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PRECAUTIONS

< PRECAUTION > [LED HEADLAMP]

PRECAUTION

PRECAUTIONS

Precaution for Technicians Using Medical Electric

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OPERATION PROHIBITION

WARNING:

- · Parts with strong magnet is used in this vehicle.
- Technicians using a medical electric device such as pacemaker must never perform operation on the vehicle, as magnetic field can affect the device function by approaching to such parts.

NORMAL CHARGE PRECAUTION

WARNING:

- If a technician uses a medical electric device such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator, the possible effects on the devices must be checked with the device manufacturer before starting the charge operation.
- As radiated electromagnetic wave generated by PDM (Power Delivery Module) at normal charge operation may affect medical electric devices, a technician using a medical electric device such as implantable cardiac pacemaker or an implantable cardioverter defibrillator must not approach motor room [PDM (Power Delivery Module)] at the hood-opened condition during normal charge operation.

PRECAUTION AT TELEMATICS SYSTEM OPERATION

WARNING:

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of TCU might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), when using the service, etc.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of TCU might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before TCU use.

PRECAUTION AT INTELLIGENT KEY SYSTEM OPERATION

WARNING:

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of Intelligent Key might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), at door operation, at each request switch operation, or at engine starting.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of Intelligent Key might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before Intelligent Key use.

Point to Be Checked Before Starting Maintenance Work

The high voltage system may starts automatically. It is required to check that the timer air conditioner and timer charge (during EVSE connection) are not set before starting maintenance work.

NOTE:

If the timer air conditioner or timer charge (during EVSE connection) is set, the high voltage system starts automatically even when the power switch is in OFF state.

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS

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PRECAUTIONS

< PRECAUTION > [LED HEADLAMP]

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
 injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
 Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Precaution for Removing 12V Battery

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Check that EVSE is not connected.

NOTE:

- If EVSE is connected, the air conditioning system may be automatically activated by the timer A/C function.
- 2. Turn the power switch OFF ightarrow ON ightarrow OFF. Get out of the vehicle. Close all doors (including back door).
- 3. Check that the charge status indicator lamp does not blink and wait for 5 minutes or more.

NOTE:

If the battery is removed within 5 minutes after the power switch is turned OFF, plural DTCs may be detected.

4. Remove 12V battery within 1 hour after turning the power switch OFF \rightarrow ON \rightarrow OFF.

NOTE:

- The 12V battery automatic charge control may start automatically even when the power switch is in OFF state.
- Once the power switch is turned ON → OFF, the 12V battery automatic charge control does not start for approximately 1 hour.

CAUTION:

- After all doors (including back door) are closed, if a door (including back door) is opened before battery terminals are disconnected, start over from Step 1.
- After turning the power switch OFF, if "Remote A/C" is activated by user operation, stop the air conditioner and start over from Step 1.

PREPARATION

< PREPARATION > [LED HEADLAMP]

PREPARATION

PREPARATION

Special Service Tool

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

Tool number (TechMate No.) Tool name		Description
(J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components

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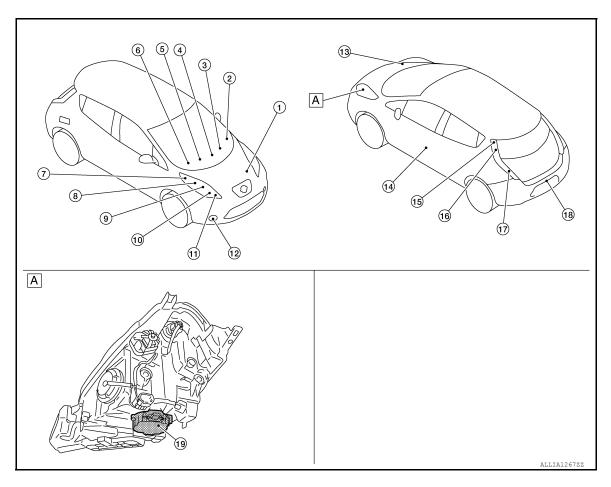
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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A. Front combination lamp (back)

No.	Part	Function
1.	IPDM E/R	 Controls the integrated relay, and supplies voltage to the load according to the request from BCM (via CAN communication). Refer to PCS-6. "Component Parts Location" for detailed installation location.
2.	Combination switch (Lighting & turn signal switch)	Refer to BCS-8, "COMBINATION SWITCH READING SYSTEM: System Description".
3.	Combination meter	 Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM (via CAN communication). Turns the tail lamp indicator lamp, high beam indicator lamp, front fog lamp indicator lamp and rear fog lamp indicator lamp ON according to the request from BCM (via CAN communication). Inputs headlamp warning lamp signal from LED headlamp control module and turns headlamp warning lamp ON.
4.	Hazard switch	Refer to EXL-13, "Hazard Switch".

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No.	Part	Function
5.	ВСМ	 Detects each switch condition by the combination switch reading function Judges that the exterior lamps are turned ON according to the vehicle condition Requests the headlamp relay (HI/LO), tail lamp relay and front fog lamp relay ON to IPDM E/R (via CAN communication) Requests the high beam indicator lamp, tail lamp indicator lamp and front fog lamp indicator lamp ON to the combination meter (via CAN communication) Judges the outside brightness from the optical sensor signal. Judges the ON/OFF timing according to the vehicle condition. Judges the ON/OFF status of the exterior lamp according to the outside brightness and the vehicle condition. Refer to BCS-5. "BODY CONTROL SYSTEM: Component Parts Location" for detailed installation location.
6.	Optical sensor	Refer to EXL-12, "Optical Sensor".
7.	Front side marker lamp	Refer to EXL-149, "Bulb Specifications".
8.	Front turn signal lamp	Refer to EXL-149, "Bulb Specifications".
9.	Headlamp LO (LED headlamp)	Refer to EXL-14. "HEADLAMP SYSTEM: System Description".
10.	Headlamp HI	Refer to EXL-149, "Bulb Specifications".
11.	Parking Lamp	Refer to EXL-149, "Bulb Specifications".
12.	Front fog lamp (if equipped)	Refer to EXL-149, "Bulb Specifications".
13.	Daytime running light relay*	Headlamp HI ground circuit is switched according to request from IPDM E/R.
14.	Front door switch (LH)	Refer to DLK-20, "Door Switch".
15.	Rear side marker lamp	Refer to EXL-149, "Bulb Specifications".
16.	Tail lamp	Refer to EXL-149, "Bulb Specifications".
17.	Rear turn signal lamp	Refer to EXL-149, "Bulb Specifications".
18.	License plate lamp	Refer to EXL-149, "Bulb Specifications".
19.	LED headlamp control module	Refer to EXL-12, "LED Headlamp Control Module".

^{*:} With daytime running light system

LED Headlamp

OUTLINE

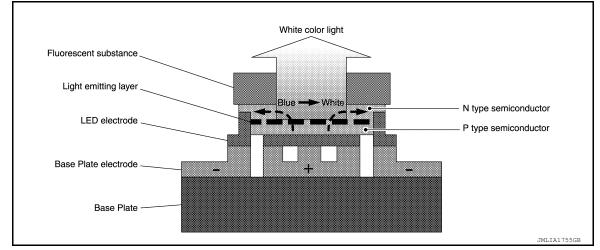
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• Semiconductor device (Light emitting diode: LED), which is illuminated when forward bias electric voltage is applied, is adopted as the source of light instead of halogen bulb or xenon bulb.

 Comparing to halogen headlamp or xenon headlamp, LED headlamp is electrically power saving, durable, and is illuminated in the similar color to the sunlight. Bright, natural, and eye-friendly visibility can be obtained.

ILLUMINATION PRINCIPLE

White LED emits the white light through fluorescent substance on luminescent surface of blue LED using semiconductor (joint construction of P type and N type).



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< SYSTEM DESCRIPTION >

- 1. When forward bias electric voltage is applied to LED, hole (positive characteristics) and electron (negative characteristics) move toward each electrode, and electric current flows.
- Hole and electron move inside of semiconductor crystal and are connected (re-connection) again at connecting portion. A part of energies that is produced at this moment is emitted as the light.

PRECAUTIONS FOR TROUBLE DIAGNOSIS

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

CAUTION:

- Never touch the harness, LED headlamp control module, the inside and metal part of lamp when turning the headlamp ON or operating the lighting switch, for preventing electrical shock.
- · Never work with wet hands, for preventing electrical shock.
- Never perform LED headlamp control module circuit diagnosis with a circuit tester or an equivalent.
- Temporarily install the headlamps on the vehicle. Always connect power supply to the connector (vehicle side) when checking ON/OFF status.
- Disconnect the 12V battery negative terminal before disconnecting the lamp socket connector or the harness connector. Refer to EXL-8, "Precaution for Removing 12V Battery".
- Check for fusing of the fusible link(s), open around connector, short, disconnection if the symptom is caused by electric error.
- Always check for deformation or hole of headlamp housing and engagement of bulb cover. Otherwise, water may enter into headlamp because of damage of headlamp housing and contact to LED headlamp control module connector. The normal operation may be inhibited when short circuit to power supply is detected.

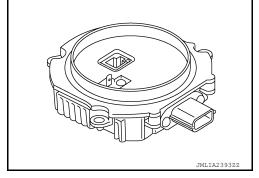
NOTE:

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

LED Headlamp Control Module

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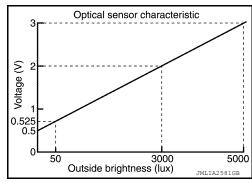
- Headlamp (LO) circuit is connected to LED headlamp control module integrated in the front combination lamp.
- Headlamp (LO) circuit turns LED headlamp ON.
- Outputs the headlamp warning lamp signal to the combination meter.



Optical Sensor

INFOID:0000000010121315

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



COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Hazard Switch

Inputs the hazard switch ON/OFF signal to BCM.

			OFF	ON
	1	Hazard switch ON/OFF signal		•
1	2	Ground		•
3 1 2 4	3	Illumination +)
			4	<u> </u>
	4	Illumination -)

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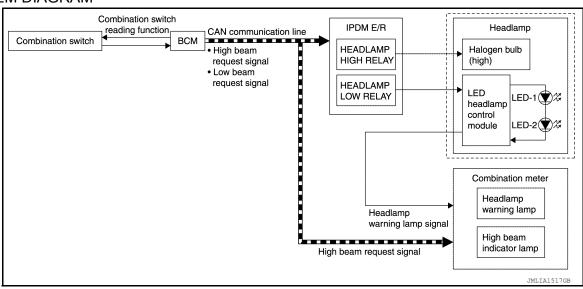
SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM: System Description

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SYSTEM DIAGRAM



OUTLINE

Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and relay 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 power switch ON
- Lighting switch PASS
- IPDM E/R turns integrated headlamp low relay ON according to low beam request signal and supplies power supply to LED headlamp control module.
- LED headlamp control module turns the headlamp (LO) ON according to the power supply from IPDM E/R.

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 power 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 integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

HEADLAMP WARNING LAMP OPERATION

- LED headlamp control module outputs the headlamp warning lamp signal to combination meter when the following malfunction is detected:
- LED
- LED headlamp control module
- Circuit between LED headlamp control module and LED.
- Circuit between LED headlamp control module and combination meter.

[LED HEADLAMP]

 Combination meter turn the headlamp warning lamp ON according to the headlamp waning lamp signal inputs.

NOTE:

Headlamp LO may turn ON while headlamp warning lamp is turned ON, because 2 pieces of LED are used so that headlamp may continuously turn ON even if one of LED is not operative.

HEADLAMP SYSTEM: Fail-Safe

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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

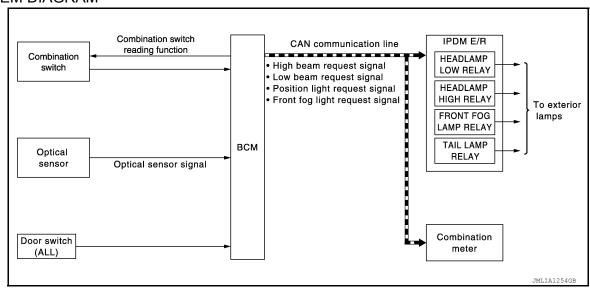
Control part Fail-safe operation	
Headlamp	 Turns ON the headlamp low relay when the power switch is turned ON Turns OFF the headlamp low relay when the power switch is turned OFF Headlamp high relay OFF

AUTO LIGHT SYSTEM (EXCEPT FOR CANADA)

AUTO LIGHT SYSTEM (EXCEPT FOR CANADA): System Description

INFOID:0000000010121319

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

- Combination switch reading function
- Headlamp control function
- Auto light function
- Delay timer function
- Wiper linked auto lighting function
- Auto light adjustment system

Control by IPDM E/R:

- Relay control function
- Auto light system has the auto light function (with twilight lighting function), wiper linked auto lighting function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps* and each illumination automatically, depending on the outside brightness.
- Wiper linked auto lighting function automatically turns ON/OFF the exterior lamps* and each illumination when the light switch is in the AUTO position, according to a front wiper operation.

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[LED HEADLAMP]

- When auto light system turns the exterior lamps ON with the power 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, tail lamp, front fog lamp and side marker lamp (Headlamp HI and front fog lamp depend on the combination switch condition.)

NOTE:

The settings of the twilight lighting function and the wiper linked auto lighting function can be changed with CONSULT. Refer to BCS-17, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

AUTO LIGHT FUNCTION (WITH TWILIGHT LIGHTING FUNCTION)

Description

- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to the optical sensor when the power switch is turned ON or ACC.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- BCM filters outside brightness based on the optical sensor signal and judges outside brightness.
- BCM detects change status of outside brightness according to outside brightness from the optical sensor signal and filtered outside brightness. Based on the change status, BCM judges ON/OFF condition of the exterior lamp.
- 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:

As to ON/OFF timing, the sensitivity depends on settings. The settings can be changed with CONSULT. Refer to BCS-17, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

WIPER LINKED AUTO LIGHTING FUNCTION

BCM turns the exterior lamps ON when detecting 4 operations of the front wiper work the light switch in AUTO position.

