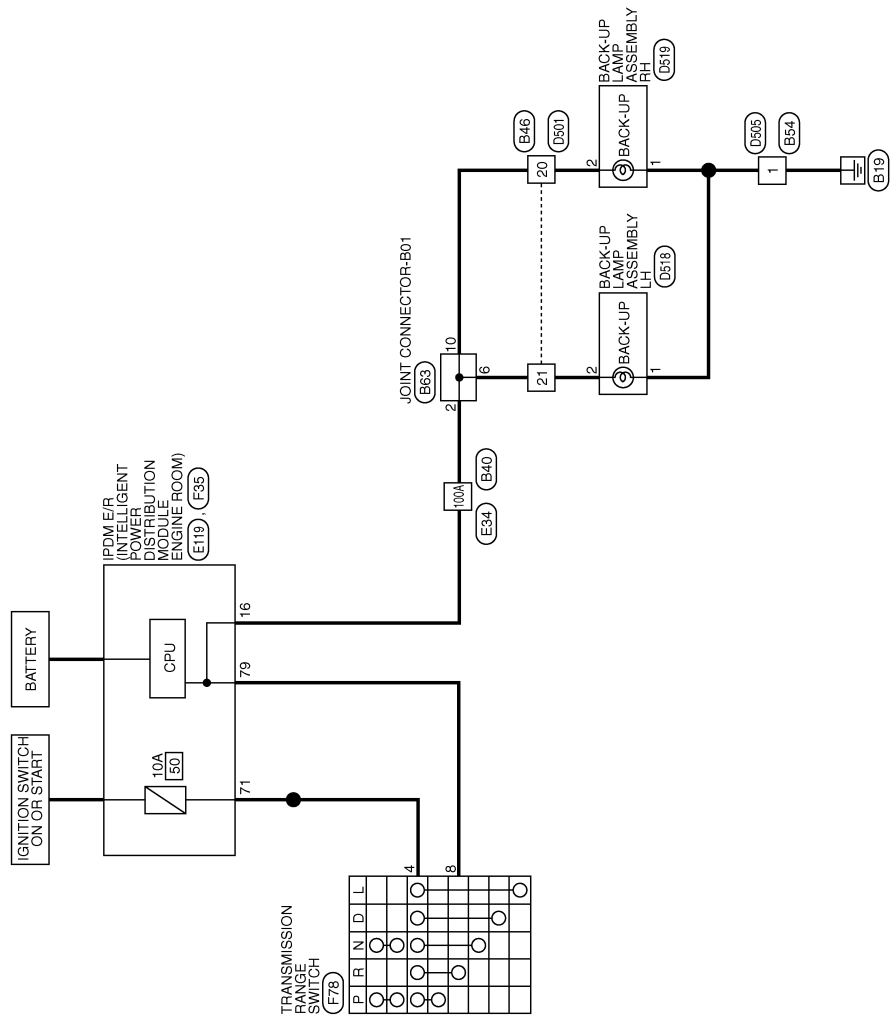
[LED HEADLAMP]

BACK-UP LAMP

Wiring Diagram

INFOID:0000000012710535

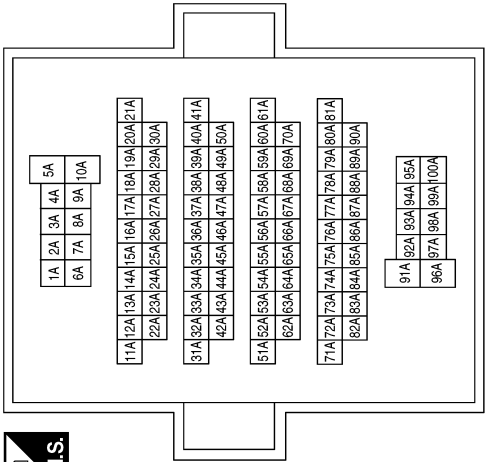
BACK-UP LAMP



EXL

BACK-UP LAMP CONNECTORS

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	GRAY



1A	2A	3A	4A	5A
6A	7A	8A	9A	10A

11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

22A	23A	24A	25A	26A	27A	28A	29A	30A
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31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A
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42A	43A	44A	45A	46A	47A	48A	49A	50A
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51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

62A	63A	64A	65A	66A	67A	68A	69A	70A
-----	-----	-----	-----	-----	-----	-----	-----	-----

71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

82A	83A	84A	85A	86A	87A	88A	89A	90A
-----	-----	-----	-----	-----	-----	-----	-----	-----

91A	92A	93A	94A	95A
96A	97A	98A	99A	100A



Connector No.	F35
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

71	70	69	68	<div></div>	67	66	65	
80	79	78	77	76	75	74	73	72



6	5	4	3	2	1
10	9	8	7		

Terminal No.	Color of Wire	Signal Name
71	SB	O IGN REVERSE SW AC VALVE
79	G	LI LIGHT REVERSE SW

Terminal No.	Color of Wire	Signal Name
4	W	—
8	G	—

Terminal No.	Color of Wire	Signal Name
100A	G	—

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



9	8	7	6	<div></div>	5	4	3	
18	17	16	15	14	13	12	11	10

Terminal No.	Color of Wire	Signal Name
16	G	O LIGHT REVERSE LAMP

Connector No.	F78
Connector Name	TRANSMISSION RANGE SWITCH
Connector Color	BLACK

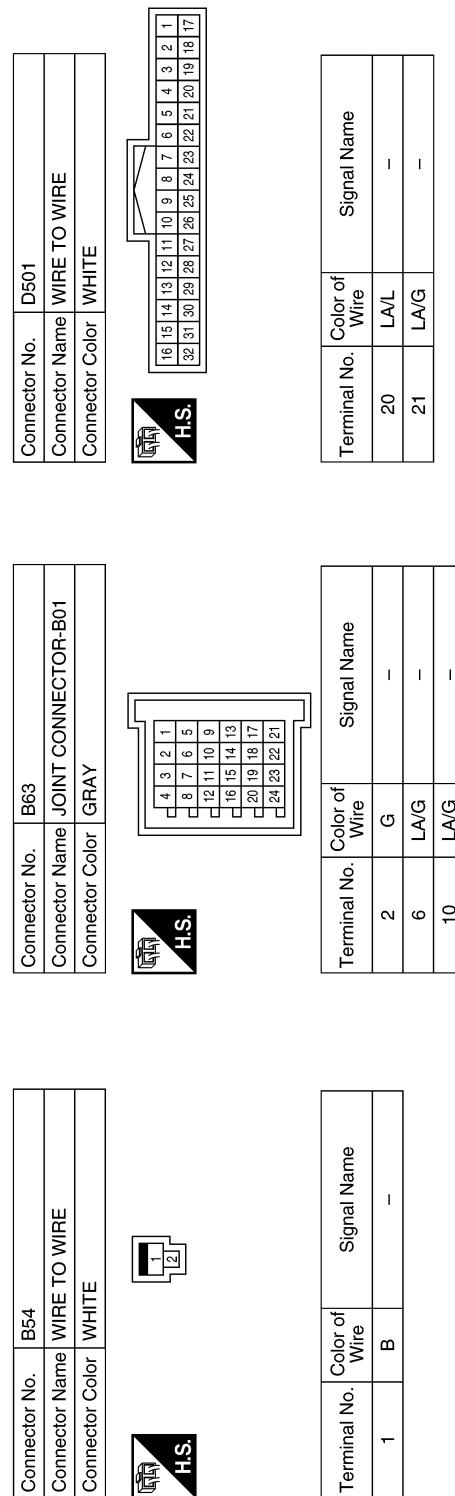
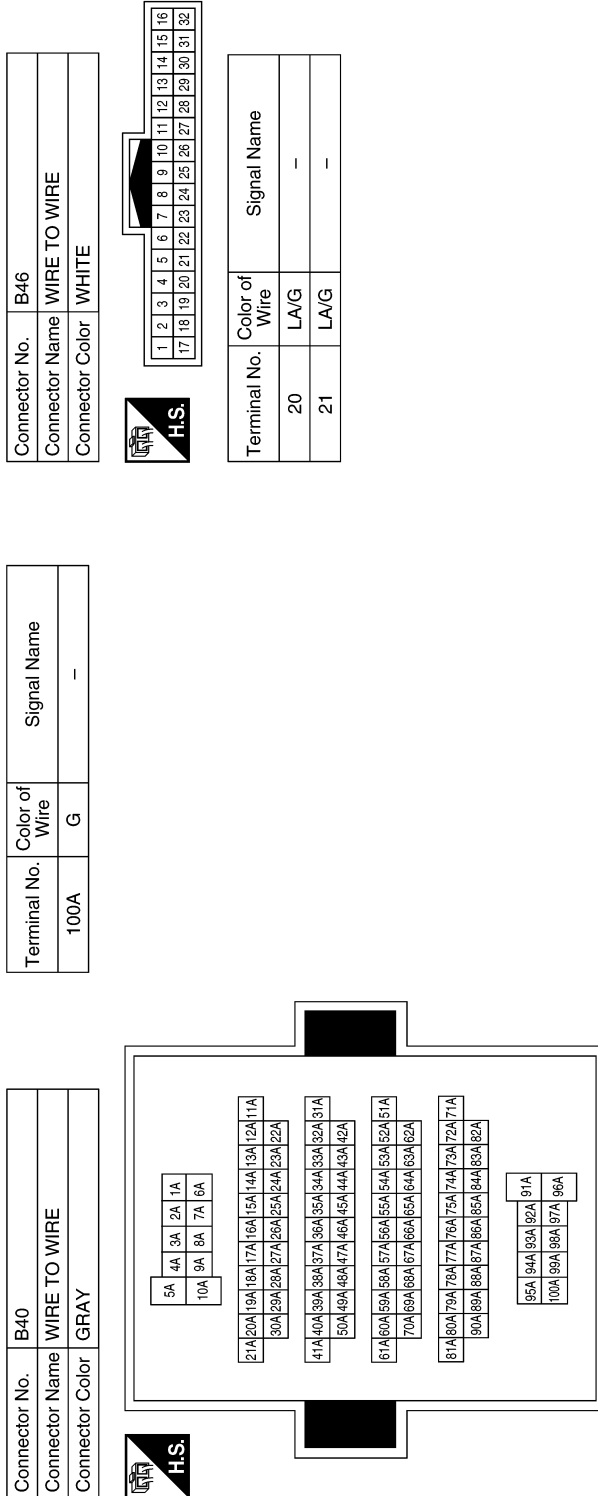


6	5	4	3	2	1
10	9	8	7		

# BACK-UP LAMP

< WIRING DIAGRAM >

[LED HEADLAMP]



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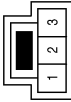
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BACK-UP LAMP

< WIRING DIAGRAM >

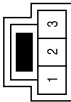
[LED HEADLAMP]

Connector No.	D519
Connector Name	BACK-UP LAMP ASSEMBLY RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	LA/L	-

Connector No.	D518
Connector Name	BACK-UP LAMP ASSEMBLY LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	LA/G	-

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LED HEADLAMP]