NOTE:

BCM turns OFF the headlamps 3 seconds after the front wiper switch is turned from ON⇒OFF.

AUTO LIGHT ADJUSTMENT SYSTEM

The auto light adjustment system automatically, dims/brightens the display and combination meter, according to brightness outside the vehicle, when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to INL-12, "AUTO LIGHT ADJUSTMENT SYSTEM: System Description".

DELAY TIMER FUNCTION

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

- Turns the exterior lamps OFF 5 minutes after detecting that any door opens. (Door switch ON).
- Turns the exterior lamps OFF a certain period of time* after closing all doors. (Door switch ON→OFF).
- Turns the exterior lamps OFF with the power switch ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>BCS-17</u>, "<u>HEAD-LAMP</u>: CONSULT Function (BCM HEAD LAMP)".

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.

FOG OVERRIDE FUNCTION

When front fog lamp switch is ON while power switch is in ON position and lighting switch is in AUTO position, BCM turns ON exterior lamps* regardless of outside brightness.

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

NOTE:

- Headlamp (HI) depending on the combination switch condition.
- Front fog light reminder warning is cancelled when fog override function is Off.

How to Set

(I) With CONSULT

- 1. Turn power switch ON.
- Select "INT LAMP" of "BCM" using CONSULT.
- 3. Select "FOG LAMP OVERRIDE" in "Work Support" mode.

Service item	Setting item	Setting
FOG LAMP OVERRIDE	On	With fog override function
1 00 LAWII OVLINIDL	Off	Without fog override function

AUTO LIGHT SYSTEM (FOR CANADA)

AUTO LIGHT SYSTEM (FOR CANADA): System Description

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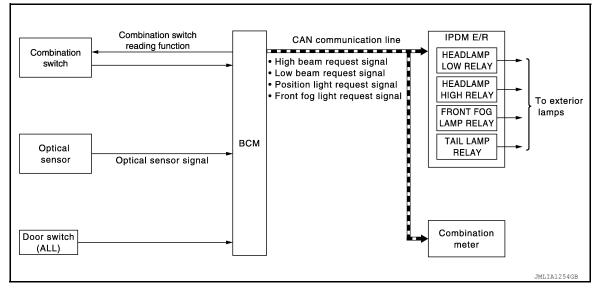
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SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

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

Control by IPDM E/R:

- Relay control function
- 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 power 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 power 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-17, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

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AUTO LIGHT ADJUSTMENT SYSTEM

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 INL-12, "AUTO LIGHT ADJUSTMENT SYSTEM: System Description".

DELAY TIMER FUNCTION

BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the power 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 \rightarrow OFF).
- Turns the exterior lamp OFF with the power switch ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>BCS-17</u>, "HEAD-LAMP: CONSULT Function (BCM HEAD LAMP)".

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.

FOG OVERRIDE FUNCTION

When front fog lamp switch is ON while power switch is in ON position and lighting switch is in AUTO position, BCM turns ON exterior lamps* regardless of outside brightness.

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

NOTE:

- Headlamp (HI) depending on the combination switch condition.
- Front fog light reminder warning is cancelled when fog override function is Off.

How to Set

(P)With CONSULT

- Turn power switch ON.
- 2. Select "INT LAMP" of "BCM" using CONSULT.
- 3. Select "FOG LAMP OVERRIDE" in "Work Support" mode.

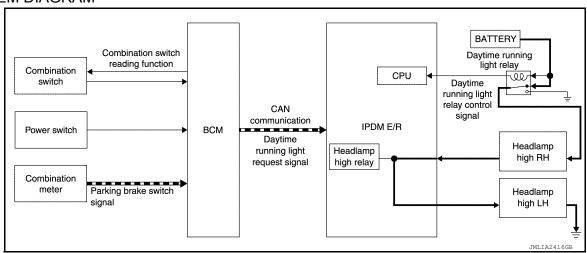
Service item	Setting item	Setting
FOG LAMP OVERRIDE	On	With fog override function
TOG LAWIF OVERVIDE	Off	Without fog override function

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM: System Description

INFOID:0000000010121323

SYSTEM DIAGRAM



OUTLINE

- Turns the headlamp high ON (high beam at approximately half illumination) as the daytime running light.
- Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and relay control function of IPDM E/R.

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DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects the vehicle condition according to power 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:

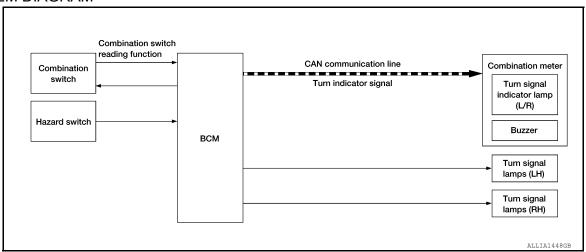
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO, and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running light request signal.
- Power is supplied from the daytime running light relay through headlamp high RH and IPDM E/R to headlamp high LH. And high beam headlamps are illuminated (approximately half illumination) as the daytime running light.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Description

INFOID:0000000010121324

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 power 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.

3-TIME FLASH FUNCTION

By a short touch of the turn signal lever, BCM blinks the turn signal 3 times in the selected direction.

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 Cancels the operation when short touch of the turn signal lever in the reverse direction during the 3_time flasher function operation.

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.

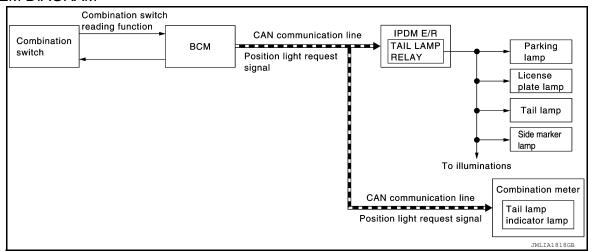
NOTE:

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 Description

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 relay control function 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 power switch ON
- IPDM E/R turns the integrated tail lamp relay ON and 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:0000000010121326

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	
Parking lampLicense plate lampIlluminationTail lampSide marker lamp	Turns ON the tail lamp relay when the power switch is turned ON Turns OFF the tail lamp relay when the power switch is turned OFF	

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM: System Description

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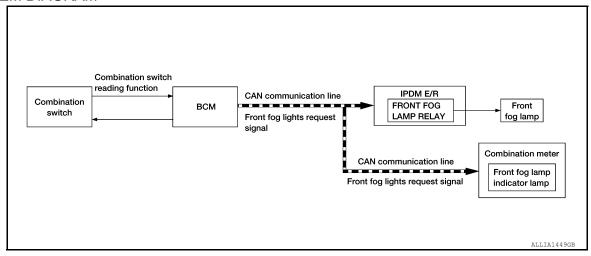
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SYSTEM DIAGRAM



OUTLINE

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

FRONT FOG LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the front fog 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 condition is satisfied.(except for the high beam ON):
- Lighting switch 2ND
- Lighting switch AUTO and the power switch ON

IPDM E/R turns the integrated front fog lamp relay ON, and 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:0000000010121329

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 relay OFF		

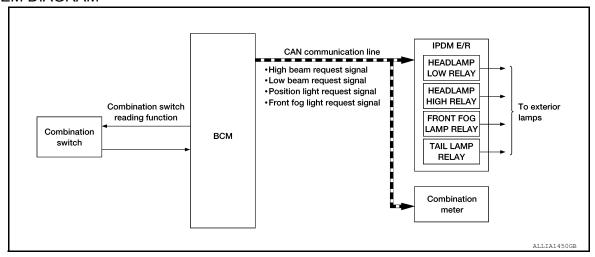
EXTERIOR LAMP BATTERY SAVER SYSTEM

Revision: May 2014 EXL-21 2014 LEAF

EXTERIOR LAMP BATTERY SAVER SYSTEM: System Description

INFOID:0000000010121330

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

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

Control by IPDM E/R:

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

NOTE:

- Headlamp control function turns the exterior lamps ON normally when the power 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)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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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	 The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

				Direct [Diagnosti	c Mode		
System	Sub System	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			×	×	×		
Air conditioner	AIR CONDITIONER			×	×			
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×	×		
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Trunk open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

HEADLAMP

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000010519551

DATA MONITOR

Monitor Item [Unit]	Description			
PUSH SW [On/Off]	Indicates condition of power 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]				
TURN SIGNAL L [On/Off]				
TAIL LAMP SW [On/Off]				
HI BEAM SW [On/Off]				
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.			
HEAD LAMP SW 2 [On/Off]				
PASSING SW [On/Off]				
AUTO LIGHT SW [On/Off]				
FR FOG SW [On/Off]				
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.			
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.			
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.			
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.			
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.			
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.			

ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
HEAD LAMP	This test is able to check headlamp operation [Off/Low/Hi].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].
TAIL LAMP	This test is able to check taillamp operation [Off/On].

WORK SUPPORT

Support Item	Setting	Description		
	MODE6			
	MODE5	Autolamp function OFF.		
	MODE4			
AUTO LIGHT LOGIC SET	MODE3	Autolamp function ON at twilight.		
	MODE2	Autolamp function ON at twilight or with wiper LO and HI operation.		
	MODE1*	Autolamp function ON at twilight or with wiper INT, LO and HI operation.		
BATTERY SAVER SET	Off	Exterior lamp battery saver function OFF.		
DATIENT SAVEN SET	On*	Exterior lamp battery saver function ON.		

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Support Item	Se	etting	Description		
	MODE4		Less sensitive than normal setting (turns ON later).		
CUSTOM A/LIGHT SETTING	MODE3		More sensitive than MODE2.		
COSTONI A/LIGHT SETTING	MODE2		More sensitive than normal setting (turns ON earlier).		
	MODE1*		Normal setting.		
	MODE 8	180 sec.			
	MODE 7	150 sec.	Autolamp delay timer operation time.		
	MODE 6	120 sec.			
ILL DELAY SET	MODE 4	90 sec.			
ILL DELAT SET	MODE 5	60 sec.			
	MODE 3	30 sec.			
	MODE 2	OFF			
	MODE 1*	45 sec.			

^{*:} Initial setting

FLASHER

FLASHER: CONSULT Function (BCM - FLASHER)

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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 power switch.			
TURN SIGNAL R [On/Off]	Indicates and iting of turn circul function of combination quiteb			
TURN SIGNAL L [On/Off]	Indicates condition of turn signal function of combination switch.			
HAZARD SW [On/Off]	Indicates condition of hazard switch.			
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.			
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.			
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.			

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
HAZARD ANSWER BACK	Lock/Unlock	Hazard warning lamp answer back for LOCK and UNLOCK with request switch or Intelligent Key.
	Unlock Only	Hazard warning lamp answer back for UNLOCK only with request switch or Intelligent Key.
	Lock Only Hazard warning lamp answer back for LOCK only with received Key.	
	Off	Hazard warning lamp answer back OFF.

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DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000010519553

AUTO ACTIVE TEST

Description

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

- Rear window defogger
- Front wiper motor
- Parking lamp
- · License plate lamp
- Tail lamp
- Front fog lamp
- Side marker lamp
- Headlamp (LO, HI)

Operation Procedure

NOTE:

Never perform auto active test in the following conditions.

- · CONSULT is connected.
- · Passenger door is open.
- 1. Turn the power switch OFF.
- 2. Turn the power switch ON, and within 20 seconds, press the driver door switch 10 times. Then turn the power switch OFF.
- 3. Turn the power switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.

NOTE:

Never depress brake pedal while operating power switch so that auto active test is not activated.

4. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

- When auto active test mode has to be cancelled halfway through test, turn the power switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to <u>DLK-102</u>, "Component Function Check".

Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following operation sequence is repeated 3 times.

Operation sequence	Inspection location	Operation
1	Rear window defogger	10 seconds
2	Front wiper motor	LO for 5 seconds → HI for 5 seconds
3	Parking lamp License plate lamp Tail lamp Front fog lamp Side marker lamp	10 seconds
4	Headlamp	LO for 10 seconds →HI ON ⇔ OFF 5 times

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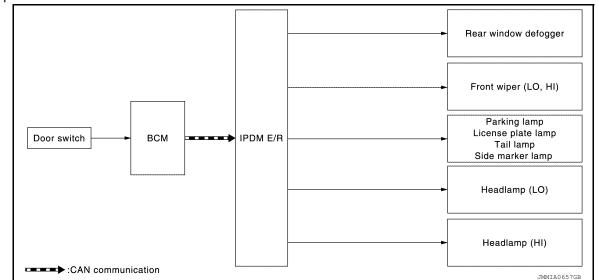
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Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause		
		YES	BCM signal input circuit		
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	NO	Rear window defogger Rear window defogger ground circuit Harness or connector between IPDM E/R and rear window defogger IPDM E/R		
Any of the following components do not		YES	BCM signal input circuit		
operate Parking lamp License plate lamp Tail lamp Front fog lamp Headlamp (HI, LO) Side marker lamp Front wiper motor	Perform auto active test. Does the applicable system operate?	NO	Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R		

CONSULT Function (IPDM E/R)

INFOID:0000000010519554

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.

SELF DIAGNOSTIC RESULT

Refer to PCS-18, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation
IGN RLY1 -REQ [On/Off]		Indicates power switch ON signal received from BCM on CAN communication line
IGN RLY [On/Off]	×	Indicates condition of ignition relay-1
PUSH SW [On/Off]		Indicates condition of power switch
DETENT SW [On/Off]		Indicates condition of shift position (park position switch)
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communication line
HOOD SW [On/Off]		Indicates condition of hood switch
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line

ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [On].
REAR DEFOGGER	This test is able to check rear window defogger operation [On/Off].
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].
EXTERNAL LAMPS	This test is able to check external lamp operation [Fog/Hi/Lo/TAIL/Off].

CAN DIAG SUPPORT MNTR

Refer to LAN-14, "CAN Diagnostic Support Monitor".

BCM, IPDM E/R

< ECU DIAGNOSIS INFORMATION >

[LED HEADLAMP]

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:000000010121337	В

ECU	Reference				
	BCS-28, "Reference Value"				
BCM	BCS-46, "Fail-safe"				
BCIVI	BCS-47, "DTC Inspection Priority Chart"				
	BCS-48, "DTC Index"				
	PCS-14, "Reference Value"				
IPDM E/R	PCS-17, "Fail-Safe"				
	PCS-18, "DTC Index"				

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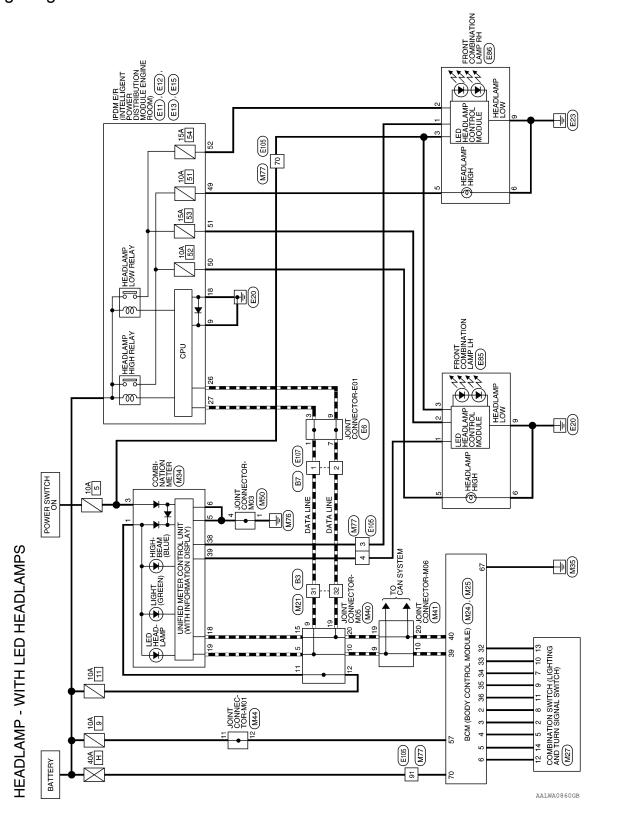
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WIRING DIAGRAM

HEADLAMP

Wiring Diagram



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	M24	Connector Name BCM (BODY CONTROL	MODULE)	BI ACK
NECTORS	Connector No. M24	Connector Name		Connector Color Bl ACK
HEADLAMP - WITH LED HEADLAMPS CONNECTORS	M21	Connector Name WIRE TO WIRE	WHITE	1
EADLAMP - V	Connector No. M21	Connector Name	Connector Color WHITE	
I				

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L	
Color of Wire	ŋ	>	GR	>	>	BG	۵	_	Ь	
Terminal No. Wire	5	9	32	33	34	35	36	39	40	
				19 20	39 40					
	ı			5 17 18 19	6 37 38 39		Z.,	z_	Į	

	M34	Connector Name COMBINATION METER	<u></u>	
	Connector No.	Connector Name	Connector Color WHITE	

	2 1 22 21									
	12 11 10 9 8 7 6 5 4 3 3 3 29 28 27 26 25 24 23 2	Signal Name	BAT	NSI	GND	GND	CAN-L	CAN-H	LED HEAD LAMP-R CUT SIG	LED HEAD LAMP-L CUT SIG
	14 13 34 33	Color of Wire	ГG	GR	В	В	۵	_	>	LG
明.S.	20 19 18 17 16 15 40 39 38 37 36 35	Terminal No.	-	ღ	2	9	18	19	38	39

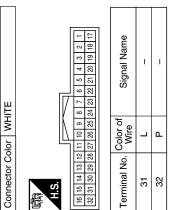
	ı —	6.7	1 1		I 🖚	_
	16	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 3	П	<u>e</u>	COMBINATION SW INPUT 5	NOTAINIANOO
	15	35	П	an	Ē5	Ē
	4	g	П	Z	≥⊑	Ž
لے	13	æ	П	na	≥قا	q
117	10 11 12 13 14 15 16	33	П	Signal Name	OMBINATION SW INPUT 5	ć
IV	Ξ	31	П	0,	ŭ"	Ç
11	9	8	П			
	6	53	П	-		
	∞	28	П	Color of Wire		
	7	27	П	olor c Wire		
	9	26	П	<u>ن</u> ر		
	5	25	П	0.		
	4	24	П	Z		
16	က	23	П	La La	N	
H.S.	7	22	П	E		
慢	-	21	П	Terminal No.		
			_ '	-		

Connector Color BLACK

00 00 00 00 00 00 00 00 00 00 00 00 00	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	
2 07 17 07	Color of Wire	_	GR	BR	
2 12 22 22 12	Terminal No. Wire	2	е	4	

	Connector Name COMBINATION SWITCH	里	3 4 5 6 9 10 11 12 13 14	Signal Name	1	
. M27	me COI	lor WH	1 2 8 8 9 9 8	Color of Wire	GR	2
Connector No.	Connector Na	Connector Color WHITE	原 H.S.	Terminal No. Wire	2	L

ITE	10 11 12 13 14	Signal N	ı	1	I	ı	ı	ı	I	1	I	1
olor WHITE	1 2 8 8 9 8	Color of Wire	GR	BR	8	٦	BG	>	۵	>	GR	ŋ
Connector Color	所 H.S.	Terminal No.	2	5	7	8	6	10	11	12	13	14



Connector No.	M25
Connector Name	Connector Name BCM (BODY CONTRC MODULE)
Connector Color WHITE	WHITE



Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)	
Color of Wire	Ь	В	Υ	
Terminal No. Color of Wire	22	29	70	

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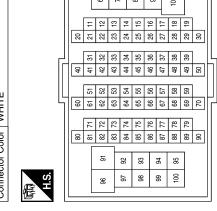
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Connector No.	o. M44	4
Connector Name	ame JOI	JOINT CONNECTOR-M01
Connector Color GRAY	olor GR	AY
	10 9 8 7	6 5 4 3 2 1
E.S.	20 19 18 1	20 19 18 17 16 15 14 13 12 11
Terminal No. Wire	Color of Wire	Signal Name
11	Ь	-
12	Ь	ı

Connector No.). M41	н
Connector Na	or Jo	Connector Name JOINT CONNECTOR-M06
Connector Color BLUE	olor BL	UE
E.S.	10 9 8 20 19 18	7 6 5 4 3 2 1 17 16 15 14 13 12 11
Terminal No. Wire	Color of Wire	Signal Name
6	7	_
10	7	-
19	Ь	1
20	Ь	-

Signal Name	ı	1	I	ı
Color of Wire	>	ГС	GR	>
Terminal No.	ဗ	4	0/	91

O	onne	Connector No.	o.	2	M77			l								
O	onne	Connector Name WIRE TO WIRE	au	>	/IB	ш	0	MF	끭							
O	onne	Connector Color	olor		WHITE											
1	NE C															
	H.S.															
						L			Г							
ш					Ш	7		П	IJ	Ш	Ш		Ш	Ш	Ш	
			88			8		9			20					
			8	7	Le	61	5	41	8	_	21	Ξ		ł		
				T	1	-	T			_	+	Τ	-		,	
	96	6	8	75	Ψ.	62	25	45	88		ผ	12	٥		_	
					ļ	I										



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	JOINT CONNECTOR-M03	\ \	6 5 4 3 2 1	20 19 18 17 16 15 14 13 12 11	Signal Name
M50	15	PINK	7	4	1
∣≥	>	□	8	윤	5.2
_	me	ō	6 0	99	S
Connector No.	Connector Name	Connector Color			Terminal No. Color of

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Connector No.	o. E12	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color		BROWN
赋 H.S.	12 22 12 12 12 12 12 12	77 (16 15
Terminal No. Color of Wire	Color of Wire	Signal Name
18	W.	CINES

Connector Nam Connector Colo H.S. H.S. 18
conne-

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BLACK	BLACK

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ACK	11 10 9 12 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Signal Name	POWER GROUND
	lor BL		Color of Wire	В
Connector Name	Connector Color BLACK	原.S.H	Terminal No. Wire	6

Connector No.	E6
Connector Name	Connector Name JOINT CONNECTOR-E01
Connector Color BLUE	BLUE
H.S. (12111019	9 8 7 6 5 4 3 2 1

Signal Name	I	-	1	I	
Color of Wire	Γ	٦	Ь	Д	
Terminal No. Wire	ļ	8	2	6	

Connector No.). E85	?
Connector Name		FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)
Connector Color		BLACK
原 H.S.	100	8 8 8 7 7 8 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9
Terminal No.	Color of Wire	Signal Name
-	LG	ı
2	٦	-
3	BR	_
5	g	ı
9	B/W	1
σ	B/W	-

tor Name tor Color Sign 2 Sign 2 Sign 3 Sign 2 Sign 3 Sign 3 Sign 3 Sign 3 Sign 3 Sign 4 Sign 4 Si	Connector No.	. E15	2
	Connector Na		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
S S S S S S S S S S	Connector Co	lor W	НТЕ
Color of Wire Y G	.S.	5 51 5	3 58 57 56 55 54
> ℃		Color of Wire	Signal Name
(C)	49	>	H/LAMP HI RH
-	20	ၒ	H/LAMP HI LH
1	51	_	H/LAMP LO LH
<u> </u>	52	₾	H/LAMP LO RH

_	27 L CAN-H

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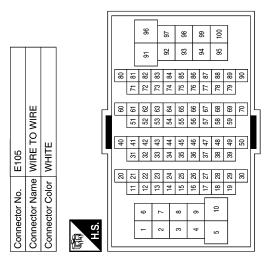
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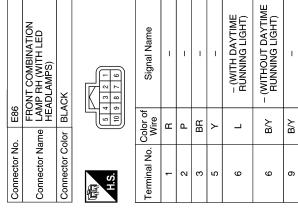
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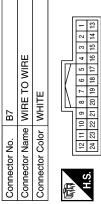
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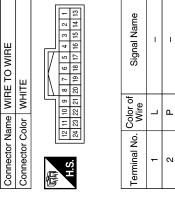
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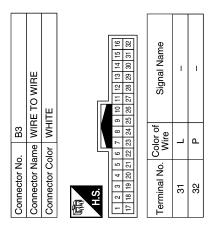
Signal Name	ı	ı	ı	ı
Color of Wire	В	LG	BR	Υ
Terminal No. Wire	3	4	20	91









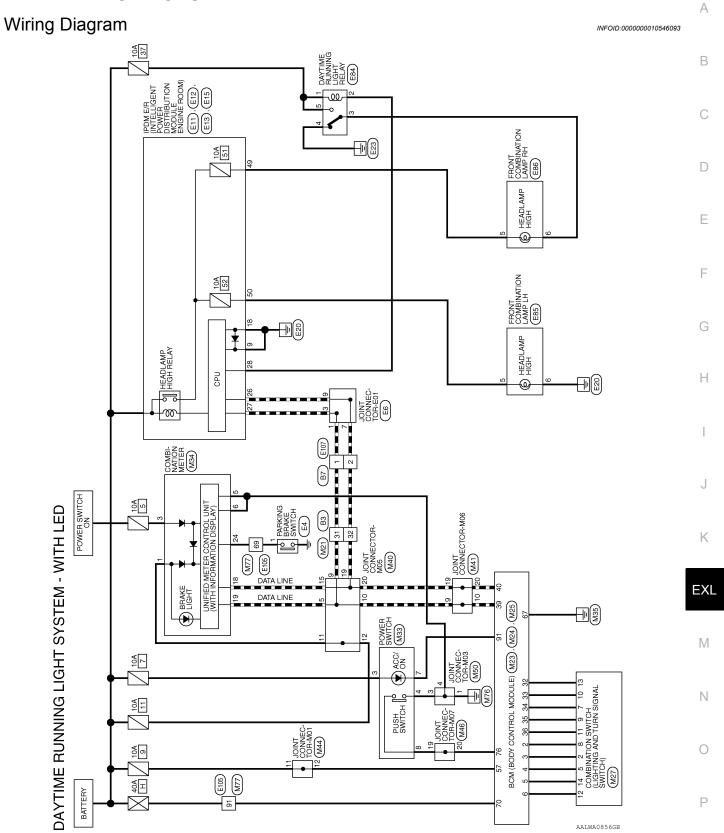




Signal Name	-	I
Color of Wire	٦	Д
Terminal No. Wire	1	2

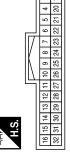
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DAYTIME LIGHT SYSTEM



DAYTIME RUNNING LIGHT SYSTEM WITH LED CONNECTORS

Connector Name WIRE TO WIRE	TO WIRE
Connector Color WHITE	111





3	Connector Name BCM (BODY CONTROL	MODULE)	11		77 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 81 91 92 89 89 95 96 97 98 99 100 101 102 103 104 105 106 11	Signal Name	ENG START SW	POWER POSITION I
M23	Ime BCI	2	lor WH		76 77 78 96 97 98	Color of Wire	SB	>
Connector No.	Connector Na		Connector Color WHITE	原列 H.S.	71 72 73 74 75 76 77 78 79 80 81 82 91 92 93 94 95 96 97 98 99 100 101 102	Terminal No. Wire	9/	91
			-					
	WIRE TO WIRE	ITE .			11 10 9 8 7 6 5 4 3 2 1 27 26 25 24 22 21 20 19 18 17	Signal Name	_	-
. M21	ıme WIR	lor WHITE			11 10 9 27 27 26 25 2	Color of Wire	Τ	Ь

POWER POSITION LED **ENG START SW**

M25	Connector Name BCM (BODY CONTROL MODULE)	WHITE
Connector No.	Connector Name	Connector Color WHITE

Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	GR	\	W	BG	Ь	Γ	Ь
Terminal No. Wire	32	33	34	35	98	68	40

Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	GR	>	M	BG	Ь	L	۵
Terminal No. Wire	32	33	34	35	36	39	40
							-

BATTERY (FUSE)

₾ В

Signal Name

Color of Wire

Terminal No. 22 67 2

BATTERY (F/L)

>

Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
Color of Wire	٦	GR	BB	В	^
Terminal No. Wire	2	3	4	5	9

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Connector Name | BCM (BODY CONTROL MODULE) BLACK

Connector Color

M24

Connector No.