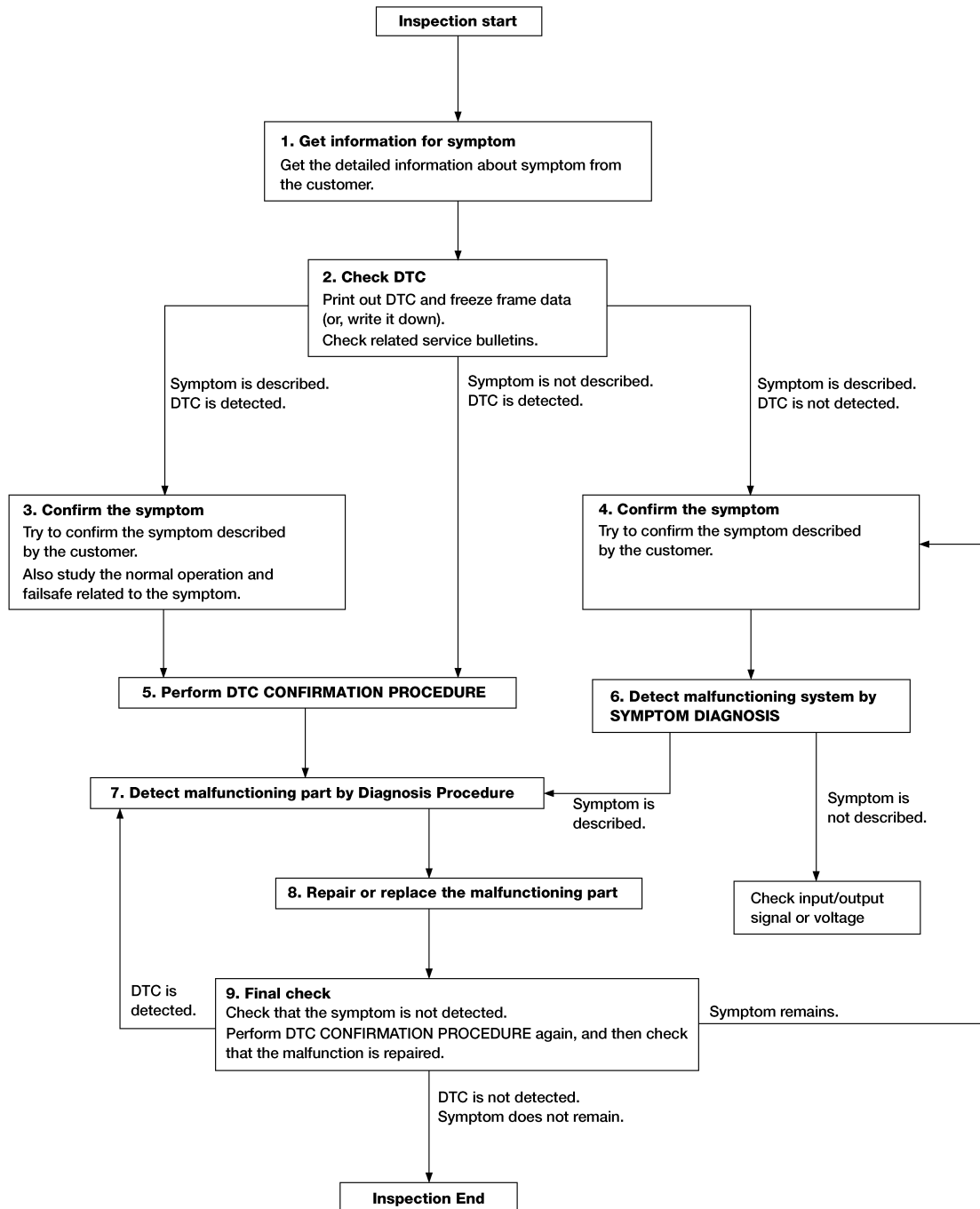
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:0000000012423103

#### OVERALL SEQUENCE



#### DETAILED FLOW

Revision: September 2015

EXL-213

2016 Rogue NAM

ALAI/A0158GB

## 1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

## 2.CHECK DTC

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

Are any symptoms described and any DTC detected?

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

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

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

## 3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

>> GO TO 6.

## 5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-47, "DTC Inspection Priority Chart"](#) (with Intelligent Key system) or [BCS-109, "DTC Inspection Priority Chart"](#) (without Intelligent Key system) (BCM) or [PCS-26, "DTC Index"](#) (IPDM E/R), and determine trouble diagnosis order.

### NOTE:

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

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-45, "Intermittent Incident"](#).

## 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.

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

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LED HEADLAMP]

### 7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-45, "Intermittent Incident"](#).

### 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

### 9. FINAL CHECK

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

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

Is DTC detected and does symptom remain?

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

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

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

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# LED HEADLAMP OPERATION INSPECTION

< BASIC INSPECTION >

[LED HEADLAMP]

## LED HEADLAMP OPERATION INSPECTION

### Diagnosis Procedure

INFOID:0000000012423108

#### 1. CHECK START

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

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to [EXL-241, "Symptom Table"](#).



# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT

#### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM)

#### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000012735183

Regarding Wiring Diagram information, refer to [BCS-51, "Wiring Diagram"](#).

### 1. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

#### Is the fuse blown?

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

### 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.
2. Check voltage between BCM connector M20 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M20	161	—	Battery voltage

#### Is the inspection result normal?

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

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	170	—	Yes
	171		

#### Is the inspection result normal?

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

#### BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM)

#### BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000012735184

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

### 1. CHECK FUSE

## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

Is the fuse blown?

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

### 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.
2. Check voltage between BCM connector M20 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M20	161	—	Battery voltage

Is the inspection result normal?

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

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	170	—	Yes
	171		

Is the inspection result normal?

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

## OPTICAL SENSOR

## Component Function Check

INFOID:0000000012423111

## 1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

## CONSULT DATA MONITOR

1. Turn ignition switch ON.
2. Select "OPTICAL SENSOR" in "Data Monitor" of "BCM (HEADLAMP)".
3. Turn lighting switch AUTO.
4. With the optical sensor illuminating, check the monitor status.

Monitor item	Condition		Voltage (Approx.)
OPTICAL SENSOR	Optical sensor	When illuminating	3.1 V or more *
		When shutting off light	0.6 V or less

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

Is the inspection result normal?

- YES >> Optical sensor is normal.  
 NO >> Refer to [EXL-219, "Diagnosis Procedure"](#).

## Diagnosis Procedure

INFOID:0000000012423112

## 1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(+)		(-)	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M13	1	Ground	5 V

Is the inspection result normal?

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

## 2.CHECK OPTICAL SENSOR GROUND INPUT

Check voltage between optical sensor harness connector and ground.

(+)		(-)	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M13	3	Ground	0 V

Is the inspection result normal?

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

## 3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

With illuminating the optical sensor, check voltage between optical sensor harness connector and ground.

# OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

(+)		(-)	Condition		Voltage (Approx.)
Optical sensor					
Connector	Terminal				
M13	2	Ground	Optical sensor	When illuminating	3.1 V or more *
				When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace the optical sensor.

## 4.CHECK OPTICAL SENSOR OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M13	1	M18	12	Yes

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M13	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137. "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace harness.

## 6.CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M13	3	M18	30	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137. "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace harness.

## 7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

## OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M13	2	M18	19	Yes

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

### 8.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M13	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace harness.

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# HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## HAZARD SWITCH

### Component Function Check

INFOID:0000000012423113

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

##### CONSULT DATA MONITOR

1. Turn ignition switch ON.
2. Select "HAZARD SW" in "Data Monitor" of "BCM (FLASHER)".
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 inspection result normal?

- YES >> Hazard switch circuit is normal.  
NO >> Refer to [EXL-222, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000012423114

#### 1.CHECK HAZARD SWITCH SIGNAL INPUT

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

(+)		(-)	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M26	2	Ground	Battery voltage

Is the inspection result normal?

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

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

1. Disconnect BCM connector.
2. Check continuity between hazard switch harness connector and BCM harness connector.

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M26	2	M18	11	Yes

Is the inspection result normal?

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

#### 3.CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M26	2		No

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).  
NO >> Repair or replace harness.

## HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### 4.CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M26	3		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to [EXL-126, "Removal and Installation"](#).

NO >> Repair or replace harness.

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# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## TURN SIGNAL LAMP CIRCUIT

### Description

INFOID:0000000012423115

The BCM monitors inputs from the combination switch (lighting and turn signal 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:0000000012423116

#### 1.CHECK TURN SIGNAL LAMP

##### CONSULT

1. Select "FLASHER" in "Active Test" of "BCM (FLASHER)".
2. While operating the test items, check that the turn signal lamp blinks.

**LH** : Turn signal lamps (LH) ON

**RH** : Turn signal lamps (RH) ON

**Off** : Turn signal lamps OFF

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to [EXL-224, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000012423117

Regarding Wiring Diagram information, refer to [EXL-187, "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 the front combination lamp harness connector, door mirror harness connector or the side turn signal harness connector or the rear combination lamp harness connector in question.
3. Turn the ignition switch ON.
4. Operate the turn signal switch.
5. While the turn signal is operating, check the voltage between the front combination lamp harness connector and ground.

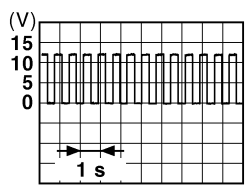
(+)		(-)	Voltage (Approx.)
Connector	Terminal		



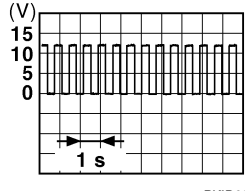
# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

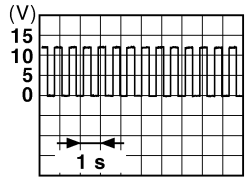
[LED HEADLAMP]

LH	E105			
RH	E103	1	Ground	 <p>PKID0926E</p>

6. While the turn signal is operating, check the voltage between the door mirror harness connector and ground.

(+) Connector		Terminal	(-)	Voltage (Approx.)
LH	D14			
RH	D107	13	Ground	 <p>PKID0926E</p>

7. While the turn signal is operating, check the voltage between the rear combination lamp harness connector and ground.

(+) Connector		Terminal	(-)	Voltage (Approx.)
LH	B90			
RH	B102	3	Ground	 <p>PKID0926E</p>

Are the inspection results normal?

YES >> GO TO 5.

NO >> GO TO 3.

## 3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect BCM harness connector E29, M18 or B23.
- Check continuity between the BCM harness connector E29 and the front combination lamp harness connector.

BCM			Front combination lamp		Continuity
Connector	Terminal		Connector	Terminal	
LH	E29	135	E105	1	Yes
RH		136	E103		

4. Check continuity between the BCM harness connector B23 and the door mirror harness connector.

BCM			Door mirror		Continuity
Connector	Terminal		Connector	Terminal	
LH	M18	2	D14	13	Yes
RH		3	D107		

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# TURN SIGNAL LAMP CIRCUIT

[LED HEADLAMP]

## < DTC/CIRCUIT DIAGNOSIS >

- Check continuity between the BCM harness connector B23 and the rear combination lamp harness connector.

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	B23	157	B90	3	Yes
RH		160	B102		

Are the inspection results normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

## 4.CHECK TURN SIGNAL LAMP SHORT CIRCUIT

- Check continuity between the BCM harness connector E29 and ground.

BCM			Ground	Continuity
Connector		Terminal		
LH	E29	135		No
RH		136		

- Check continuity between the BCM harness connector M18 and ground.

BCM			Ground	Continuity
Connector		Terminal		
LH	B18	2		No
RH		3		

- Check continuity between the BCM harness connector M23 and ground.

BCM			Ground	Continuity
Connector		Terminal		
LH	B23	157		No
RH		160		

Are the inspection results normal?

YES >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137. "Removal and Installation"](#) (without Intelligent Key system).

NO >> Repair or replace the harness or connectors.

## 5.CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- Turn the ignition switch OFF.
- Check continuity between the front combination lamp harness connector, the door mirror connector or the rear combination lamp harness connector in question and ground.

Front combination lamp			(-)	Continuity
Connector		Terminal		
LH	E105	2	Ground	Yes
RH	E103			

- Check continuity between the door mirror harness connector and ground.

Door mirror			(-)	Continuity
Connector		Terminal		

# TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

LH	D14	14	Ground	Yes
RH	D107			

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

Rear combination lamp		(-)	Continuity
Connector	Terminal		
LH	B90	Ground	Yes
RH	B102		

Are the inspection results normal?

- YES >> Replace the malfunctioning lamp.
- NO >> Repair or replace the harness or connectors.

EXL

# B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B121A FRONT FOG LAMP LH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423118

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B121A	FR FOG LAMP LH PWR SPLY CIRC [CIRC SHORT TO GROUND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

#### Is DTC B121A detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-228, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423119

#### 1.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

1. Disconnect fog lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	51		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between fog lamp harness connector and ground.

Fog lamp		Ground	Continuity
Connector	Terminal		
LH	E222	1	No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1231 DAYTIME RUNNING LIGHT RH POWER SUPPLY CIRCUIT

### DTC Logic


INFOID:0000000012423120

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B1231	DTRL RH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground in the daytime running lamp circuit is detected.	<ul style="list-style-type: none"><li>IPDM E/R</li><li>Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B1231 detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-229, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423121

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	58		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E240	8		No

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B1256 FRONT FOG LAMP RH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423122

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B1256	FR FOG LAMP RH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground is detected.	<ul style="list-style-type: none"><li>IPDM E/R</li><li>Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

- Turn ignition switch ON.
- Perform "Self Diagnostic Result".