DAYTIME LIGHT SYSTEM

< WIRING DIAGRAM > [LED HEADLAMP]

Connector No.		TOTAL CHARGE	Connector No.	M33		Connector No.	or No.	M34		
connector Name COMBII	olor WHI	COMBINATION SWITCH WHITE	Connector Name POWER SWITCH CONNECTOR CONNECTOR WHITE	or WHIT	EH SWIICH E	Connector Name	or Name or Color	WHITE	Connector Color WHITE	
是 H.S.	7 8 8 9 9 9 9	4 11 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	所 H.S.	4 %	7 8 7	原 H.S.	20 19 1	19 18 17 16 15 14 13 39 38 37 36 35 34 33	12 11 10 9 8 7 6 32 31 30 29 28 27 26	5 4 3 2 1 25 24 23 22 21
erminal No.	Color of Wire	Signal Name					-	,		
2	GR	1	Terminal No.	Color of Wire	Signal Name	Terminal No.	<u>ဗ</u> ဗိ	Color of Wire	Signal Name	
2	BB	ı	က	ŋ	1	-		LG	BAT	
7	8	ı	4	В	1	က		GR	IGN	
8	Т	-	7	>	1	5		В	GND	
6	BG	1	∞	SB	1	9		В	GND	
10	Y	-				18		۵	CAN-L	
11	Ь	1				19		_	CAN-H	
12	^	1				24		BG	E-PKB	
13	GR	-						-		
14	В	1								
				Г				:		
connector No.		M40	Connector No.		M41	Connector No.	or No.		M44	
connector Color			Connector Color			Connector Color	or Color			
H.S.	10 9 8 7 20 19 18 17	10 9 8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13 12 11	H.S.	9 8 7 (10 9 8 7 6 5 4 3 2 1 1 20 19 18 17 16 15 14 13 12 11	E.S.H	20 10	10 9 8 7 6 20 19 18 17 16	5 4 3 2 1 15 14 13 12 11	
erminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	8 8 8	Color of Wire	Signal Name	
2	_	1	6	_	1	1		Ъ	1	
6	Г	1	10	Г	1	12		Ь	1	
10	Г	1	19	Ь	1					
=	ГG	ı	20	۵	ı					
12	re	ı								
15	۵	1								
19	۵	ı								
20	۵	ı								

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Revision: May 2014 EXL-37 2014 LEAF

			Connector No. E6 Connector Name JOINT CONNECTOR-E01 Connector Color BLUE	H.S.	al No. Col						
nector No. M50 nector Name JOINT CONI	H.S. (20 19 18 17 16 15 14 13 12 11) Terminal No. Wire Signal Name	3 B B	Connector No. E4 Connector Name PARKING BRAKE SWITCH Connector Color BLACK	H.S.	Terminal No. Color of Signal Name	8 1					
nector No. M46 nector Name JOINT CONNEC	H.S. (20 19 18 17 16 15 14 13 12 11) Terminal No. Wire Signal Name	19 SB – 20 SB –	Connector No. M77 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	80 60 40 20 20 80 80 80 80 80 80 80 80 80 80 80 80 80	—	77 6 6 6 6 6 7 7 7 7 8 7 7 7 8 7 8 7 8 7	08 02 02 00	Terminal No. Color of Signal Name	- BB 69	91 Y

nector No. E12	E12	Connector No. E13	E13
ector Name	IPDM E/R (INTELLIGENT Inector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
mector Color BROWN	BROWN	Connector Color WHITE	WHITE
σį	17	S H	28 27 28 25 24 23

28 27 28 25 24 23 34 33 32 31 30 29	Signal Name	CAN-L	CAN-H	DTRL RLY	
8 8 7 7 8	Color of Wire	Ъ	Г	G	
中 H.S.	Terminal No.	26	27	28	

Connector No.	·	E12	
Connector Name	ame		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Color		BROWN	NW
咸雨 H.S.		22 21 20	20 19 18
Terminal No.	Color of Wire	r of re	Signal Name
18	B/	B/W	S GND

Apr. No			Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK	stor Name POWER DISTRIBUTION MODULE ENGINE ROOM) stor Color BLACK	stor Name Module ENGINE ROOM) stor Color BLACK 11 10 9 14 13 12 14 13 12 14 13 12 15 14 18 12 15 14 18 12 15 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 12 16 14 18 18 18 16 14 18 18 18 18 18 18 18 18 18 18 18 18 18
ON rotogado?	Connector Name	Connector Colo	呵奇 H.S.	Terminal No. Wire	σ

Connector No.	E85
Connector Name	FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)
Connector Color BLACK	BLACK
原南 H.S.	5 4 3 2 1 10 9 8 7 6

DAYTIME RUNNING LIGHT RELAY	BLACK	2 4 1	Signal Name	-	1	1	-	1
			Color of Wire	ГG	g	٦	В/Υ	LG
Connector Name	Connector Color	(南 H.S.	Terminal No.	1	2	3	4	2

Signal Name

Terminal No. Wire

B_W

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Connector No.	E15
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE
H.S.	25 52 51 50 48 47 82 61 60 59 58 57 56 55 54

Connector No. E84

MODULE ENGINE ROON	WHITE	52 51 50	of Signal Name	H/LAMP HI RH	H/LAMP HI LH
-		53 52 62 61	Color of Wire	Υ	മ
	Connector Color	南 H.S.	Terminal No.	49	20

Signal Name	H/LAMP HI RH	H/LAMP HI LH	
Color of Wire	У	В	
Terminal No.	49	20	

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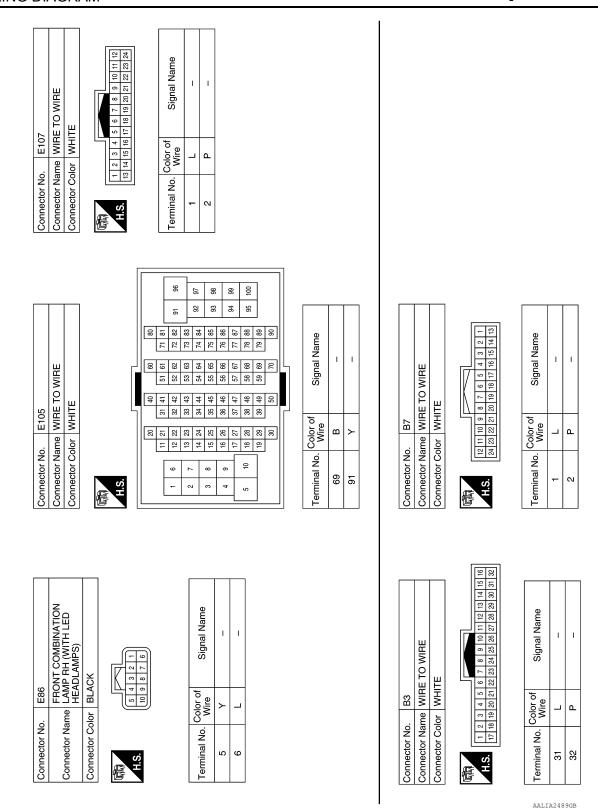
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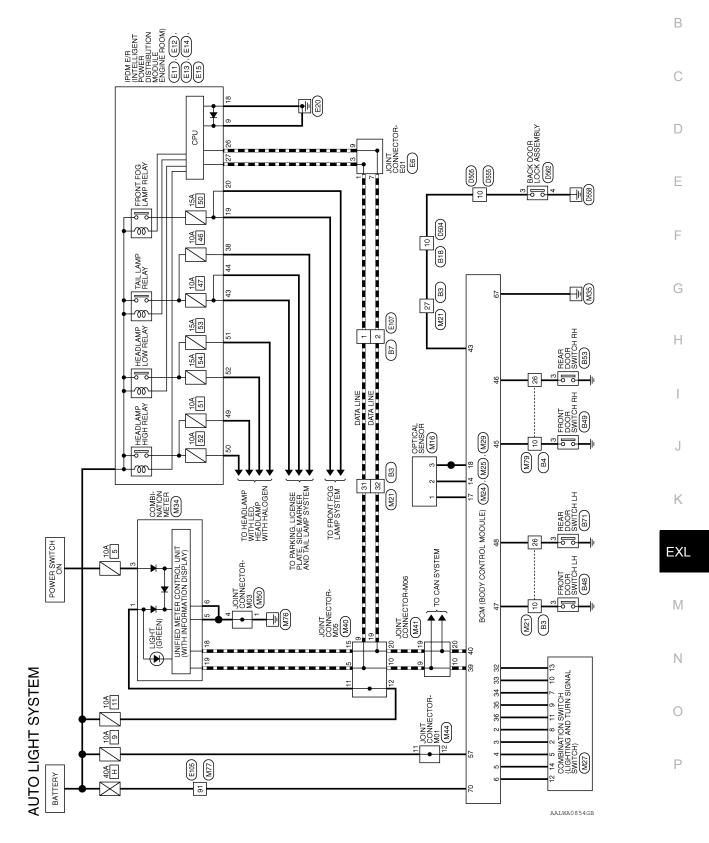
Revision: May 2014



EXL-40

AUTO LIGHT SYSTEM

Wiring Diagram



AUTO LIGHT SYSTEM CONNECTORS

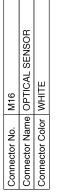
Connector No.	M16
Connector Name	Connector Name OPTICAL SENSOR
Connector Color WHITE	WHITE

Connector Name | WIRE TO WIRE

M21

Connector No.

Connector Color WHITE



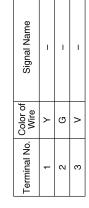


Signal Name

Color of Wire SB ≥ > _ ۵

Terminal No. 10

26 27 31 32





MODÜLE)	TE	55 75 59 59 60 61 62 63 64 65 70 68 69 70 70 64 65 70 70 64 65 70 70 70 70 70 70 70 7	Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)
MOL	lor WHI	5657 65 (6)	Color of Wire	۵	В	>
	Connector Color WHITE	是 H.S.	Terminal No. Wire	22	29	70

Signal Name	COMBINATION SW INPUT 1	AUTO LIGHT SENSOR INPUT	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT	KEYLESS TUNER, AUTO LIGHT SENSOR GND	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	^	ß	\	Г	GR	\	W	BG	Ь	Т	Ь
Terminal No.	9	14	17	18	32	33	34	35	36	39	40

	BCM (BODY CONTROL MODULE)		[7	12 13 14 15 16 17 18 19 20 32 33 34 35 36 37 38 39 40	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2
M24	SCM (BOD) NODULE)	BLACK		8 9 10 11 12 13 28 29 30 31 32 33		SO			CO
	l	\vdash		6 7 26 27	Color of Wire	_	GR	BR	g
Connector No.	Connector Name	Connector Color	H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	2	ε	4	ß

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		1	1	6					I	ı		I
	COMBINATION METER	IE II		12 11 10 0 8 7 8 7 8 1 3	31 30 29 28 27 26 25 24	Signal Name	BAT	NÐI	GND	GND	CAN-L	CAN-H
. M34		lor WHITE	<u> </u>	2 5	8 3	Color of Wire	2	GR	В	В	۵	_
Connector No.	Connector Name	Connector Color	明.S.	20 10 18 17 16 15	39 38 37 36	Terminal No.	-	3	5	9	18	19

Connector No.	o. M41	_
Connector Na	ame JOI	Connector Name JOINT CONNECTOR-M06
Connector Color BLUE	olor BLL	JE J
E SH	10 9 8	7 6 5 4 3 2 1 17 16 15 14 13 12 11
Terminal No. Wire	Color of Wire	Signal Name
6	٦	I
10	٦	1
19	Д	ı
20	Δ	ı

Signal Name	I	I	ı	I	ı	I
Color of Wire	_	ГG	ГС	۵	Ь	Д
erminal No. Wire	10	11	12	15	19	20

Signal Name	I	1	I	I	ı	I
Color of Wire	T	ГG	ГG	۵	Ь	Ь
Terminal No. Wire	10	11	12	15	19	50

Connector No.). M40	
Connector Na	ame JOII	Connector Name JOINT CONNECTOR-M05
Connector Color BLUE	olor BLU	ш
(所) H.S.	10 9 8 20 19 18	7 6 5 4 3 2 1
Terminal No.	Color of Wire	Signal Name
5	٦	ı
6	7	1

Signal Name	DOOR SW (BACK)	DOOR SW (AS)	DOOR SW (RR)	DOOR SW (DR)	DOOR SW (RL)
Color of Wire	Υ	BR	В	SB	8
Terminal No. Wire	43	45	46	47	48

M29	Connector Name BCM (BODY CONTROL MODULE)	BLACK	
Connector No.	Connector Name	Connector Color BLACK	



	Connector Name COMBINATION SWITCH	<u> </u>	0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	ı	
. M27	Ime CO	lor WH	1 2 8 2 2 8	Color of Wire	GR	
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	2	

3 10 11 12 13 14	Signal Nan	ı	1	ı	_	I	ı	_	I	ı	ı
- - - - - - - - - -	Color of Wire	GR	BR	Μ	٦	BG	Y	Ы	۸	ВĐ	Œ
οj	ninal No.	2	5	7	8	6	10	11	12	13	14

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EXL-43 Revision: May 2014 **2014 LEAF** В

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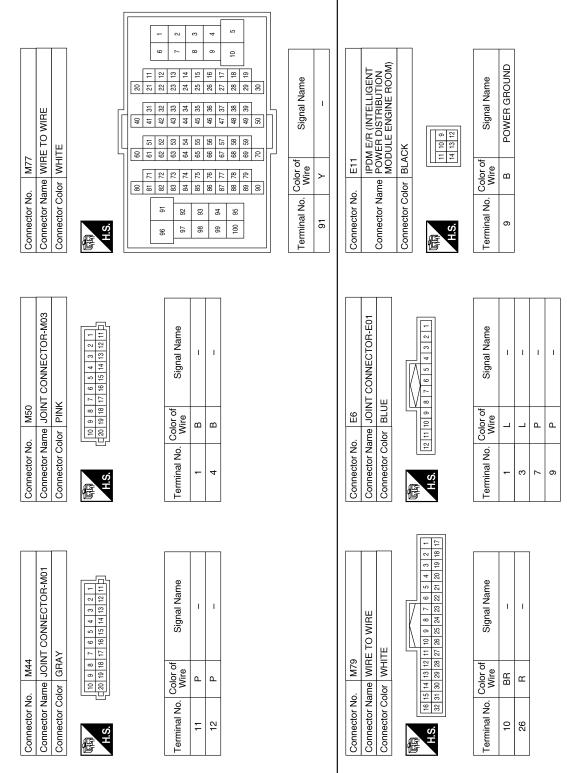
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E14 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)		36 38	Signal Name	TAIL 1 (WITHOUT SOLAR CELL)	TAIL 1 (WITH SOLAR CELL)	CLEARANCE/L LH	TAIL 2		Signal Name									
	lor BROWN	39 38 7 46 45 44 43 42 43 42	Color of Wire	LG TAII	R TAIL	O CLE	В	_	Color of S	>								
Connector No.	Connector Color	高 H.S.	Terminal No.	38	38	43	44		Terminal No.	91								
 - \tilde{\									<u> </u>					96	92 97		8	56
E13 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)		25 24 23 31 30 29	Signal Name	CAN-L	CAN-H				- C	D D			09 0	51 61 71 52 62 72	3 53 63 73 83 4 54 64 74 84	55 65 75	56 66 76	57 67 77 87 8 58 68 78 88 9 59 69 79 89
	olor WHITE	28 27 28 33 32	Color of Wire	۵.	_				Connector No. E105	Connector Color WHITE			20 40	22 32	13 23 43 43 44	25 35	26 36	17 27 37 47 18 28 38 48 19 29 39 49
Connector No.	Connector Color	原 H.S.	Terminal No.	26	27				Connector No.	Connector C	E	H.S.		- 6	2 7	8	4	5 10
LN NO									Ŀ	Z Z Ŵ						I	I	II.
E12 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	NN	20 19 18	Signal Name	S GND	FR FOG LH					POWER DISTRIBUTION MODULE ENGINE ROOM)	<u>ш</u>	50 7 49 48 47		Signal Name	H/LAMP HI RH	H/LAMP HI LH	H/LAMP LO LH	H/LAMP LO RH
. ue	olor BROWN	17 [22 21	Color of Wire	B/W	≥ >						olor WHITE	53 52 51 5		Color of Wire	>	g	٦	<u>a</u>
Connector No.	Connector Color	H.S.	Terminal No.	18	20				Connector No.	Connector Name	Connector Color	E	H.S.	Terminal No.	49	20	51	52

Revision: May 2014 EXL-45 2014 LEAF

Signal Name

Color of Wire SB

Terminal No.

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

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Connector No. B3 Connector No. B4 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE	H.S. The result of the resul	Signal Name Terminal No. Color of Wire Signal Name Terminal No. Color of Wire Signal Name - 10 SB - 10 BR - - 26 LG - 26 R -	27 Y – 31 L – 32 P – 32	Connector No. B18 Connector No. B48 Connector Name WINE TO WIRE Connector Name FRONT DOOR SWITCH LH Connector Color WHITE Connector Color WHITE	
E TO WIRE	6 7 8 9 1 20 20 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2			E TO WIRE	
Connector No. E107 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 13 14 15 16 17	Terminal No. Color of Wire 1 L 2 P		Connector No. B7 Connector Name WIRE TO WIRE Connector Color WHITE	

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Signal Name OWIRE	Terminal No. Color of Signal Name 3 R Connector No. D505 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name 3 LG - Connector No. D555 Connector Name WIRE TO WIRE Connector Color WHITE
Signal Name -		Terminal No. Color of Sign 3 LG Connector No. D555 Connector Name WIRE TO WIRI Connector Color WHITE
OWIRE	r No. D505 ir Name WIRE TO WIRE	Connector No. D555 Connector Name WIRE TO WIRE Connector Color WHITE
Connector Color WHITE Connector	1 COO	
H.S. 20 19 13 12 11 10 9 8 7 H.S.	5 4 10 9 8 7 6 1 1 6 1 1 6 1 1 6 1 1	H.S. (6 7 8 9 10 11 12
Terminal No. Color of Signal Name Terminal No. Wire - 10 SB - 10	No. Color of Signal Name SB –	Terminal No. Color of Signal Name
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EXL-47 Revision: May 2014 **2014 LEAF**





Signal Name	ı	1
Color of Wire	SB	В
Terminal No.	က	4

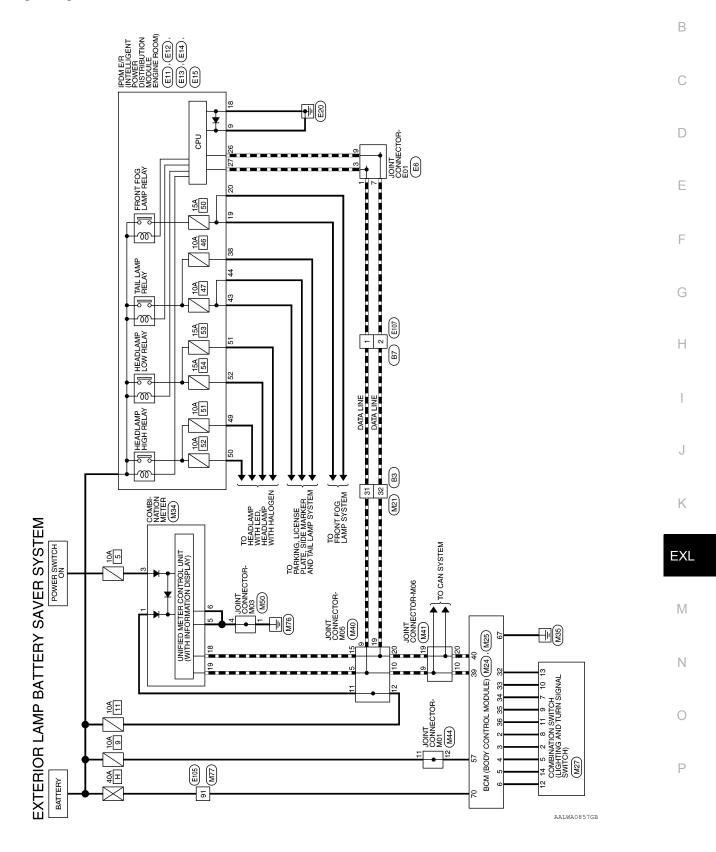
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< WIRING DIAGRAM > [LED HEADLAMP]

EXTERIOR LAMP BATTERY SAVER SYSTEM

Wiring Diagram

Α



Signal Name

Color of Wire

Terminal No.

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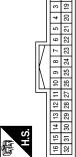
EXTERIOR LAMP BATTERY SAVER SYSTEM CONNECTORS

Connector No.	M21
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE

Connector No. M24
Connector Name BCM (BODY CONTROL MODULE)

Connector Color BLACK

ctor No. M21	Connector Name WIRE TO WIRE	Connector Color WHITE	
Connector No.	Connector Na	Connector Co	



		ar	8	7	П
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		Signal Nar	20	5 4	
		Sig	21	2	
		0,	22	9	
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			24	8	
		e of	52	6	
Ф	7	lo i	56	9	
		87	27	Ξ	1
			28	12	
		Z	29	13	
32	~	na	30	14	l
•	` '	Ë	31	15	l
		Те	32	16	
	31 L	Terminal No. Color of Wire	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18	16 15 14 13 12 11 10 9 8 7 6	

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	9	۸	GR	>	*	BG	Ь	٦	Ь
Terminal No. Wire	2	9	32	33	34	35	96	68	40
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Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
Color of Wire	Т	GR	BR
erminal No. Wire	2	3	4

Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	
Color of Wire	Т	GR	BR	
Terminal No. Wire	2	3	4	

M27	Connector Name COMBINATION SWITCH	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

Connector No.



Connector Name COMBINATION SWITCH	IITE	9 3 10 11 12 13 14 6	Signal Name	1	I	ı
me CO	lor WF	1 8 8 2	Color of Wire	GB.	BB	>
Connector Na	Connector Color WHITE	H.S.	Terminal No.	2	5	7

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Connector Name BCM (BODY CONTROL MODULE)	1	Se Se Se Se Se Se Se Se	Signal Name	BATTERY (FUSE)	GND	
me BCN MOI	lor WHI	65 66	Color of Wire	۵	В	
Connector Na	Connector Color WHITE	原列 H.S.	Terminal No.	22	29	ï

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EXTERIOR LAMP BATTERY SAVER SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

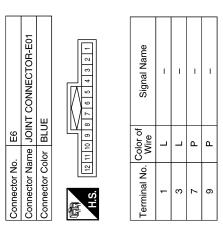
M41 M61 M71 M91 M91 M91 M91 M91 M91 M9	Terminal No. Color of Mire Signal Name	A B C D
0. M40 mne JOINT CO loo BLUE 10 9 8 7 6 5 20 19 18 17 16 15	Terminal No. Color of Signal Name 5	G H I
4 MABINATION METER HITE	Terminal No. Color of Connector No. M44 Connector No. Color of Connector Color of Connector Color of Color of Connector No. Mire Signal Name Terminal No. Color of Color of Connector No. Mire Signal Name Terminal No. Color of	K EXL M N
	AALIA2491GB	P

Revision: May 2014 EXL-51 2014 LEAF

Connector No.). E12	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color		BROWN
画 H.S.	17 22 2	22 21 20 19 18
Terminal No. Wire	Color of Wire	Signal Name
18	B/W	S GND
19	Μ	FR FOG RH
20	>	FR FOG LH

. E12	me POWER DISTE	lor BROWN	17	Color of Wire Sign	B/W	W	V FB
Connector No.	Connector Name	Connector Color	明.S.	Terminal No. Wire	18	19	20

Terminal No. Wire Signal Name 9 B POWER GROUND
В



Connector No.	E15
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	ır WHITE
顾 H.S.	23 52 51 50

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ПЕ	50	Signal Name	H/LAMP HI RH	H/LAMP HI LH	H/LAMP LO LH	H/LAMP LO RH
	lor WHITE	53 52 51 50 62 61 60 59	Color of Wire	Υ	В	Т	Ь
Connector Name	Connector Color	雨 H.S.	Terminal No.	49	20	51	52

Connector Name POWER Connector Color BROWN	POWER DISTRIBUTION MODULE ENGINE ROOM) BROWN
100000000000000000000000000000000000000	
	•
1 0 mo 1	1 Y Y Y
	<u> </u>

Signal Name	TAIL 1 (WITHOUT SOLAR CELL)	TAIL 1 (WITH SOLAR CELL)	CLEARANCE/L LH	TAIL 2
Color of Wire	ΓC	Œ	0	В
Terminal No. Wire	38	38	43	44

28 27 26 25 24 23		tor Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector No. E13
I	28 27	ctor Color WH	ctor Name POWER DISTRIBUTION MODULE ENGINE ROOM ctor Color WHITE
			Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)





Д	ė.	Wire	Sig
	26	Ь	CAN
	27	٦	CAN-

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EXTERIOR LAMP BATTERY SAVER SYSTEM

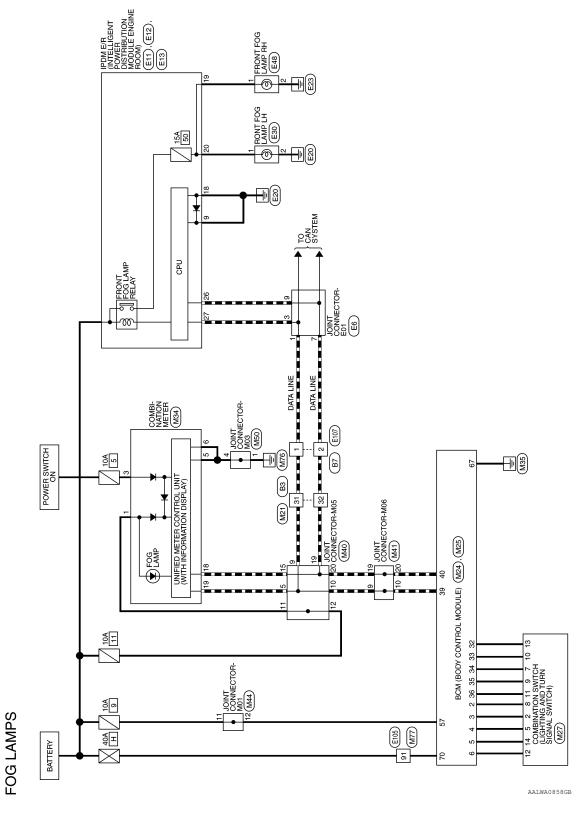
< WIRING DIAGRAM > [LED HEADLAMP]

Connector No. B3	A B C C D
Connector No. E107	F G H
Connector No. E105 Connector Name WIRE TO WIRE Connector Color WHITE This is a second to seco	Connector No. B7 Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE TITITIO 9 8 7 6 5 4 3 2 11 Terminal No. Color of Signal Name Z P

Revision: May 2014 EXL-53 2014 LEAF

FRONT FOG LAMP SYSTEM

Wiring Diagram



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Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	GR	>	*	BG	۵	7	Ь
Terminal No.	32	33	34	35	36	39	40

				19 20 39 40						
	BCM (BODY CONTROL MODULE)	BLACK		9 10 11 12 13 14 15 16 17 18 29 30 31 32 33 34 35 36 37 38	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
M24		-		6 7 8 26 27 28 3	Color of Wire	_	GR	BR	5	>
Connector No.	Connector Name	Connector Color	师 H.S.	1 2 3 4 5 1 21 22 23 24 25 2	Terminal No.	2	က	4	5	9

H.S.	32 31 30 29 28 27 26 25	S =	4 8	29	2 8	11	12 11 10 9 8 7 6 5 4 3 2 1 28 27 26 25 24 23 22 21 20 19 18 17	6 23	8 42	23 22	৩ ম	2 5	4 8	20 4 3	2 8	
]	1	1]	11]]]]]]	11]]]]]]] :	H	71
erminal No. Wire	87	응분	ဥမ	-			Š	ığ	<u> </u>	Signal Name	l e					
31									1							
32		Р							-1							

Signal Name	ı	_	ı	-	-	ı
Color of Wire	BG	У	Ъ	۸	GR	G
Terminal No.	6	10	F	12	13	14

	COMBINATION SWITCH	TE TE	2 3 4 5 6 8 9 10 11 12 13 14	Signal Name	1	-	_	-
. M27		lor WHITE	1 1	Color of Wire	GR	BR	Μ	_
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	2	5	2	α

]		Γ		
CM (BODY CONTROL IODULE)	VHITE		9 29 29 10 10 10 10 10 10 10 10 10 10 10 10 10		Signal Name	BATTERY (FUSE)
రౖరై	ĮΨ		200	ſ	of	

Connector Name BCM (BODY CONTRC MODULE)	ПЕ	86 57 58 59 60 61 62 63 64 66 67 68 69 70	Signal Nam	BATTERY (FU	GND	BATTERY (F.
me MOI	lor WH	5657	Color of Wire	Ь	В	γ
Connector Na	Connector Color WHITE	H.S.	Terminal No.	25	29	20

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FOG LAMPS CONNECTORS

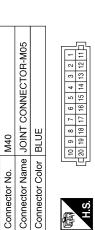
Connector Name WIRE TO WIRE Connector Color WHITE M21 Connector No.