#### Is DTC B1256 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-230, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423123

#### 1.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

- Disconnect fog lamp connector and IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	57		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK FOG LAMP SHORT CIRCUIT TO GROUND

- Reconnect IPDM E/R connector.
- Check continuity between fog lamp harness connector and ground.

Fog lamp			Ground	Continuity
Connector		Terminal		
RH	E221	1		No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20CB DAYTIME RUNNING LIGHT LH POWER SUPPLY CIRCUIT

### DTC Logic


INFOID:0000000012423130

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B02CB	DTRL LH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground is detected.	<ul style="list-style-type: none"><li>IPDM E/R</li><li>Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B02CB detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-231, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423131

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	49		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between fog lamp harness connector and ground.

Front combination lamp		Ground	Continuity
Connector	Terminal		
LH	E239		No

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

## B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### B20CE HEADLAMP (HI) LH POWER SUPPLY CIRCUIT

#### DTC Logic


INFOID:0000000012423132

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20CE	DTRL LH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

##### Is DTC B20CE detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-232, "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423133

##### 1.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	59		No

##### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
LH	E239	5		No

##### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).



# B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20CF HEADLAMP (HI) RH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423134

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20CF	HL (HI) RH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B20CF detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-233, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423135

#### 1.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	54		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK HEAD LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E240	5		No

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20D0 HEADLAMP (LO) LH POWER SUPPLY CIRCUIT

### DTC Logic


INFOID:0000000012423136

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D0	HI (LO) RH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

#### Is DTC B20D0 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-234, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423137

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	50		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
LH	E239	6		No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20D1 HEADLAMP (LO) RH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423138

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D1	HL (LO) RH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.

2. Perform "Self Diagnostic Result".

Is DTC B20D1 detected?

YES >> Proceed to diagnosis procedure. Refer to [EXL-235, "Diagnosis Procedure"](#).

NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423139

#### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connector and IPDM E/R connector.

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	62		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.

2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E240	6		No

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

## B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### B20D2 PARKING LAMP POWER SUPPLY CIRCUIT

#### DTC Logic

INFOID:0000000012423140

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D2	PARKING LAMP PWR SPLY CIRC [CIRC SHORT TO GROUND]	When a short to ground is detected in the parking lamp power supply circuit.	• Short to ground

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

Is DTC B20D2 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-236, "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423141

##### 1.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp connectors and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R			Ground	Continuity
Connector		Terminal		
LH	E217	56		No
RH	E218	61		

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK FRONT COMBINATION LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp harness connector and ground.

IPDM E/R			Ground	Continuity
Connector		Terminal		
LH	E236 (parking lamp)	12		No
	E235 (side marker lamp)	9		
RH	E234 (parking lamp)	12		
	E233 (side marker lamp)	9		

Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20D4 TAIL LAMP LH POWER SUPPLY CIRCUIT

### DTC Logic

INFOID:0000000012423142

### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D4	TAIL LAMP LH PWR SPLY CIRC [CIRC SHORT TO GRND]	Short to ground	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK SELF DIAGNOSTIC RESULT

Ⓐ With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

#### Is DTC B20D4 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-237, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423143

#### 1.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Disconnect rear combination lamp (LH), license plate lamps, back up lamp connectors and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E119	4		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
LH	B90	1		No

#### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

## B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### B20D5 TAIL LAMP RH POWER SUPPLY CIRCUIT

#### DTC Logic

INFOID:0000000012423144

#### DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
B20D5	TAIL LAMP RH PWR SPLY CIRC [CIRC SHORT TO GRND]	When a short circuit to ground is detected in the tail lamp supply voltage circuit.	<ul style="list-style-type: none"><li>• IPDM E/R</li><li>• Short to ground</li></ul>

#### DTC CONFIRMATION PROCEDURE

##### 1.CHECK SELF DIAGNOSTIC RESULT

 With CONSULT.

1. Turn ignition switch ON.
2. Perform "Self Diagnostic Result".

##### Is DTC B20D5 detected?

- YES >> Proceed to diagnosis procedure. Refer to [EXL-238, "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423145

##### 1.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Disconnect rear combination lamp (RH), back up lamp connectors and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E119	17		No

##### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK TAIL LAMP SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
RH	B102	1		No

##### Is the inspection result normal?

- YES >> Refer to [GI-45, "Intermittent Incident"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

# B20E2 LED HEADLAMP RH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

## B20E2 LED HEADLAMP RH

### DTC Logic

INFOID:0000000012423148

### DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B20E2	LED HEADLAMP RH [CMPNENT INTERNAL MLFNCTN]	Detection signal circuit short to ground.	<ul style="list-style-type: none"><li>• Harness or connectors between the front combination lamp RH and the IPDM E/R</li><li>• IPDM E/R</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" with CONSULT.

#### Is DTC detected?

- YES >> Refer to [EXL-239, "Diagnosis Procedure"](#).  
NO >> Inspection End.

### Diagnosis Procedure

INFOID:0000000012423149

#### 1.CHECK FRONT COMBINATION LAMP RH SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp RH connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E218	60		No

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

#### 2.CHECK FRONT COMBINATION LAMP RH SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp RH harness connector and ground.

Front combination lamp RH		Ground	Ground
Connector	Terminal		
E240	7		No

#### Is the inspection result normal?

- YES >> Replace front combination lamp RH. Refer to [EXL-253, "Removal and Installation"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

## B20E3 LED HEADLAMP LH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

### B20E3 LED HEADLAMP LH

#### DTC Logic

INFOID:0000000012423150

#### DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B20E3	LED HEADLAMP LH [CMPNENT INTERNAL MLFNCTN]	Detection signal circuit short to ground	<ul style="list-style-type: none"><li>• Harness or connectors between the front combination lamp LH and the IPDM E/R</li><li>• IPDM E/R</li></ul>

#### DTC CONFIRMATION PROCEDURE

##### 1.SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" with CONSULT.

Is DTC detected?

- YES >> Refer to [EXL-240, "Diagnosis Procedure"](#).  
NO >> Inspection End.

#### Diagnosis Procedure

INFOID:0000000012423151

##### 1.CHECK FRONT COMBINATION LAMP LH SHORT CIRCUIT TO GROUND

1. Disconnect front combination lamp LH connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E217	53		No

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace harness.

##### 2.CHECK FRONT COMBINATION LAMP LH SHORT CIRCUIT TO GROUND

1. Reconnect IPDM E/R connector.
2. Check continuity between front combination lamp LH harness connector and ground.

Front combination lamp LH		Ground	Ground
Connector	Terminal		
E239	7		No

Is the inspection result normal?

- YES >> Replace front combination lamp LH. Refer to [EXL-253, "Removal and Installation"](#).  
NO >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).



# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## SYMPTOM DIAGNOSIS

### EXTERIOR LIGHTING SYSTEM SYMPTOMS

#### Symptom Table

INFOID:0000000012423152

#### CAUTION:

Perform the “Self Diagnostic Result” with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON.	One side	<ul style="list-style-type: none"> <li>Fuse</li> <li>LED</li> <li>Harness between IPDM E/R and headlamp (HI)</li> <li>Harness between headlamp (HI) and ground</li> <li>IPDM E/R</li> </ul>	Headlamp (HI) circuit Refer to <a href="#">EXL-232, "DTC Logic"</a> (LH) or <a href="#">EXL-233, "DTC Logic"</a> (RH).
	Both sides	<b>Symptom diagnosis</b> “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to <a href="#">EXL-232, "DTC Logic"</a> (LH) or <a href="#">EXL-233, "DTC Logic"</a> (RH).	
High beam indicator lamp is not turned ON. [Headlamp (HI) is turned ON.]		Combination meter	<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 (LO) is not turned ON.	One side	<ul style="list-style-type: none"> <li>Fuse</li> <li>LED</li> <li>Harness between IPDM E/R and headlamp lamp (LO)</li> <li>Harness between headlamp (LO) and ground</li> <li>IPDM E/R</li> </ul>	Headlamp (LO) circuit Refer to <a href="#">EXL-234, "DTC Logic"</a> (LH) or <a href="#">EXL-235, "DTC Logic"</a> (RH).
	Both sides	<b>Symptom diagnosis</b> “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to <a href="#">EXL-234, "DTC Logic"</a> (LH) or <a href="#">EXL-235, "DTC Logic"</a> (RH).	
Each lamp is not turned ON/OFF with lighting switch AUTO.		<ul style="list-style-type: none"> <li>Combination switch</li> <li>Harness between combination switch and BCM</li> <li>BCM</li> </ul>	Combination switch Refer to <a href="#">BCS-74, "Symptom Table"</a> (with Intelligent Key system) or <a href="#">BCS-135, "Symptom Table"</a> (without Intelligent Key system).
		<ul style="list-style-type: none"> <li>Optical sensor</li> <li>Harness between optical sensor and BCM</li> <li>BCM</li> </ul>	Optical sensor Refer to <a href="#">EXL-88, "Component Function Check"</a> .
Daytime running light is not turned ON. [Headlamp (HI) is turned ON.]		<ul style="list-style-type: none"> <li>Fuse</li> <li>Harness between IPDM E/R and front combination lamp</li> <li>IPDM E/R</li> <li>BCM</li> <li>ECM</li> <li>Combination meter</li> </ul>	<ul style="list-style-type: none"> <li>Daytime running light circuit Refer to <a href="#">EXL-229, "DTC Logic"</a>.</li> <li>BCM (HEADLAMP) “Data Monitor” “ENGINE STATE”</li> <li>Combination meter “Data Monitor” “PKB SW”</li> <li>BCM (HEADLAMP) “Active Test” “DAYTIME RUNNING LIGHT”</li> </ul>
Parking lamp is not turned ON.		<ul style="list-style-type: none"> <li>Fuse</li> <li>Parking lamp bulb</li> <li>Harness between IPDM E/R and front combination lamp</li> <li>IPDM E/R</li> </ul>	Parking lamp circuit Refer to <a href="#">EXL-236, "DTC Logic"</a> .

# EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symptom		Possible cause	Inspection item
Front side marker lamp is not turned ON.		<ul style="list-style-type: none"> <li>• Front side marker lamp bulb</li> <li>• Harness between IPDM E/R and front side marker lamp</li> <li>• Harness between front side marker lamp and ground</li> <li>• IPDM E/R</li> </ul>	Front side marker lamp circuit Refer to <a href="#">EXL-236, "DTC Logic"</a> .
License plate lamp is not turned ON.		<ul style="list-style-type: none"> <li>• License plate lamp bulb</li> <li>• Harness between IPDM E/R and license plate lamp</li> <li>• Harness between license plate lamp and ground</li> </ul>	License plate lamp circuit Refer to <a href="#">EXL-237, "DTC Logic"</a> .
Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned ON.		<b>Symptom diagnosis</b> "PARKING, SIDE MARKER, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to <a href="#">EXL-246, "Description"</a> .	
Tail lamp indicator is not turned ON. (Exterior lamps are turned ON.)		Combination meter	<ul style="list-style-type: none"> <li>• Combination meter "Data Monitor" "LIGHT IND"</li> <li>• BCM (HEADLAMP) "Active Test" "TAIL LAMP"</li> </ul>
Turn signal lamp does not blink.	Indicator lamp is normal. (Applicable side performs high flasher activation.)	<ul style="list-style-type: none"> <li>• Turn signal lamp bulb</li> <li>• Door mirror</li> <li>• Harness between BCM and each turn signal lamp</li> <li>• Harness between each turn signal lamp and ground</li> </ul>	Turn signal lamp circuit Refer to <a href="#">EXL-224, "Component Function Check"</a> .
Turn signal indicator lamp does not blink. (Turn signal lamp is normal.)	One side	Combination meter	—
	Both sides (Always)	<ul style="list-style-type: none"> <li>• Turn signal indicator lamp signal</li> <li>• BCM</li> <li>• Combination meter</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 (Only when activating hazard warning lamp with ignition switch OFF)	<ul style="list-style-type: none"> <li>• Combination meter power supply and ground circuit</li> <li>• Combination meter</li> </ul>	Combination meter Power supply and ground circuit Refer to <a href="#">MWI-60, "COMBINATION METER : Diagnosis Procedure"</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 hazard switch and BCM</li> <li>• Harness between hazard switch and ground</li> <li>• BCM</li> </ul>	Hazard switch circuit Refer to <a href="#">EXL-91, "Component Function Check"</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 front fog lamp</li> <li>• Harness between front fog lamp and ground</li> <li>• IPDM E/R</li> </ul>	Front fog lamp circuit Refer to <a href="#">EXL-228, "DTC Logic"</a> (LH) or <a href="#">EXL-230, "DTC Logic"</a> (RH).
	Both sides	<b>Symptom diagnosis</b> "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to <a href="#">EXL-228, "DTC Logic"</a> (LH) or <a href="#">EXL-230, "DTC Logic"</a> (RH).	

## NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

### NORMAL OPERATING CONDITION

#### Description

INFOID:0000000012423153

#### AUTO LIGHT SYSTEM

The headlamp may not be turned ON/OFF immediately after passing dark area or bright area (short tunnel, sky bridge, shadowed area, etc.) while using the auto light system. This is caused by the control difference. This is normal.

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# BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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

### Description

INFOID:0000000012423154

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

### Diagnosis Procedure

INFOID:0000000012423155

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "HEADLAMP (HI)" in "Data Monitor" of "IPDM E/R".
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HEADLAMP (HI)	Lighting switch (2ND)	HI or PASS	On
		LO	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

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

Check headlamp (HI) circuit. Refer to [EXL-232, "DTC Logic"](#) (LH) or [EXL-233, "DTC Logic"](#) (RH).

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning part.

# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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

### Description

INFOID:0000000012423156

Both side headlamps (LO) are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000012423157

#### 1.CHECK COMBINATION SWITCH

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "HEADLAMP (LO)" in "Data Monitor" of "IPDM E/R".
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HEADLAMP (LO)	Lighting switch	2ND	On
		OFF	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

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

Check headlamp (LO) circuit. Refer to [EXL-234, "DTC Logic"](#) (LH) or [EXL-235, "DTC Logic"](#) (RH).

Is the inspection result normal?

YES >> Refer to [GI-45, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

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

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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

### Description

INFOID:0000000012423158

The parking, license plate, side marker, tail lamps and each illumination are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000012423159

#### 1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "TAIL LAMP" in "Data Monitor" of "IPDM E/R".
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
TAIL LAMP	Lighting switch	1ST	On
		OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

### Description

INFOID:0000000012423160

The front fog lamps are not turned ON in any condition.

### Diagnosis Procedure

INFOID:0000000012423161

#### 1.CHECK COMBINATION SWITCH

Check combination switch. Refer to [BCS-74, "Symptom Table"](#) (with Intelligent Key system) or [BCS-135, "Symptom Table"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning part.

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

##### CONSULT DATA MONITOR

1. Select "FRONT FOG LAMP REQ" in "Data Monitor" of "IPDM E/R".
2. With operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FRONT FOG LAMP REQ	Front fog lamp switch (With lighting switch 2ND)	ON	On
		OFF	Off

Is the item status normal?

YES >> Replace IPDM E/R. Refer to [PCS-44, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-137, "Removal and Installation"](#) (without Intelligent Key system).

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## PERIODIC MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT

#### Inspection

INFOID:0000000012423162

#### PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

- Make sure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Make sure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Coolant and engine oil filled to correct level, and fuel tank full.
- Remove cargo and/or luggage to maintain an unloaded vehicle condition.
- Confirm spare tire, jack and tools are properly stowed.
- Carefully wipe off any dirt from headlamp lens.

#### CAUTION:

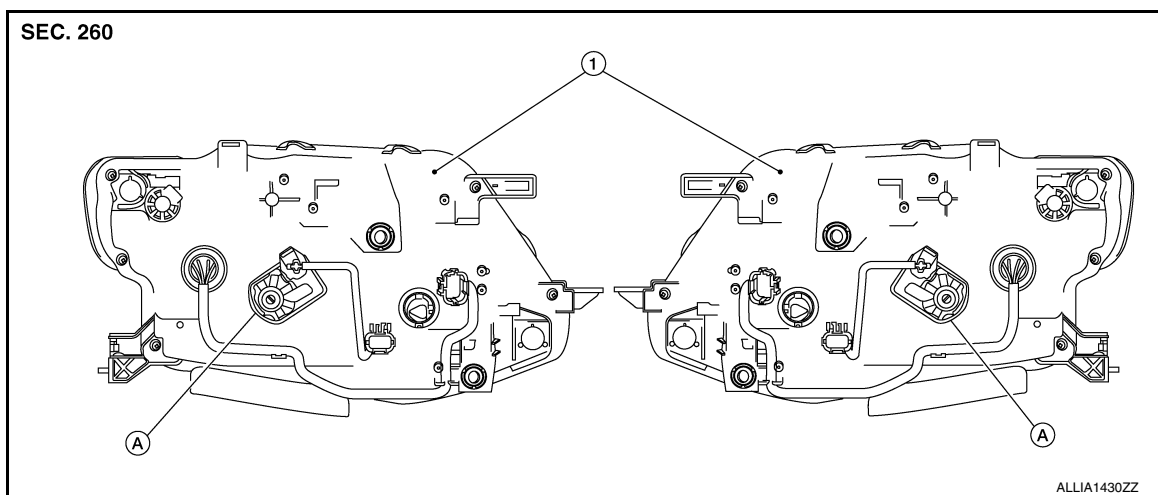
**Do not use organic solvent (thinner, gasoline etc.)**

- Place a driver or equivalent weight of 68.5 kg (150 lb) on the driver seat.
- By hand, bounce the front and rear of the vehicle to settle the suspension and eliminate any static load.
- Place the front tires in the straight ahead position.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

#### NOTE:

- For headlamp aiming details, refer to regulations in your area.
- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Use adjusting screw to perform aiming adjustment.
- Perform headlamp aiming if:
  - The vehicle front body has been repaired;
  - The front combination lamp has been removed or replaced;
  - Any outfitting has been installed;
  - The vehicle's standard load condition has been substantially increased.

#### AIMING ADJUSTMENT SCREW



1. Front combination lamp  
(view from rear)

A. Headlamp HI/LO (UP/DOWN)  
adjustment screw



# HEADLAMP AIMING ADJUSTMENT

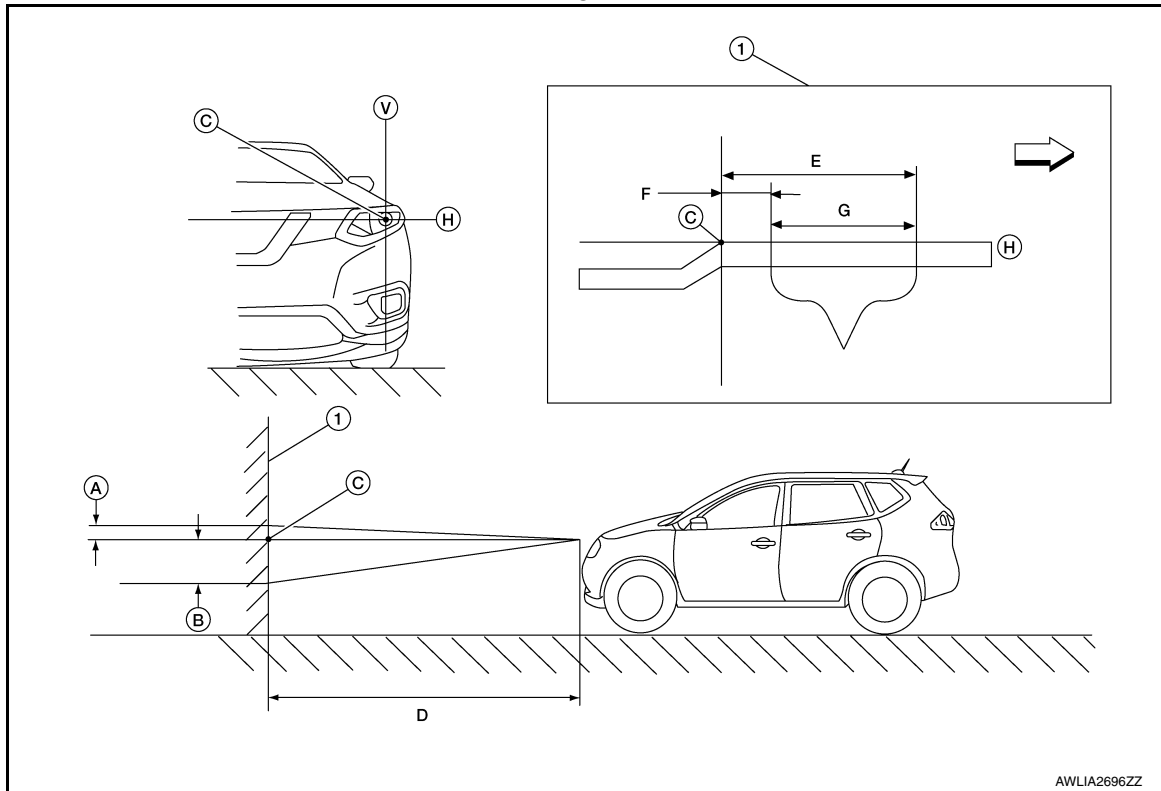
< PERIODIC MAINTENANCE >

[LED HEADLAMP]

## Aiming Adjustment Procedure

INFOID:0000000012423163

Aiming Chart



- |   |   |   |
|---|---|---|
| 1. Adjustment screen  | A. Highest cutoff line height                                     | B. Lowest cutoff line height  |
| C. Headlamp bulb center (H-V point)   | D. Distance of headlamp aiming screen from vehicle 7.62 m (25 ft) | E. Maximum aim evaluation distance from vertical center on aiming screen 399 mm (3°R) |
| F. Minimum aim evaluation distance from vertical center on aiming screen 133 mm (1°R) | G. Aim evaluation area  | H. Horizontal aiming evaluation line  |
| V. Vertical aiming evaluation line  | ↔ Right   |   |

**A (Highest cutoff line height)**

**13.3 mm (0.5 in)**

**0.1° up**

**B (Lowest cutoff line height)**

**53.2 mm (2.1 in)**

**0.4° down**

### LOW BEAM AND HIGH BEAM

#### NOTE:

- Basic illuminating area for evaluation and/or adjustment should be within range shown on aiming chart.

- Use adjustment screw to perform aiming adjustment.

- Ensure fog lamps are turned off.

- Block the opposite headlamp from projecting a beam pattern onto the adjustment screen, using a suitable object. Aim each headlamp individually.

#### CAUTION:

**Do not cover the lens surface with a tape etc. The lens is made of resin.**

- Place the screen on the same level and flat surface as the vehicle.

#### NOTE:

Surface should be free of any debris that would cause a difference between the headlamp center and the adjustment screen.

- Face the front of the vehicle to the screen and measure distance between the headlamp center and the screen surface.

## HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

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**Distance between the headlamp center and the screen (D) : 7.62 m (25 ft)**

5. Start the engine. Turn the headlamp on.
6. Determine the preferred vertical aim range dimensions, using the aiming chart.
7. Measure the projected beam within the aim evaluation segment on the screen.
8. Adjust the beam pattern of each headlamp until the aim evaluation segment (the area relative to both the highest and lowest cutoff line height) is positioned within the vertical aim range dimensions shown on the aiming chart.

# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

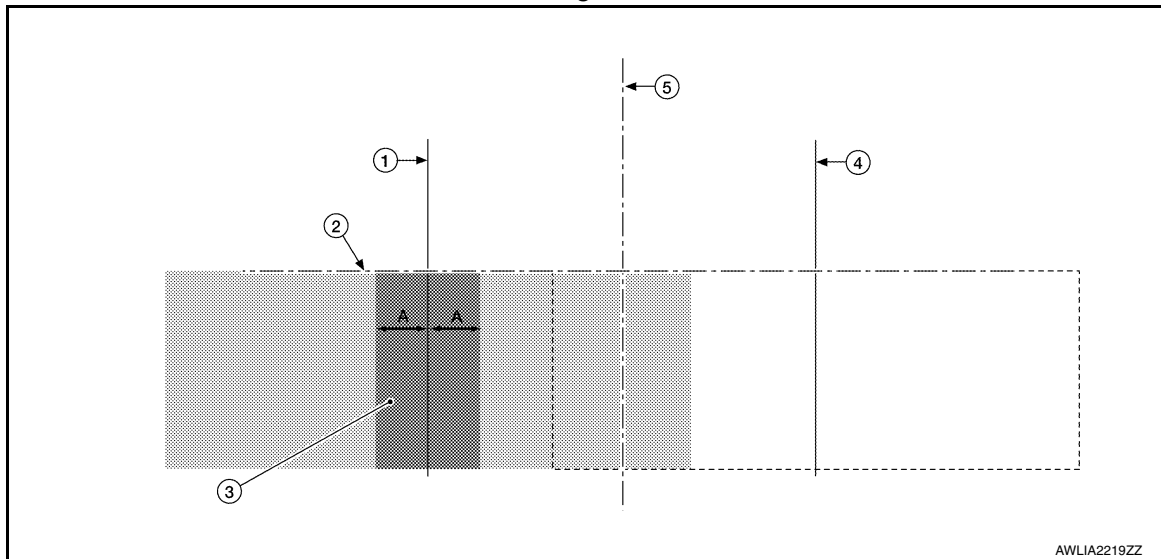
[LED HEADLAMP]

## FRONT FOG LAMP AIMING ADJUSTMENT

### Aiming Adjustment Procedure

INFOID:000000012423164

Aiming Chart



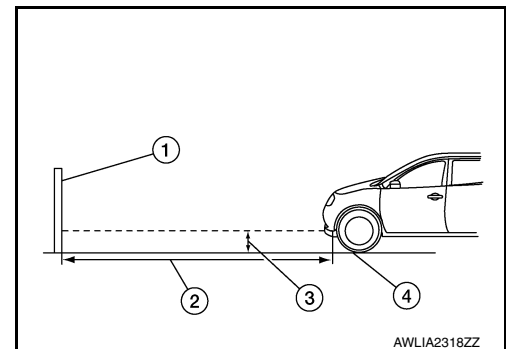
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|--|-----------------------------|--|
| 1. Vertical center line of front fog lamp (LH) | 2. Lamp center above ground | 3. Front fog lamp high intensity area (LH) |
| 4. Vertical center line of front fog lamp (RH) | 5. Vertical center axis     | A. 100mm (4in)                             |

#### NOTE:

- (LH) Front fog lamp aiming specifications shown, (RH) similar.
- Check the following conditions before performing the aiming adjustment.
  - Keep all tires inflated to correct pressure.
  - Place vehicle on level ground.
  - See that 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 driver seat.
  - When performing adjustment, if necessary, cover the headlamps and opposite front fog lamp.

1. Set the distance between the screen and the center of the front fog lamp lens as shown.

- (1) Aiming screen or a matte white surface
- (2) 7.62 m (25 ft)
- (3) Floor to center of front fog lamp lens
- (4) Floor



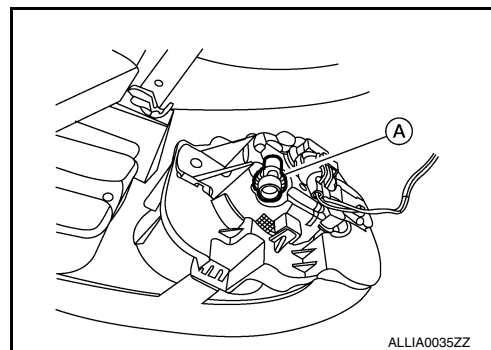
2. Turn front fog lamps ON.

## FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

3. Access adjusting screw (A) from underneath front bumper fascia. Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone is at the front fog lamp centers above ground.



# FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

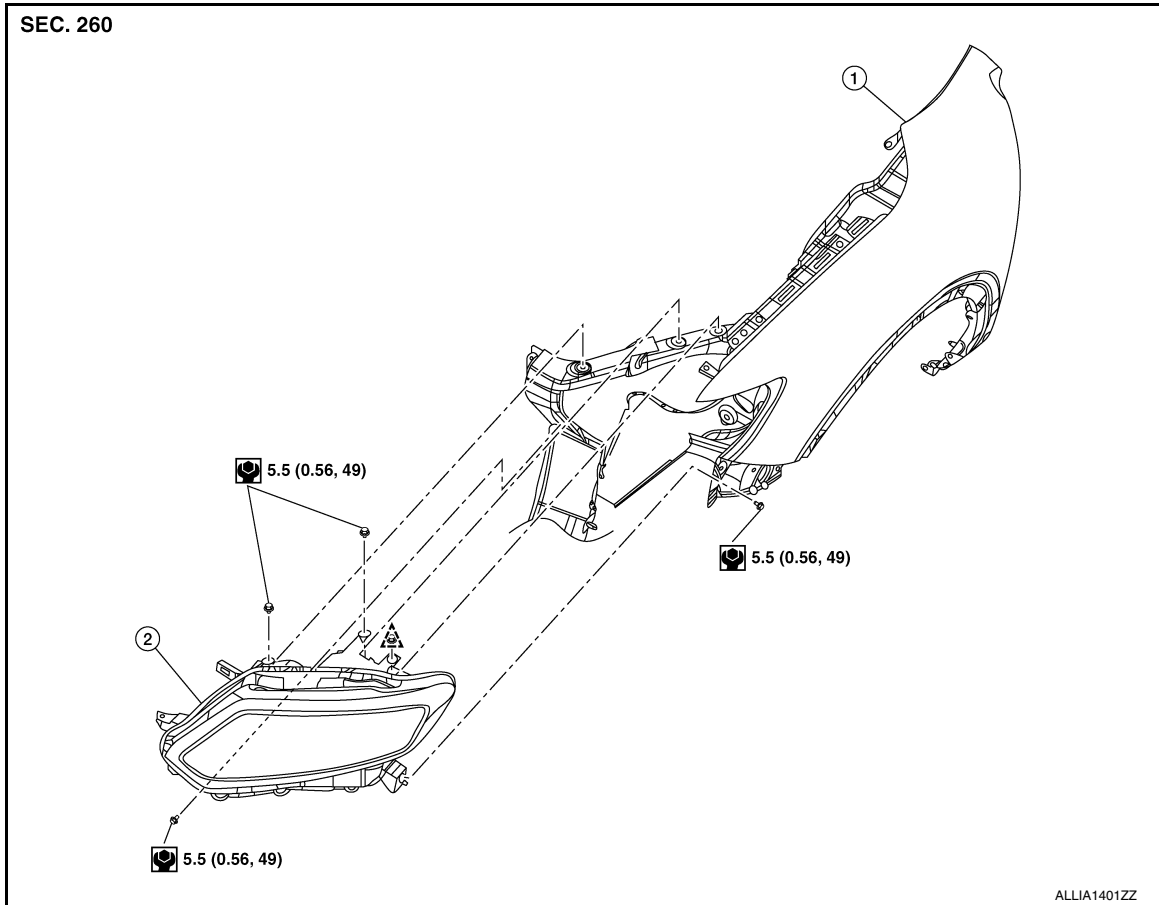
[LED HEADLAMP]

## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012423165



1. Front fender

2. Front combination lamp

Clip

### Removal and Installation

INFOID:0000000012423166

#### REMOVAL

1. Remove front bumper fascia. Refer to [EXT-17, "Removal and Installation"](#).
2. Remove front combination lamp bolts and clip.
3. Pull front combination lamp forward.
4. 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-115, "Inspection"](#).

### Bulb Replacement

INFOID:0000000012423167

#### HEADLAMP (LOW BEAM) BULB

The headlamp (low beam) bulb is not serviced separately. Refer to [EXL-253, "Removal and Installation"](#).

#### HEADLAMP (HIGH BEAM) BULB

The headlamp (high beam) bulb is not serviced separately. Refer to [EXL-253, "Removal and Installation"](#).

## FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

### SIDE MARKER LAMP BULB

The side marker lamp bulb is not serviced separately. Refer to [EXL-253. "Removal and Installation"](#).

### TURN SIGNAL LAMP BULB

#### Removal

1. Rotate bulb socket counterclockwise and remove from the front combination lamp.
2. Remove the bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install the bulb socket securely for watertightness.**

# FRONT FOG LAMP

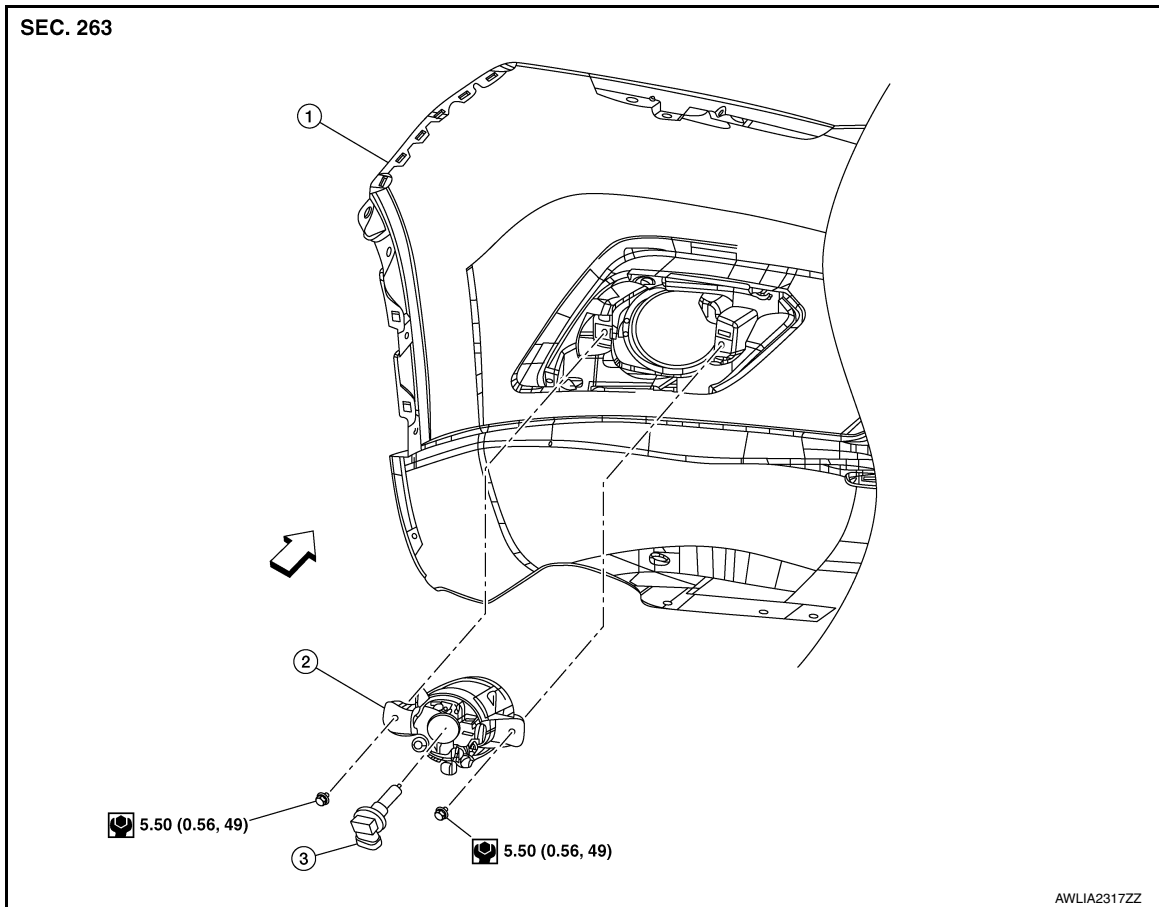
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## FRONT FOG LAMP

### Exploded View

INFOID:0000000012423170



1. Front bumper fascia

2. Front fog lamp

3. Front fog lamp bulb

⇐ Front

## Removal and Installation

INFOID:0000000012423171

EXL

### REMOVAL

1. Partially remove front fender protector. Refer to [EXT-29. "FENDER PROTECTOR : Exploded View"](#).
2. Disconnect the harness connector from the front fog lamp.
3. Remove front fog lamp bolts and front fog lamp.

### INSTALLATION

Installation in the reverse order of removal.

#### NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to [EXL-118. "Aiming Adjustment Procedure"](#).

### Bulb Replacement

INFOID:0000000012423172

#### WARNING:

Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.

#### CAUTION:

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.