EXL-55 Revision: May 2014 **2014 LEAF**

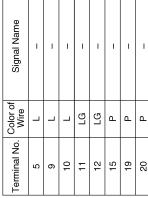
Connector No.

Connector No.	M41
Connector Name	Connector Name JOINT CONNECTOR-M06
Connector Color BLUE	BLUE

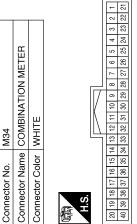
Signal Name	_	-	-	-
Color of Wire	Γ	Τ	Д	Ь
Terminal No. Wire	6	10	19	20



Signal Name	I	ı	ı	I	ı	ı	I	ı
Color of Wire	7	_	_	ГG	ГG	۵	Ь	Ь
Terminal No.	5	6	10	11	12	15	19	20



Signal Name	ı	ı	ı	-	ı	ı	_	I	
Color of Wire	٦	٦	Γ	ГG	ГG	۵	Ь	Д	
Terminal No. Color of Wire	5	6	10	11	12	15	19	20	



Signal Name	BAT	IGN	GND	GND	CAN-L	CAN-H
Color of Wire	LG	GR	В	В	Ь	Г
Terminal No.	-	3	5	9	18	19

7 6 5 4 3 2 1 17 16 15 14 13 12 11	Signal Name	ı	1
10 9 8 7	Color of Wire	В	В
明.S.	Terminal No. Color of Wire	1	4

H.S.	Terminal No.

Connector Name JOINT CONNECTOR-M03

Connector Color

Connector No. M50

Connector No.

	7 6 5 4 3 2 1	7 16 15 14 13 12 11		Signal Name
	7	17		
- []	8	18		of of
	6	19		olor
L	10	<u></u>		Color of
				0

Sonnector Name JOINT CONNECTOR-M01	lame	의행			[8] [ž	빌	[5]		[뉴]	101
Æ			- 15						- 15	- 15	_
AHA	9	6	8	7	9	6 5 4	4	3	2	-	
SH	20 19 18 17 16 15 14 13 12 11	19	18	17	16	15	14	13	12	Ξ	ш
5											,

H.S.	Color of Wire	11 P	12 P
Ŧ	Term		

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FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

	Connector Name JOINT CONNECTOR-E01	JE	9 8 7 6 5 4 3 2 1			Signal Name	ı	ı	ı	ı			3	TIATOL LITTIAL OLD MODE
Ш	ne JOI	or BLUE	12 11 10			Color of Wire	_	_	۵	۵			E13	2
oly rotograph	Connector Nar	Connector Color	H.S.			Terminal No. Wire	1	ဇ	2	6			Connector No.	
to rolo	ON I	91 Y -											Connector No. E12	TINEDITION CAN DELICENT
				20	21 11 6 1	1 2 4		26 16 9 4	27 17	2 61	8			FIVE
M77	WIRE TO WIRE	WHITE		60 40	61 51 41 31	83 84 85 85 85 84 85 84	65 55 45	96 56 46	67 57 47 37	69 59 49	05		E11	I I I I I I I I I I I I I I I I I I I
9		Color			81 83		_	-	87 77	$\overline{}$	06		Š.	

Connector No.	. E13	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	lor WH	TE
斯 H.S.	38 88	27 26 25 24 23 33 32 31 30 29
Terminal No.	Color of Wire	Signal Name
56	Ь	CAN-L
27	_	CAN-H

Connector No.). E12	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	olor BRC	BROWN
H.S.		22 21 20 19 18
Terminal No.	Color of Wire	Signal Name
18	B/W	S GND
19	Μ	FR FOG RH
20	۸	FR FOG LH

LNC NO NO MO			o)	JND	
M E/R (INTELLIGE WER DISTRIBUTIC DULE ENGINE RO	4CK	11 10 9 14 13 12		POWER GROU	
	lor BL/		Color of Wire	В	
Connector Na	Connector Co	际面 H.S.	Terminal No.	6	
	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)		Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK 11 10 9 14 13 12	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK H.S. Terminal No. Color of Signal Name Signal Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK H.S. Terminal No. Color of Signal Name 9 B POWER GROUND

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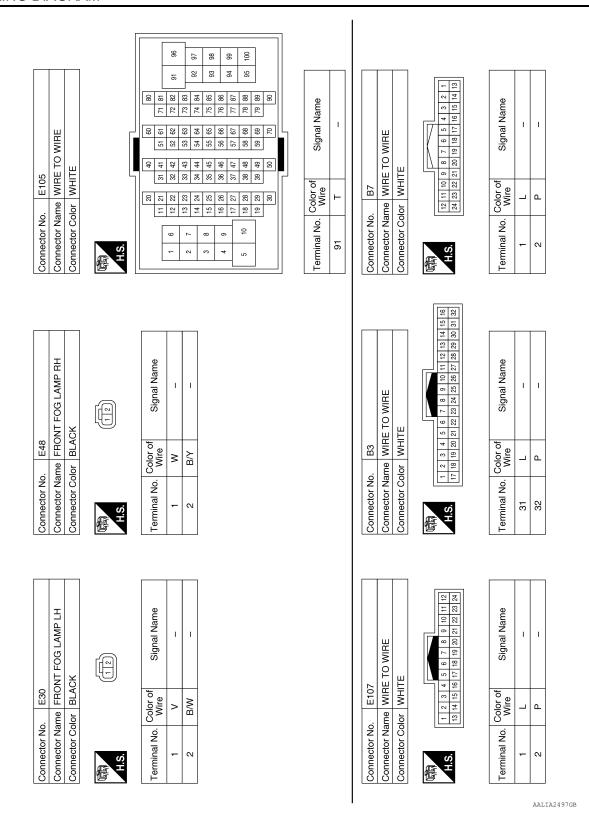
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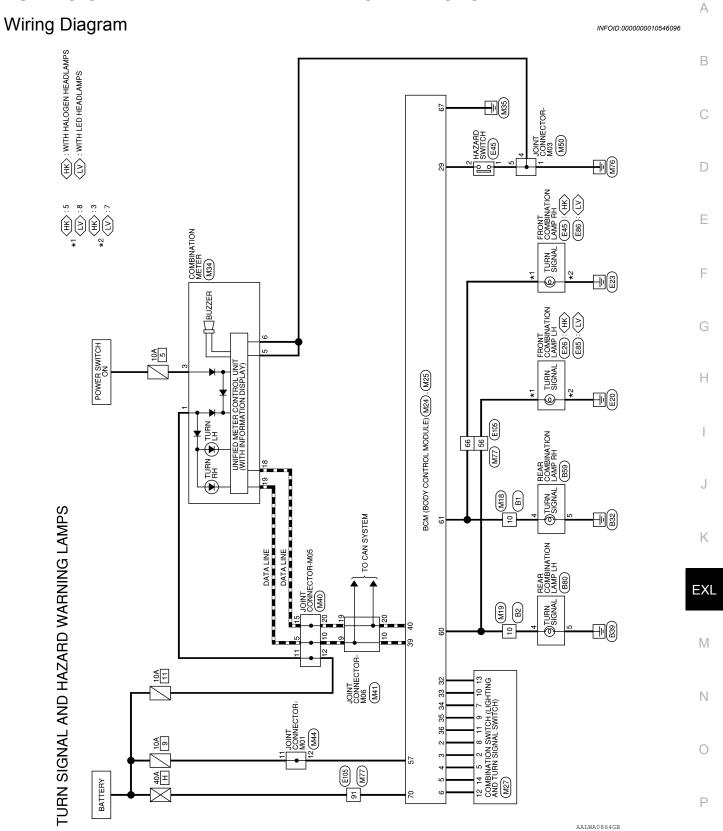
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< WIRING DIAGRAM > [LED HEADLAMP]

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM



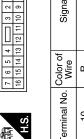
TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

M19

Connector No.

M18	WIRE TO WIRE	WHITE	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	

7 6 5 4 2 3 2 1 16 15 14 13 12 11 10 9 8			 ∞ ₽			8 유 후 후 후	WIRE WHI	ω ν ω μ		ž ž ŏ —	inector Narinector Col	
7 6 5 4 3 2 1	 -	2	က	ПΠ	∥⊔	4	r2	9	_	_		
					ш		∣≶	Ė.	응	ĮΫ	턍	ě
inector Color WHITE		R	M	0	Ē	RE	M	0	ame	ž	ctor	ne
inector Name WIRE TO WIRE						ω	Ξ		o.	ž	ctor	ě



10 R
Terminal No. Color of Wire Sign

10

RE TO WIRE	ITE	7 6 5 4	Signal	_
me WIF	lor WH	7 6 5 16 15 14	Color of Wire	^
Connector Name WIRE TO WIRE	Connector Color WHITE	际 H.S.	Terminal No. Wire	10
Name WIRE TO WIRE	TE	7 6 5 4 3 2 1 16 15 14 13 12 11 10 9 8	Signal Name	ı
me WIR	Color WHITE	7 6 5 4	lo. Color of Wire	В
Na	၂႘		o.	

Signal Name		

Connector No.	M25
Connector Name	Connector Name BCM (BODY CONTROI MODULE)
Connector Color WHITE	WHITE



r WHITE	66 F7 58 59 60 61 62 63 64 66 70 86 70 89 70 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 89 70 89	
nector Color WHITE	S.	

Signal Name	HAZARD SW	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	ŋ	GR	\	M	BG	Ь	Γ	Ь
Terminal No. Color of Wire	29	32	33	34	35	36	39	40

				19 20 39 40						
	BCM (BODY CONTROL MODULE)	BLACK		9 10 11 12 13 14 15 16 17 18 19 29 30 31 32 33 34 35 36 37 38 39	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
. M24				6 7 8	Color of Wire		GR.	HH HH	G	>
Connector No.	Connector Name	Connector Color	原 H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	2	ဇ	4	5	9

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

[LED HEADLAMP] < WIRING DIAGRAM >

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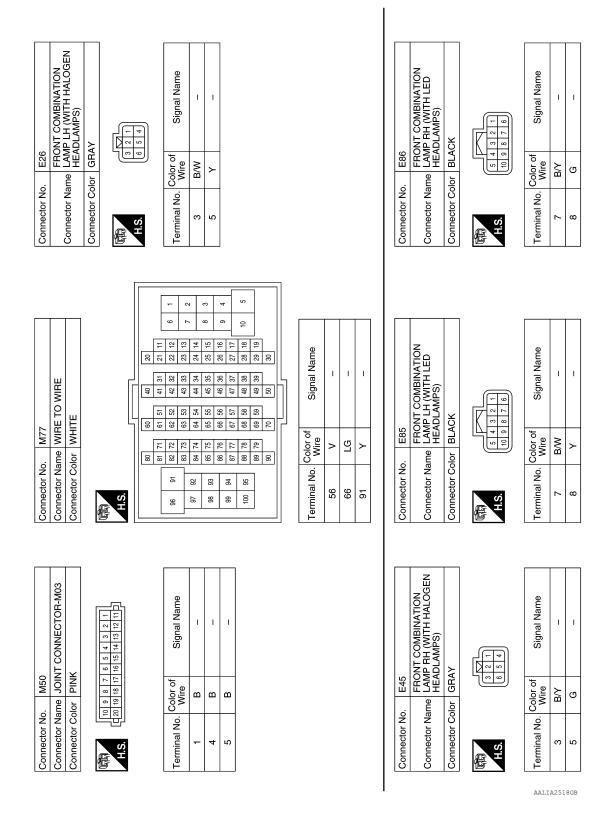
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DR-MOS	аш	a a a a a a a a a a a a a a a a a a a	В
Io. M40 lame JOINT CONNECTOR-I color BLUE 10 9 8 7 6 5 4 8 2 1 120 19 18 17 16 15 14 13 12 11	Signal Name	M45 HAZARD SWITCH WHITE 3 1 2 4 c of Signal Name e	С
0. M40 ame JOINT olor BLUE	Color of Mire of LG LG LG P P P G P P P P P P P P P P P	00 M45 ame HAZARI olor WHITE Color of Wire B G G	D
M40 Connector No. M40 Connector Name JOINT CONNECTOR-M05 Connector Color BLUE	Terminal No. 5 9 10 11 12 12 15 19 20	Connector No. M45 Connector Name HAZARD SWITCH Connector Color WHITE A.S. Terminal No. Color of Signal No. Wire 2 G	Е
221			F
METER 7 6 5 4 3 2 11 27 28 25 24 23 22 21	ame H	Name	G
	Signal Name BAT IGN GND GND CAN-L CAN-L	CONNECT	Н
or No. M34 or Name COMBIN or Color WHITE	Color of Wire LG R B B B B C C B C C C C C C C C C C C C	No. M44 Name JOINT Color GRAY Color of P P P P	I
Connector No. M34 Connector Name COMBINATIC Connector Color WHITE H.S. 2019 18 17 16 15 14 13 12 11 10 9 9 40 39 38 37 38 35 34 33 32 31 30 29	Terminal No. 3 3 6 6 6 19 19 19	Connector No. Connector Name Connector Color A.S. Terminal No. W 11 12 Fig. 19 Terminal No. M 11 Terminal No. M 11 Terminal No. M 12 Terminal No. M 13 Terminal No. M 14 Terminal No. M M M M M M M M M M M M M	J
			K
Connector No. M27 Connector Name COMBINATION SWITCH Connector Color WHITE The state of the st		Connector No. M41 Connector Name JOINT CONNECTOR-M06 Connector Color BLUE H.S. Total 18 17 16 18 14 18 12 11 Terminal No. Wire 9	EXL
M27 COMBINAT WHITE		or No. M41 or Name JOINT CONNEC or Color BLUE 10 9 8 7 6 5 4 3 2 10 9 18 17 16 15 14 13 15 L L L P P	M
Connector No. M27 Connector Name COMBIN Connector Color WHITE TH.S. T S 10 11 11 11 11 11 11	S	No. M41 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 9 10 9 10 9 9 10 9	Ν
Connector No. Connector Colc	2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No. Connector Name Connector Color Terminal No. V 9 9 10 10 19	0

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]



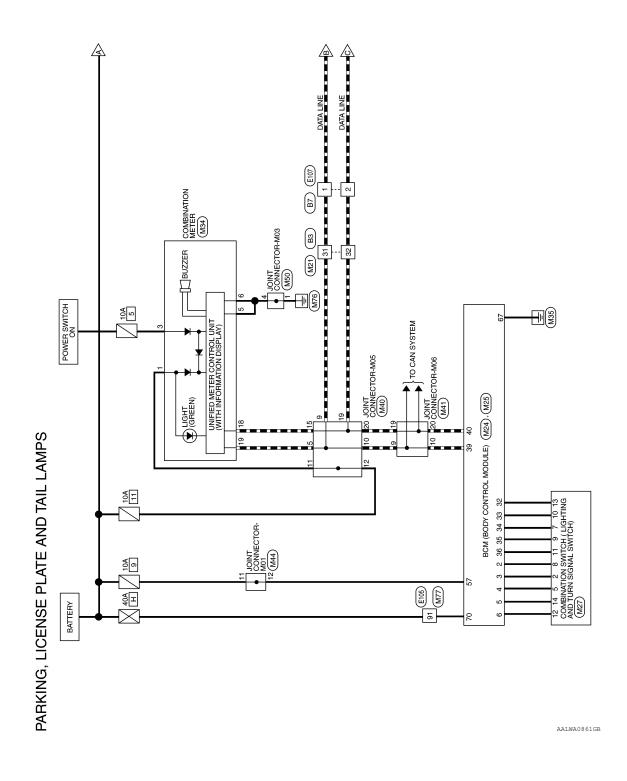
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

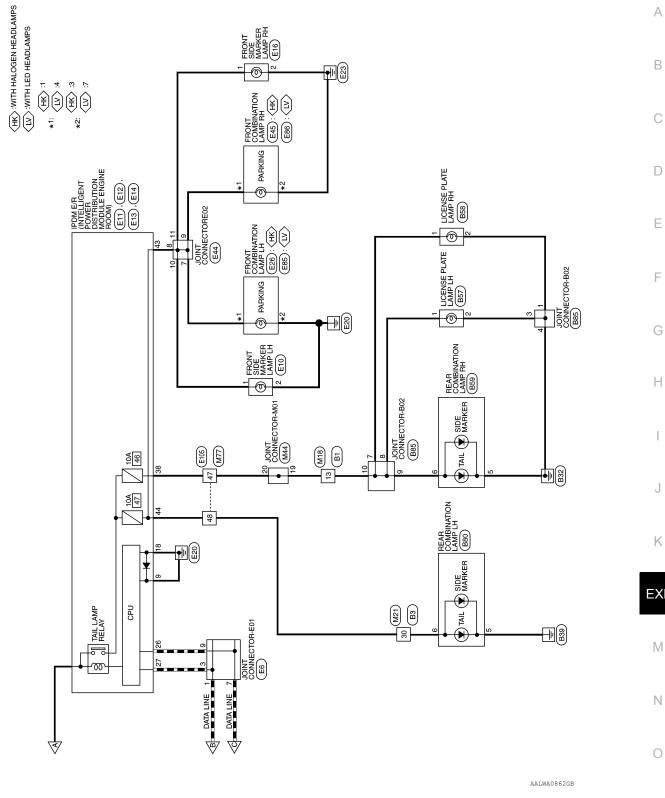
< WIRING DIAGRAM > [LED HEADLAMP]

Connector No. B2 Connector Name WIRE TO WIRE Connector Color WHITE 2	Terminal No. Color of Signal Name 10 SB -				A B C D
Connector No. B1 Connector Name WIRE TO WIRE Connector Color WHITE 2	Terminal No. Color of Signal Name		Connector No. B80 Connector Name REAR COMBINATION LAMP Connector Color WHITE	Terminal No. Color of Signal Name 4 SB 5 B	F G H
Connector No. M105 Connector Color WHITE Connector Color WHITE	20 40 60 70 80 70	Terminal No. Color of Wire Signal Name 56 Y - 66 G - 91 Y -	Connector No. B59 Connector Name REAR COMBINATION LAMP Connector Color WHITE A.S. R.A. Connector Color WHITE L.S. R.A. R.A. L.S. R.A. R.A. Connector Color WHITE	Terminal No. Color of Wire Wire Barras Barra	K EXL M N

Revision: May 2014 EXL-63 2014 LEAF

Wiring Diagram





EXL-65 Revision: May 2014 **2014 LEAF** EXL

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PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

Connector No. M18 Connector Name WIRE TO WIRE Connector Color WHITE

Connector Name | WIRE TO WIRE

Connector No.

Connector Color WHITE

r No.	M18	9								
r Name WIRE TO WIRE	8	IR	ш	2	>	lΒ	ш			
r Color	WHITE	三								
	7	9	2	4	Ш	П	6	2	-	
	16 15 14	12	14	13	12	7	10	9	8	
נ										

2 1	8 6 0
	12 11 1
4	13
2	14
9	15
7	16



Signal Name	I	
inal No. Color of Wire	Μ	
inal No.	13	

Signal Name	I	I	-	
Color of Wire	7	_	Ь	
Terminal No. Wire	30	31	32	

Connector No.	M25
Connector Name	Connector Name BCM (BODY CONTRO MODULE)
Connector Color WHITE	WHITE

65 758 59 60 61 62 63 64 70 65 66 67 68 69 70	Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)
56 57	Color of Wire	Ь	В	Υ
阿利 H.S.	Terminal No. Wire	57	29	20
		•		

Φ	NC 2	N ₄	NC 3	NO 2	NO-	ws N	s sw	NS N	s sw	NS N		
Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
	0	0	0	0	0	00	CO	8	CO	00		
Color of Wire	٦	GR	H 8	5	۸	ВÐ	>	Μ	BG	Ь	٦	d
Terminal No.	2	3	4	5	9	32	33	34	35	36	39	40

		9 10 11 12 13 14 15 16 17 18 19 20	22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	
		18	88	١
		17	37	١
		19	Ж	١
		15	ક્ષ	١
		14	8	١
		13	88	١
		12	33	١
	I IV	Ξ	3	١
X		10	30	١
Ä			29	١
뮵		8	28	١
_		7	27	١
은		9	56	١
ŏ		ß	22	١
ţ		4	24	١
Connector Color BLACK	(ó	က	83	١
ñ	H.S.	2	22	١
ပိ		Ŀ	21	١
			_	_

Connector Name BCM (BODY CONTROL MODULE)

Connector No.

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< WIRING DIAGRAM > [LED HEADLAMP]

M40 JOINT CONNECTOR-M05 BLUE	10 9 8 7 6 5 4 3 2 1		of Signal Name	ı	ı	1	1	1	ı	1			M50	JOINT CONNECTOR-M03	PINK	10 9 8 7 6 5 4 3 2 1	of Signal Name	ı	ı		
9 L		-	I No. Color of Wire			_	РП	P	4					Connector Name	Connector Color		I No. Color of Wire	В	В		
Connector No. Connector Nar	H.S.		Terminal No.	5	6	10	11	12	15	0 0	2 6		Connector No.	Connec	Connec	品.S.H.S.	Terminal No.	-	4		
	2 1	22 21								_			_								
M34 COMBINATION METER WHITE	11 10 9 8 7 6 5 4 3	31 30 29 28 27 26 25 24 23	Signal Name	BAT	IGN	GND	GND	CAN-L	CAN-H					JOINT CONNECTOR-M01	۶	8 7 6 5 4 3 2 1 18 17 16 15 14 13 12 11	Signal Name	1	ı	ı	1
-	15 14 13 12	35 34 33 32	Color of Wire	LG	GR	В	В	۵	_	-			o. M44		olor GRAY	10 9 8	Color of Wire	Ь	Ь	×	*
Connector No. Connector Name Connector Color	斯 H.S. 20 19 18 17 16	40 39 38 37 36	Terminal No.	-	က	5	9	18	19	!			Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.	11	12	19	20
Connector No. M27 Connector Name COMBINATION SWITCH Connector Color WHITE	2 3 10 11 12 13 14 8 9 10 11 12 13 14 14 14 14 14 14 14 14 14 14 14 14 14	Signal Name	1	ı	1	1	-	1	_	_	ı	_		Connector Name JOINT CONNECTOR-M06		8 7 6 5 4 3 2 1 18 17 16 15 14 13 12 11	Signal Name	ı	ı	ı	ı
o. M27 ame COMBII	- 2	Color of Wire	GR	BB	≥ .	_	5 ;	>	۵	^	GR	В	o. M41	ame JOIN	olor BLUE	10 9 8 7	Color of Wire	_	_	۵	_
Connector No. Connector Name Connector Color	是 H.S.	Terminal No.	2	5	7	∞ (n :	10	11	12	13	14	Connector No.	Connector Na	Connector Color	画 H.S.	Terminal No.	6	10	19	20

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Revision: May 2014 EXL-67 2014 LEAF

< WIRING DIAGRAM > [LED HEADLAMP]

DE MARKER Signal Name -	INTELLIGENT ISTRIBUTION ENGINE ROOM) Signal Name CAN-L CAN-H
E10 In ERONT SI CAMP LH Or GRAY	POWER D MODULE for WHITE Solor of Wire L
Connector No. Connector Nat Terminal No. 1 1 2 2	Connector Nar Connector Col Connector Col Terminal No. Col
E6 JOINT CONNECTOR-E01 BLUE I10 9 8 7 6 5 4 3 2 1 Tof Signal Name	POWER DISTRIBUTION POWER DISTRIBUTION BROWN IT I I I I I I I I I I I I I I I I I I
Connector No. E6 Connector Name JOII Connector Color BLL Terminal No. Wire 1 L 3 L 7 P 9 P	Connector No. F12 Connector Name POW MOI Connector Color BRC Terminal No. Color of Wire 18 B.W
WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE So S	E11 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) BLACK 11 10 9
Connector No. M77 Connector Name WIR Connector Color WHI M	Connector No. Connector Name POW Moll Connector Name HDM Moll Connector Color BLAS HLS HLS BORDER POWNITE BORDE

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[LED HEADLAMP] < WIRING DIAGRAM >

Connector No.	E26
Connector Name	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color GRAY	GRAY
H.S.	(0) (0) (0) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1

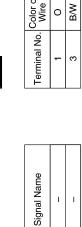
Connector Name FRONT SIDE MARKER LAMP RH

Connector No.