## FRONT FOG LAMP

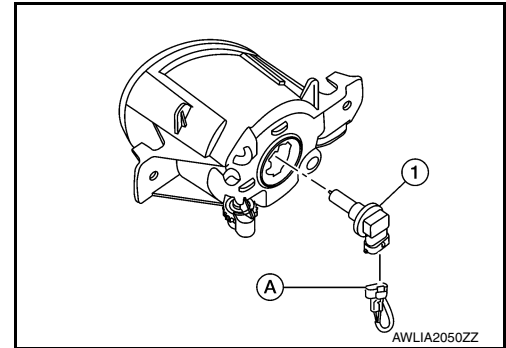
### < REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- 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.

#### REMOVAL

1. Partially remove front fender protector. Refer to [EXT-29. "FENDER PROTECTOR : Exploded View"](#).
2. Disconnect the harness connector (A) from the front fog lamp.
3. Rotate bulb (1) counterclockwise and remove.



#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install the bulb socket securely for watertightness.**



# OPTICAL SENSOR

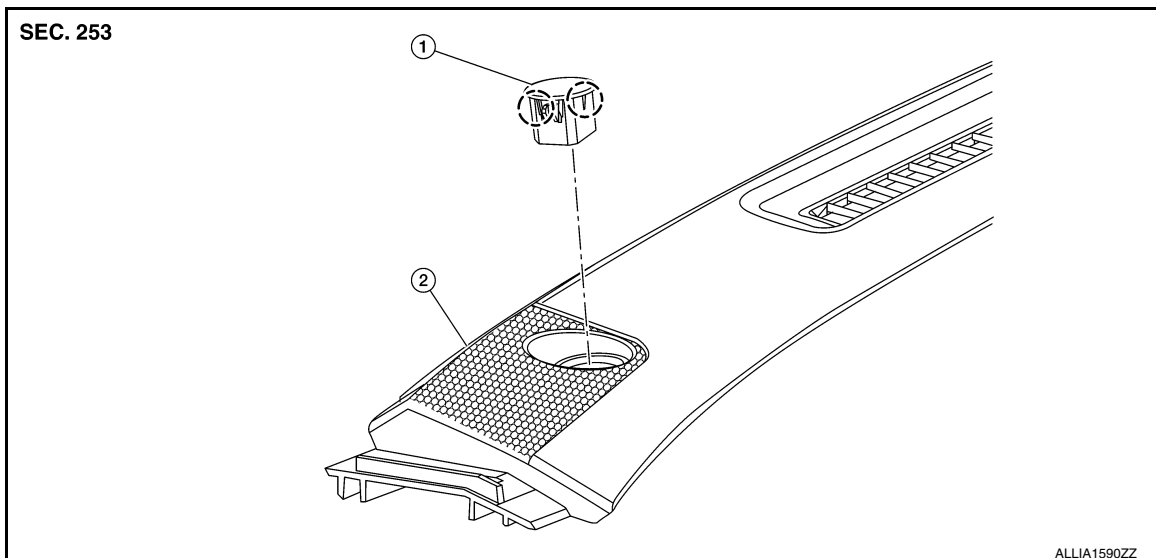
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## OPTICAL SENSOR

### Exploded View

INFOID:0000000012423173



1. Optical sensor

2. Defroster grille

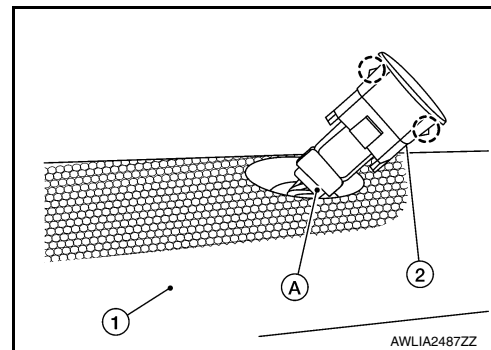
3. Pawl

### Removal and Installation

INFOID:0000000012423174

#### REMOVAL

1. Release the optical sensor (2) from defroster grille (1) using a suitable tool.
2. Disconnect the harness connector (A) from the optical sensor (2) and remove.



#### INSTALLATION

Installation is in the reverse order of removal.

# COMBINATION SWITCH

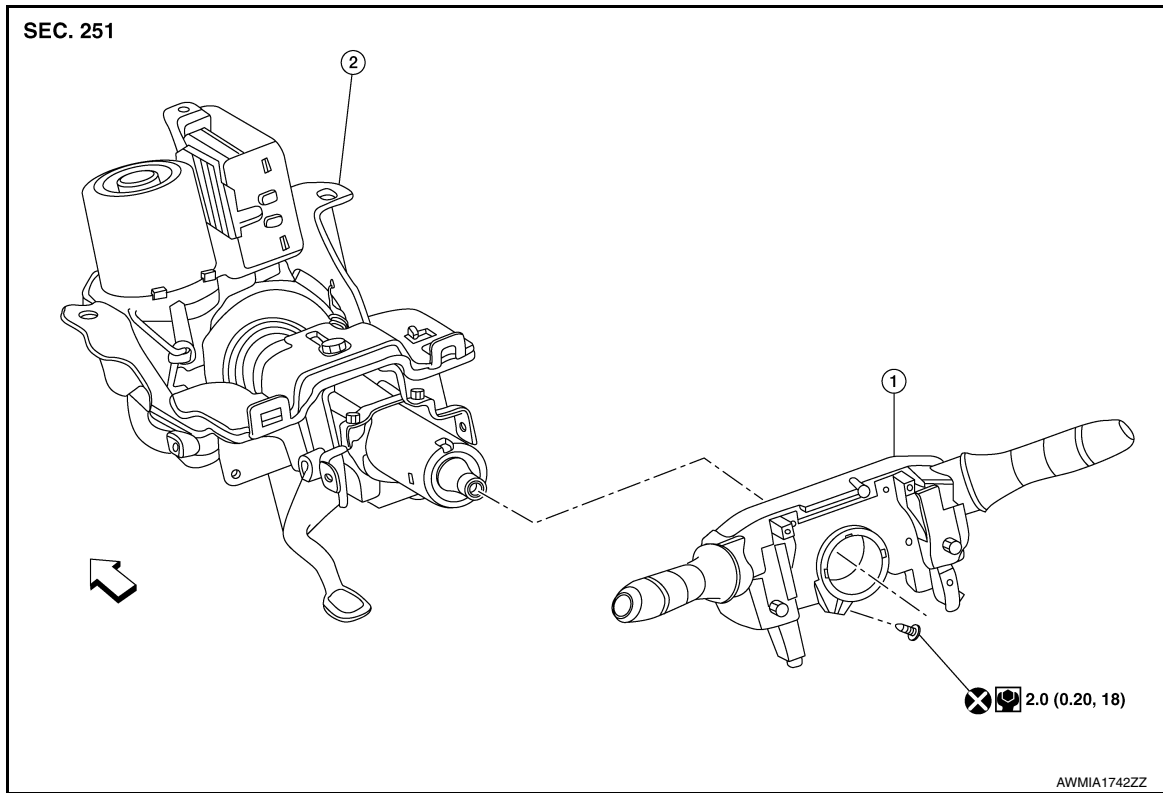
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## COMBINATION SWITCH

### Exploded View

INFOID:0000000012423175



1. Combination switch

2. Steering column

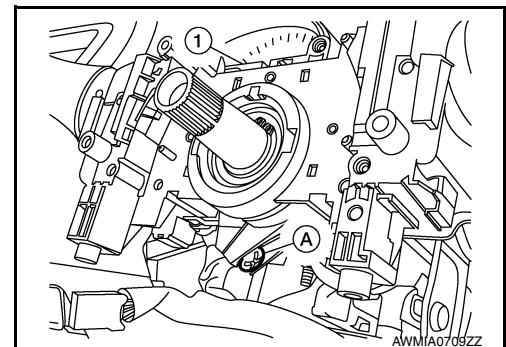
← Front

## Removal and Installation

INFOID:0000000012423176

### REMOVAL

1. Remove the steering angle sensor. Refer to [BRC-189. "Removal and Installation"](#).
2. Disconnect harness connector from combination switch.
3. Remove screw (A) and combination switch (1).



### INSTALLATION

Installation is in the reverse order of removal.

# HAZARD SWITCH

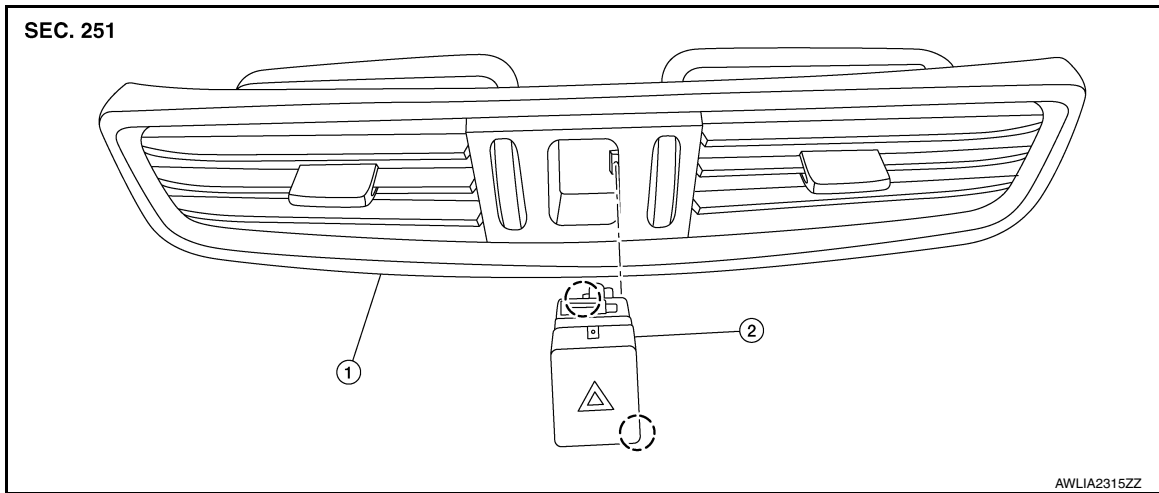
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## HAZARD SWITCH

### Exploded View

INFOID:0000000012423177



1. Center ventilator grille

2. Hazard switch

3. Pawl

### Removal and Installation

INFOID:0000000012423178

#### REMOVAL

1. Remove center ventilator grille. Refer to [VTL-13. "CENTER VENTILATOR GRILLE : Removal and Installation"](#).
2. Release the pawls and remove the hazard switch.

#### INSTALLATION

Installation is in the reverse order of removal.

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## SIDE TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

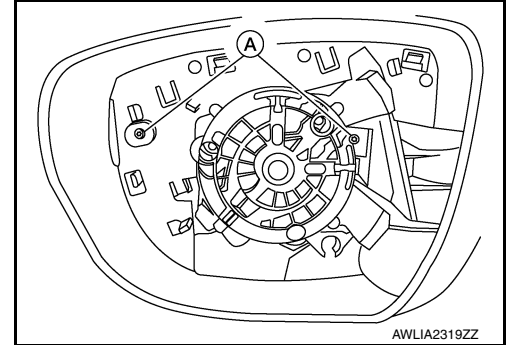
### SIDE TURN SIGNAL LAMP

#### Removal and Installation

INFOID:0000000012423179

#### REMOVAL

1. Remove door mirror rear finisher. Refer to [MIR-26, "Removal and Installation"](#).
2. Remove door mirror glass. Refer to [MIR-24, "Removal and Installation"](#).
3. Remove the screws (A) and reposition side turn signal lamp.



AWLIA2319ZZ

4. Disconnect the harness connector from the side turn signal lamp and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423180

The side turn signal lamp bulb is not serviced separately. Refer to [EXL-127, "Removal and Installation"](#).

# REAR COMBINATION LAMP

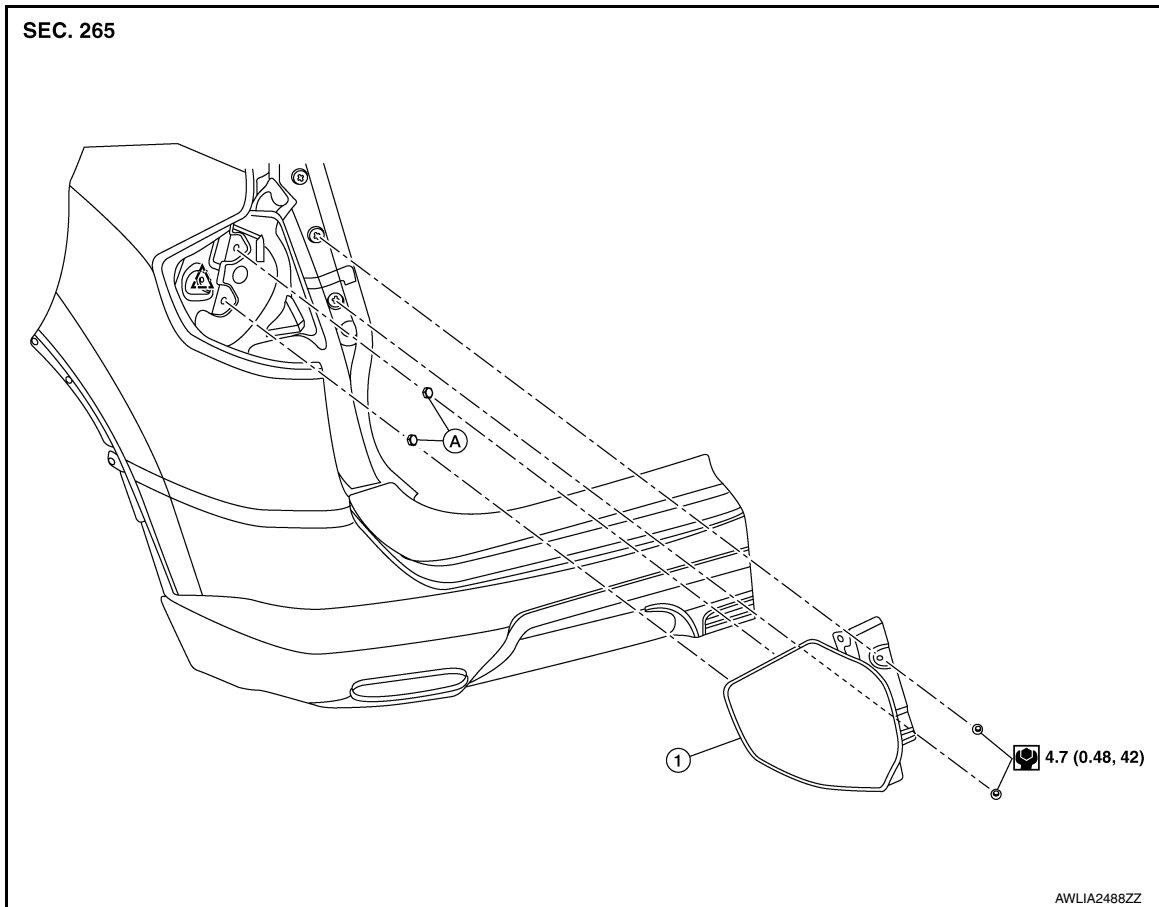
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## REAR COMBINATION LAMP

### Exploded View

INFOID:0000000012423181



### Removal and Installation

INFOID:0000000012423182

#### REMOVAL

1. Remove side air spoiler. Refer to [EXT-48, "Removal and Installation"](#).
2. Remove rear combination lamp bolts.
3. Pull rear combination lamp rearward to release from clip and locators.
4. Disconnect the harness connector from the rear combination lamp and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423183

#### **WARNING:**

Do not touch bulb with bare hand while it is lit or right after being turned off. Burning may result.

#### **CAUTION:**

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- 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 LAMP BULB

## REAR COMBINATION LAMP

[LED HEADLAMP]

### < REMOVAL AND INSTALLATION >

---

#### Removal

1. Remove rear combination lamp. Refer to [EXL-128. "Removal and Installation"](#).
2. Rotate stop lamp bulb socket counterclockwise and remove.
3. Remove stop lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

#### TAIL LAMP BULB

#### Removal

1. Remove rear combination lamp. Refer to [EXL-128. "Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise and remove.
3. Remove tail lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

#### TURN SIGNAL LAMP BULB

#### Removal

1. Remove rear combination lamp. Refer to [EXL-128. "Removal and Installation"](#).
2. Rotate turn signal lamp bulb socket counterclockwise and remove.
3. Remove turn signal lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

# HIGH-MOUNTED STOP LAMP

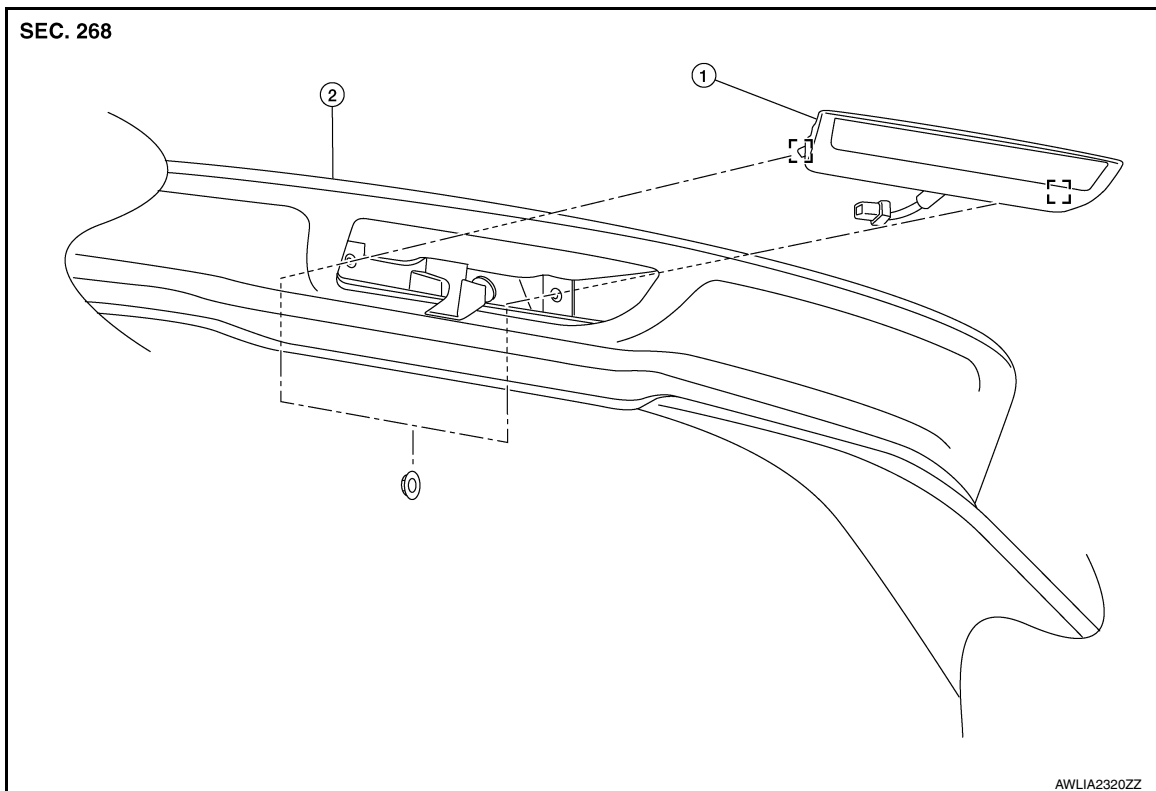
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## HIGH-MOUNTED STOP LAMP

### Exploded View

INFOID:0000000012423184



### Removal and Installation

INFOID:0000000012423185

#### REMOVAL

1. Remove access cover using a suitable tool. Refer to [INT-38, "Exploded View"](#).
2. Remove high-mounted stop lamp nuts.
3. Disconnect the harness connector from high-mounted stop lamp and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

### Bulb Replacement

INFOID:0000000012423186

#### HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is not serviced separately. Refer to [EXL-130, "Removal and Installation"](#).

# BACK-UP LAMP ASSEMBLY

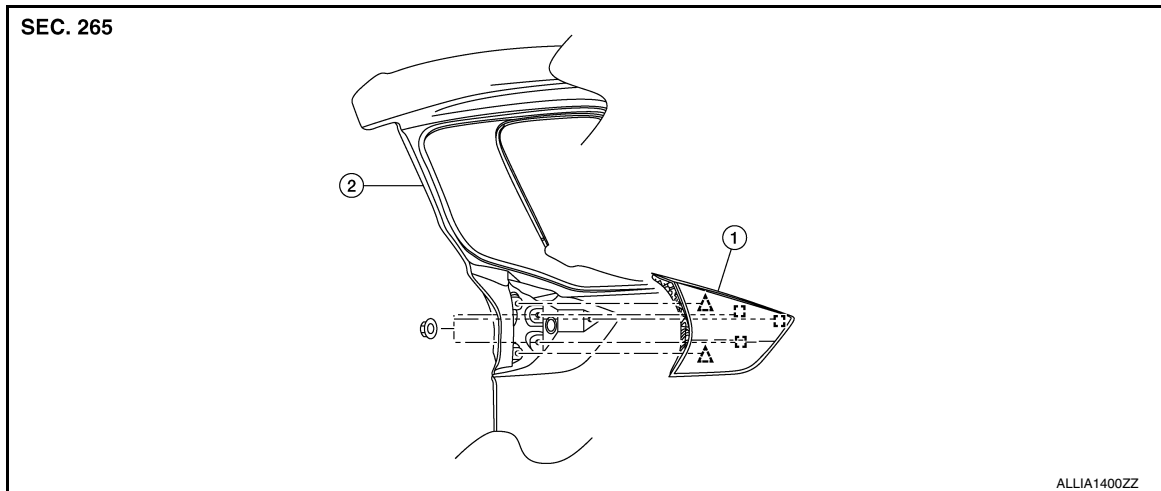
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## BACK-UP LAMP ASSEMBLY

### Exploded View

INFOID:0000000012423187



1. Back-up lamp assembly

2. Back door

△ Clip

□ Stud

### Removal and Installation

INFOID:0000000012423188

#### REMOVAL

1. Remove back door finisher. Refer to [INT-38. "Removal and Installation"](#).
2. Remove back-up lamp assembly nuts.
3. Pull back-up lamp assembly rearward, disconnect the harness connector and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

### Bulb Replacement

INFOID:0000000012423189

#### **WARNING:**

**Do not touch bulb with bare hand while it is lit or right after being turned off. Burning may result.**

#### **CAUTION:**

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- 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.

#### TAIL LAMP BULB

##### Removal

1. Remove back-up lamp assembly. Refer to [EXL-131. "Removal and Installation"](#).
2. Rotate tail lamp bulb socket counterclockwise and remove.
3. Remove tail lamp bulb from bulb socket.

##### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

#### BACK-UP LAMP BULB

##### Removal



BACK-UP LAMP ASSEMBLY

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- 1. Remove back-up lamp assembly. Refer to [EXL-131. "Removal and Installation"](#).
- 2. Rotate back-up lamp bulb socket counterclockwise and remove.
- 3. Remove back-up lamp bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

**CAUTION:**

**After installing the bulb, install bulb socket securely for watertightness.**

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EXL

# LICENSE PLATE LAMP

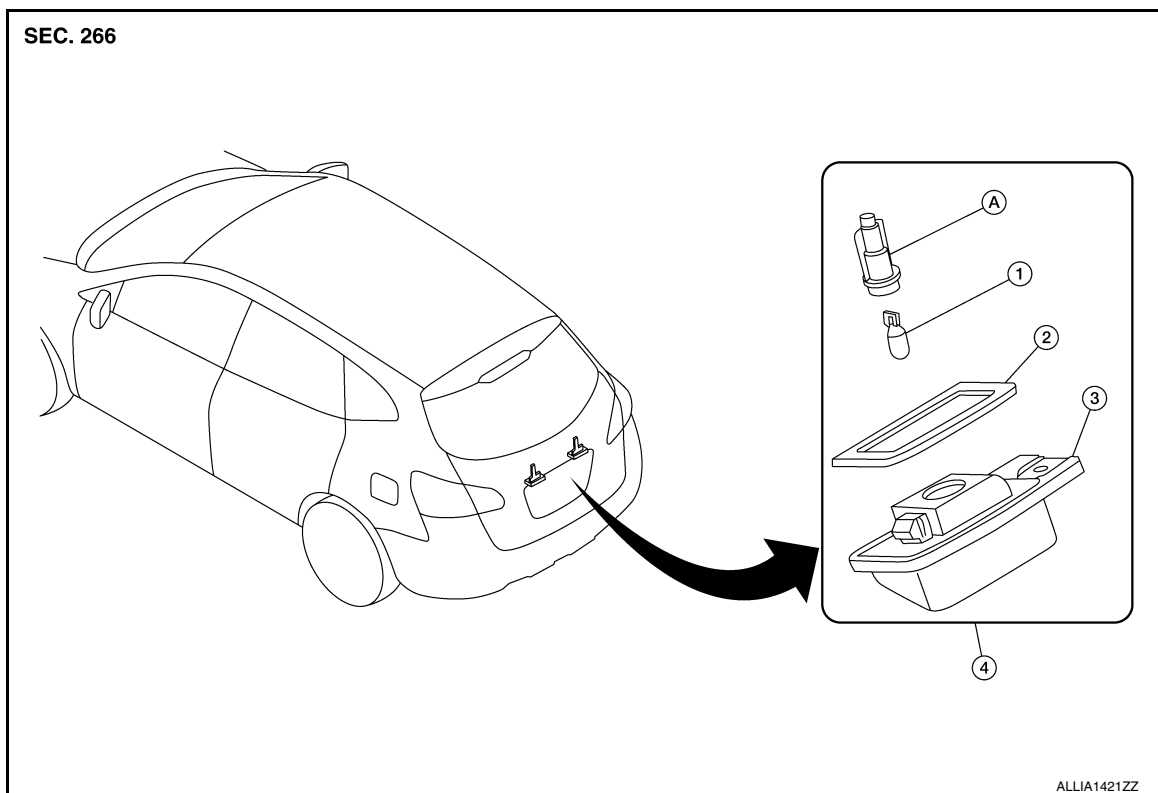
< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## LICENSE PLATE LAMP

### Exploded View

INFOID:0000000012423190



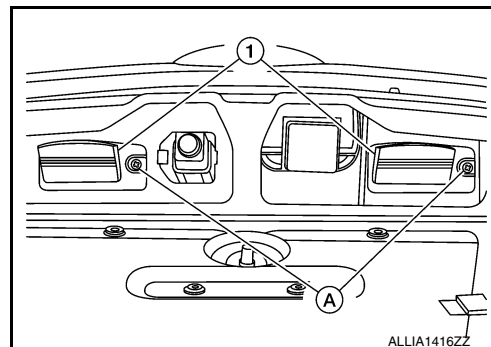
- |                                |                                   |                       |
|--------------------------------|-----------------------------------|-----------------------|
| 1. License plate lamp bulb     | 2. License plate lamp seal        | 3. License plate lamp |
| 4. License plate lamp assembly | A. License plate lamp bulb socket |                       |

### Removal and Installation

INFOID:0000000012423191

#### REMOVAL

1. Release the license lamp finisher. Refer to [EXT-50, "Exploded View"](#).
2. Remove the screw (A) (LH or RH) and pull license plate lamp (1) (LH or RH) rearward.



3. Disconnect the harness connector from the license plate lamp and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### Bulb Replacement

INFOID:0000000012423192

#### **WARNING:**

**Do not touch bulb with your hand while it is on or right after being turned off. Burning may result.**

# LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

## CAUTION:

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- 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.

## REMOVAL

1. Remove license plate lamp. Refer to [EXL-266. "Removal and Installation"](#).
2. Rotate license plate lamp bulb socket counterclockwise and remove.
3. Remove license plate lamp bulb from bulb socket.

## INSTALLATION

Installation is in the reverse order of removal.

## CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

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## FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

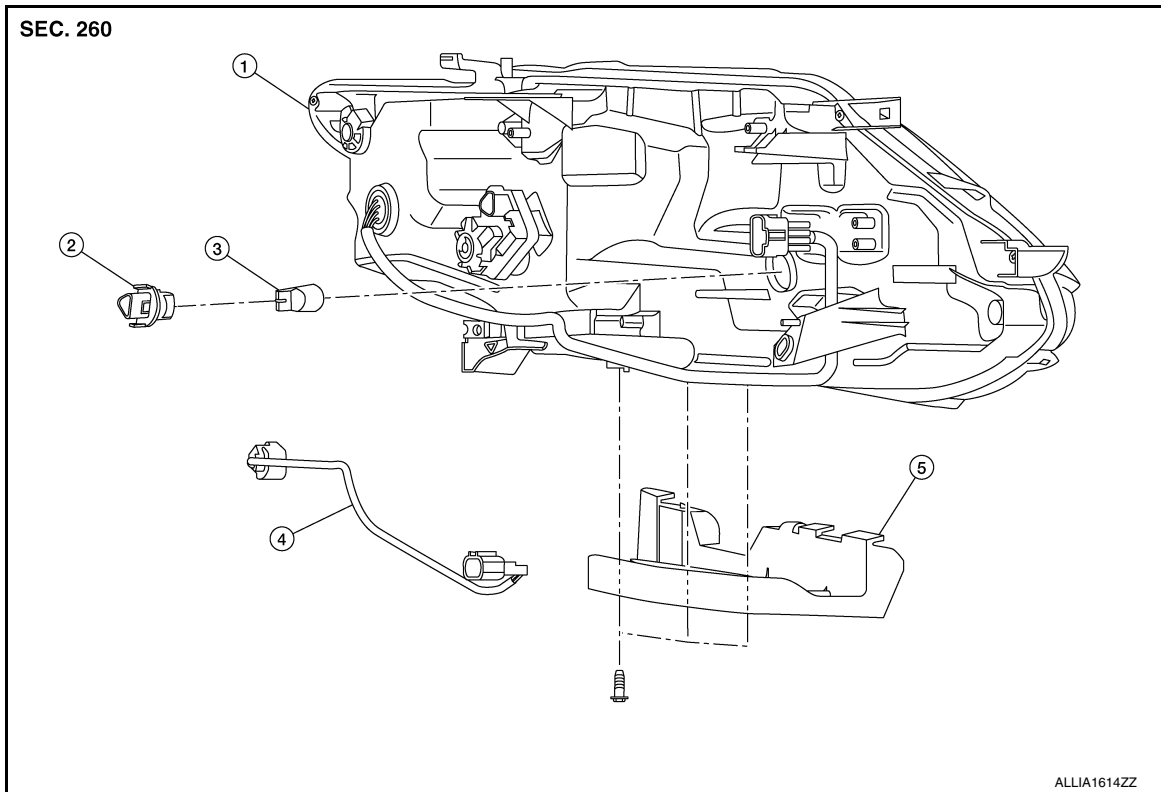
[LED HEADLAMP]

# UNIT DISASSEMBLY AND ASSEMBLY

## FRONT COMBINATION LAMP

### Exploded View

INFOID:0000000012423193



- |                                   |  |                          |
|-----------------------------------|--|--------------------------|
| 1. Front combination lamp         | 2. Turn signal lamp bulb socket            | 3. Turn signal lamp bulb |
| 4. Front combination lamp harness | 5. Front combination lamp mounting bracket |                          |

### Disassembly and Assembly

INFOID:0000000012423194

#### DISASSEMBLY

1. Remove front combination lamp. Refer to [EXL-253, "Removal and Installation"](#).
2. Rotate the turn signal lamp bulb socket counterclockwise and remove.
3. Remove the turn signal lamp bulb from the bulb socket.

#### ASSEMBLY

Assembly is in the reverse order of disassembly.

# REAR COMBINATION LAMP

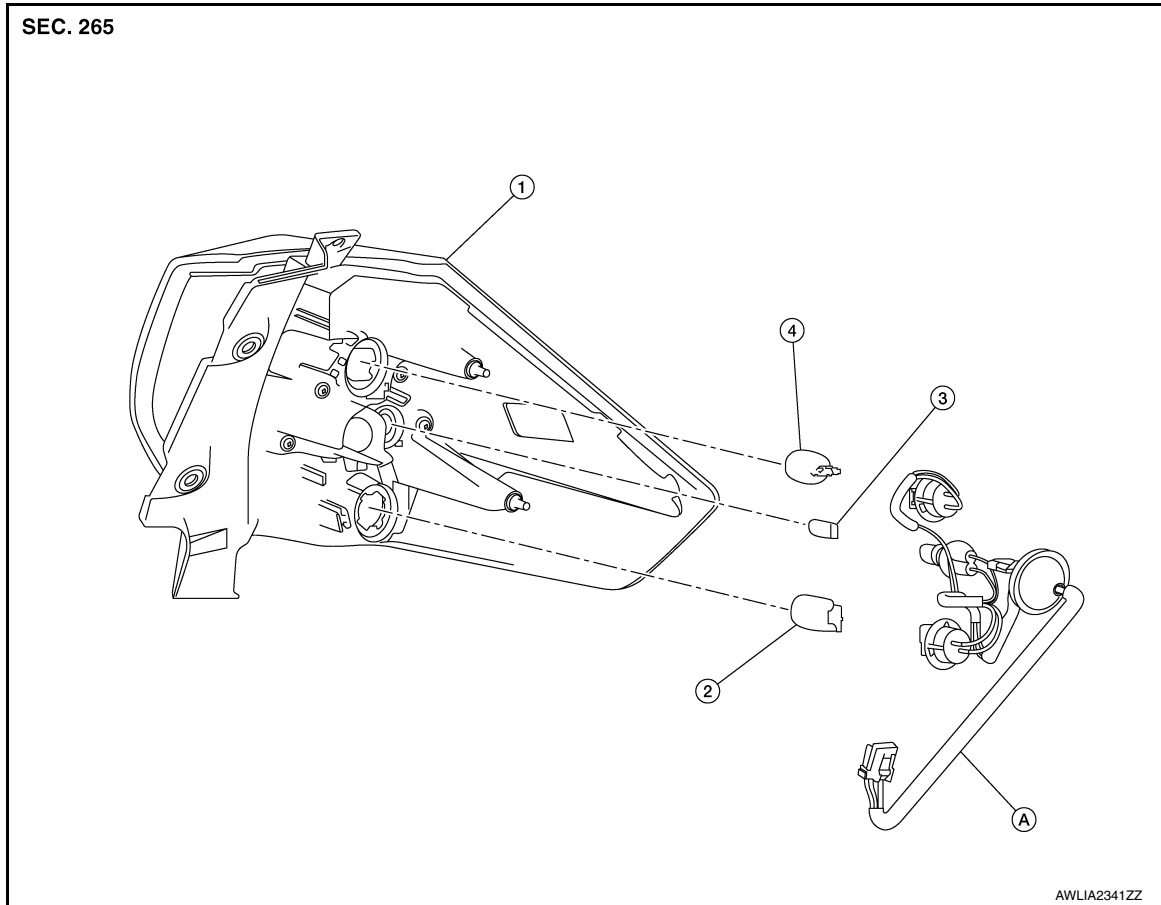
< UNIT DISASSEMBLY AND ASSEMBLY >

[LED HEADLAMP]

## REAR COMBINATION LAMP

### Exploded View

INFOID:000000012423195



- |                          |                                  |                   |
|--------------------------|----------------------------------|-------------------|
| 1. Rear combination lamp | 2. Turn signal lamp bulb         | 3. Tail lamp bulb |
| 4. Stop lamp bulb        | A. Rear combination lamp harness |                   |

### Disassembly and Assembly

INFOID:000000012423196

#### DISASSEMBLY

1. Remove rear combination lamp. Refer to [EXL-261, "Removal and Installation"](#).
2. Rotate the stop lamp bulb socket counterclockwise and remove.
3. Remove the stop lamp bulb from the bulb socket.
4. Rotate the tail lamp bulb socket counterclockwise and remove.
5. Remove the tail lamp bulb from the bulb socket.
6. Rotate the turn signal lamp bulb socket counterclockwise and remove.
7. Remove the turn signal lamp bulb from bulb socket.

#### ASSEMBLY

Assembly is in the reverse order of disassembly.

#### CAUTION:

**After installing, be sure to install the bulb sockets securely to ensure watertightness.**

## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[LED HEADLAMP]

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Bulb Specifications

INFOID:0000000012423197

Item		Wattage (W)*
Front combination lamp	High beam	—
	Low beam	—
	Turn signal lamp	28/8
	Side marker lamp	—
	Daytime running lamp	—
Front fog lamp		55
Side turn signal lamp		—
Rear combination lamp	Stop lamp	21
	Tail lamp	5
	Turn signal lamp	21
Back-up lamp	Tail lamp	5
	Back-up lamp	16
License plate lamp		5
High-mounted stop lamp		—

\*: Always check with the Parts Department for the latest parts info.