GRAY

Connector Color

0 0 7 0 - 4	Signal Name	I	1
	Color of Wire	0	B/W
H.S.	erminal No. Wire	-	3



Signal Name	I	ı	
Color of Wire	0	B/R	
Terminal No. Wire	٦	2	

Connector No.	. E14	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color		BROWN
雨 H.S.	46 39	39
Terminal No.	Color of Wire	Signal Name
38	ГG	TAIL 1 (WITHOUT SOLAR CELL)
38	Ж	TAIL 1 (WITH SOLAR CELL)
43	0	CLEARANCE/L LH
44	В	TAIL 2

E85	FRONT COMBINATION LAMP LH (WITH LED HEADLAMPS)	ACK	001 0 01 0 01 0 01 0 01 0 01 0 01	Signal Name	1	ı
		lor Bl		Color o Wire	0	B/W
Connector No.	Connector Name	Connector Color BLACK	原 H.S.	Terminal No. Wire	4	7
	ı					
9	RONT COMBINATION NMP RH (WITH HALOGEN EADLAMPS)	RAY	(c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	of Signal Name	ı	ı
Connector No. E45	Connector Name LAMP RH (WITH HALOGEN HEADLAMPS)	Connector Color GRAY	2 2	Terminal No. Color of Wire Signal Name	- 0	B/Y – –

	ECTOR-E02		6 6 2 6 7 1
E44	JOINT CONNE	BLUE	12 11 10 9 8 7 6 5
Connector No.	Connector Name JOINT CONNECTOR-E02	Connector Color BLUE	H.S. 12

Signal Name	ı	ı	_	ı	ı
Color of Wire	0	0	0	0	0
Terminal No. Wire	7	8	6	10	11

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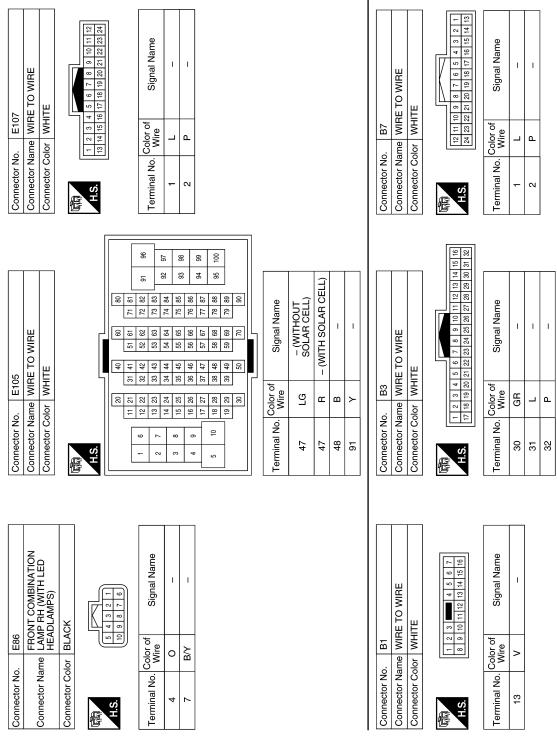
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< WIRING DIAGRAM >

[LED HEADLAMP]



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< WIRING DIAGRAM > [LED HEADLAMP]

	Α
Signal Name	В
Signa Signa	С
Volor of Wire B59	D
Connector No. B59 Connector Name REAR COMBINATION Connector Color of Signal Name 5 B - 6 V 6 V	Е
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Connector No. B58	G
B58 Signal Wire Wi	Н
Name LIC B58 Name LIC B84 Name LIC B85 Name JOII Name JOII B85 Name JOII Na	I
Connector No. B58 Connector Name LICENSE Connector Color of Terminal No. Wire Terminal	J
	K
Connector No. B57	EXL
B57 B57 B57	IVI
Connector No. B5. Connector Name LIC Connector Color of Terminal No. Wire LAI Connector Name RE Connector Name RE Connector Color of LAI Connector Color of LAI Connector Color of B8 Color o	Ν
Connector No. Connector No. Connector No. Connector No. Connector No. Connector No. Sonnector No. Fig. A.S. Terminal No. Sonnector Colc	0

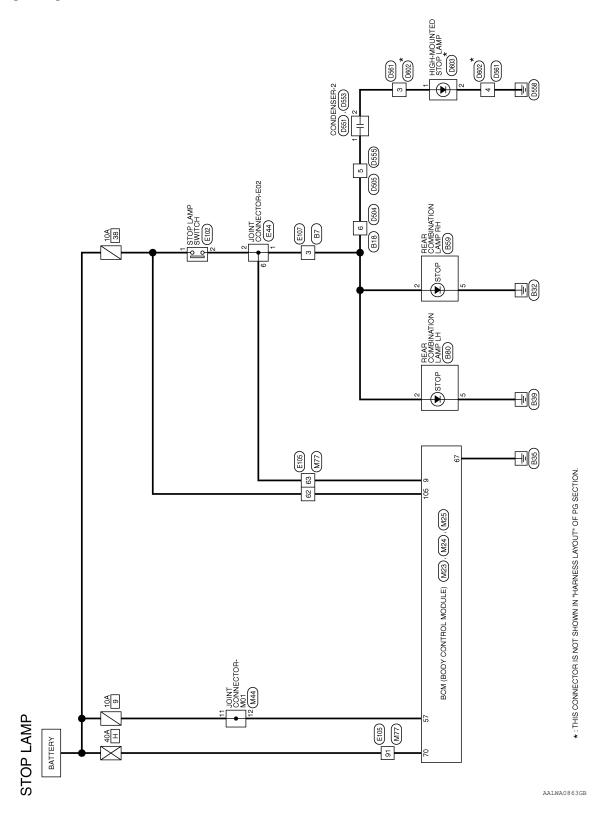
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Revision: May 2014 EXL-71 2014 LEAF

STOP LAMP

Wiring Diagram



Connector Name | BCM (BODY CONTROL MODULE)

M25

Connector No.

Connector Color WHITE

56|57|58|59|60|61|62|63|64 | 65 | 66 | 67 | 68 | 69 | 70 Α

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Connector No. M23	M23	Connector No. M24	M24
Connector Name	Connector Name BCM (BODY CONTROL MODULE)	Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE	Connector Color BLACK	BLACK

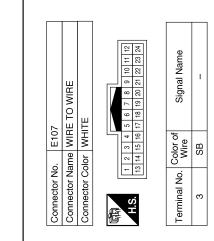
Terminal No. Color of Wire	Color of Wire	Signal Name	Terminal No. Color of Wire		Signal Name	Termina	Terminal No. Wire	or of see	Signal Name
105	×	BRAKE SW2	6	BR	BRAKE SW1	22		. BA	BATTERY (FUSE)
						29	В		GND
						70	_	, B	BATTERY (F/L)
-14 : -4	1000		-14 :: -4	1477			-		

7 16

Signal Name	1	ı	1									
Color of Wire	*	на	>									
Terminal No. Color of Wire	62	63	91									
Connector No. M77	Connector Color WHITE			H.S.	80 60 40 20	96 91 72 61 51 41 31 21 11 96 91 82 72 62 52 42 32 22 12 6 1	73 63 53 43 33 23		99 94 87 77 67 67 47 37 27 17	100 95 88 78 68 58 48 38 28 18 10 5	89 79 69 59 49 39 29 19	90 70 50 30
Connector No. M44	Connector Color (3BAY		[10 9 8 7 6 5 4 3 2 1	H.S.		Terminal No. Color of Signal Name	- L	12 P –				

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Revision: May 2014 EXL-73 2014 LEAF





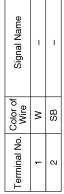
Connector Name JOINT CONNECTOR-E02

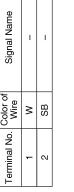
E44

Connector No.

Connector Color BLUE



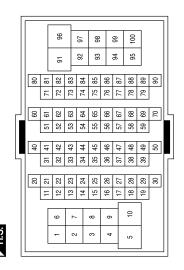




Signal Name	ı	-	_
Color of Wire	SB	SB	SB
Terminal No.	-	2	9

Signal Name	-	I	ı
Color of Wire	Μ	SB	\
Terminal No.	62	63	91

Connector No.	E105
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



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		А
WBINATION Signal Name	WIRE	В
AMP RH WHITE Of Signa	WHITE WHITE WHITE WHITE WHITE Is 11 10 9 8 7 6 Is 11 10 9 8 7 6 R R	С
Solor Virginia B B B B B B B B B B B B B B B B B B B		D
Connector Na. Connector Cold Terminal No. 5	Connector No. Connector Col	Е
		F
MRE 12 13 20 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	WIRE 3 2 1 10 9 8 7 15 14 8 8 7 15 14 14 8 8 7 15 14 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	G
		Н
Connector No. B18 Connector Name WIRE T Connector Color WHITE 1 2 9 10 7 8 14 15 7 8 14 15 6 BR	Connector No. D504 Connector Name WIRE T Connector Color WHITE 6 5 4	I
Connector No Connector No Connector No Connector Co	Connector No Conne	J
		K
MIRE 14 12 1 13 14 14 13 14 13 14 13 14 13 14 13 14 13 14 13 14 13 14 13 14 13 14 14 13 14 14 14 14 14 14 14 14 14 14 14 14 14	WBINATION Signal Name	EXL
	ame REAR COMF LAMP LH Slor WHITE Color of Si 4 3 SB BB	M
Connector No. B7 Connector Name WIRE TO WIRE Connector Color WHITE TEITING 9 8 7 6 5 4 Terminal No. Wire Signa 3 Y	Connector No. B80 Connector Name REAR COMBINATION LAMP LH Connector Color WHITE ##S. Terminal No. Color of Signal Name 2 SB - 5 B - 5 B -	Ν
Conr Tem Tem	AALIA2514GB	0

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Connector No D551	Connector No D553	Connector No 10555
Ф	Je.	<u>e</u>
Connector Color BLACK	Connector Color BLACK	Connector Color WHITE
H.S.	H.S.	(五) (1 2 3 1 4 5 1 1 1 1 1 1 1 1 1
Terminal No. Color of Signal Name	Terminal No. Color of Signal Name	Terminal No. Color of Signal Name Wire
1 B	2 R	5 R
Connector No. D561	Connector No. D602	Connector No. D603
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name HIGH-MOUNTED STOP
Connector Color WHITE	Connector Color WHITE	

٨t		Signal Name	1	-
olor GR/		Color of Wire	В	В
Connector Color GRAY	原则 H.S.	Terminal No.	1	2

E TO WIRE	11	2 3 4	Signal Name	ı	ı
ıme WIR	lor WH		Color of Wire	ш	α
Connector Name WIRE TO WIRE	Connector Color WHITE	是 H.S.	Terminal No.	က	7

Connector No. D561 Connector Name WIRE TO WIRE Connector Color WHITE H.S.	ame WIRE	ST AE TO WIRE IITE
Terminal No.	Color of Wire	Signal Name
8	Я	ı
4	В	ı

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BACK-UP LAMP

Wiring Diagram

⟨RC⟩: WITH REAR VIEW MONITOR

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POWER SWITCH
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BACK-UP LAMP

REVERSE LAMP

SB

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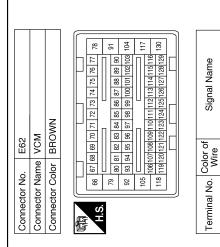
Signal Name

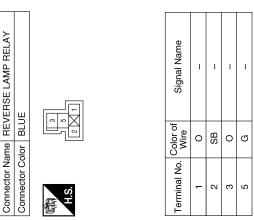
Color of Wire

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BACK-UP LAMP- CONNECTORS

Connector No. M19	M19		Conne	Connector No. M77	M					Terminal No
Connector Name WIRE TO WIRE	WIRE T	O WIRE	Conne	Connector Name		WIRE TO WIRE	WIRE			3
Connector Color WHITE	WHITE		Conne	Connector Color WHITE	×	HTE				6
						!				
9 2	5 4	1 3 2 1								
ς β	15 14 13 12 11 10	1 10 9 8	H.S.							
Terminal No. Color of Wire	or of /ire	Signal Name		8 8	7	9 2	40 20 20	=		
16	c	1	95	91	_	_	: R	9	_	
	5		-		23	63	43 33 23	13	T,	
			6	92	-	+			N	
			86	93	57	92 29	45 35 25	15 8	e	
				8	9/	99	46 36 26	91	4	
			8	94 87	11	67 57	47 37 27	12		
			100	95	3 78	88	48 38 28	18 10	2	
			_		92	69 29	49 39 29	16	<u> </u>	
				06		02	20			





IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ITE	25 22 51 50 —— 49 48 47 62 61 60 59 58 57 56 55 54	Signal Name	REV LAMP POWER
	lor WHITE	23 52 51 50 19 50 1	Color of Wire	0
Connector Name	Connector Color	京 S.H	Terminal No. Color of Wire	58

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Connector No.

E15

Connector No.

WIRE TO WIRE WHITE 3	Color of Signal Name Wire G -	B85 JOINT CONNECTOR-B02 BLACK	10 9 8 7 6 5 4 3 2 1	Color of Signal Name	- J	- I
Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Colc	Connector No. Connector Name	H.S.	Terminal No. W		16 (
Signal Name		B80 REAR COMBINATION LAMP LH WHITE	[-[0]	Signal Name	I	1
Color of Wire G			2 8 8 4 8	Color of Wire	5	Δ
Terminal No. 97		Connector No. Connector Name Connector Color	是 S:H	Terminal No.	-	ည
WHITE	31 41 51 61 77 81 96 33 43 53 63 73 88 64 65 66 77 88 64 99 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 97 98 97 97 98 97 97 97 98 97 97 97 98 97 97 97 98 97 97 98 97 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 98 97 97 97 97 97 97 97 97 97 97 97 97 97	B59 REAR COMBINATION LAMP RH WHITE	<u>■ 4</u> - ©	Signal Name	ı	1
8 뿝 투	20 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	l	6 5 4	Color of Wire	G	ω
Connector No. E105 Connector Name WIRE 1 Connector Color WHITE	11 12 12 12 13 14 18 19 18 18 18 18 18 18 18 18 18 18 18 18 18	Connector No. Connector Name Connector Color		Terminal No.	\rightarrow	_

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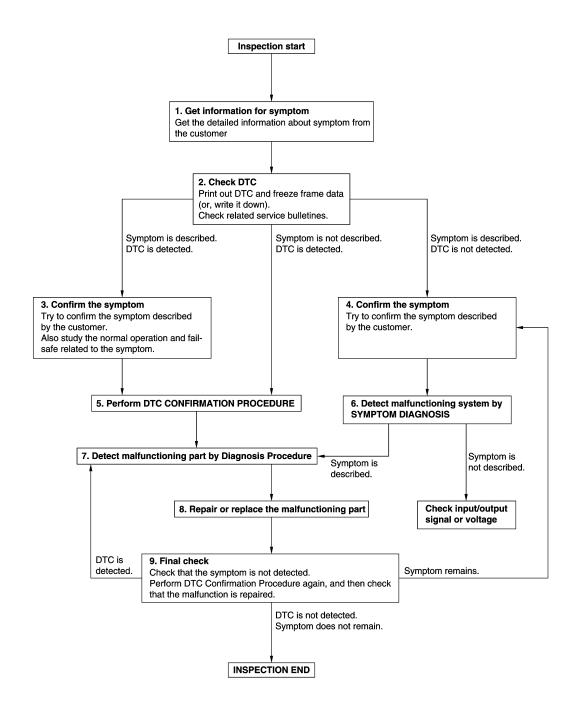
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[LED HEADLAMP] < BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

- Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
- 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.)
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 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.

${f 3.}$ 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.

f 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.

$oldsymbol{5}$.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) or PCS-18, "DTC Index" (IPDM E/R), and determine trouble diagnosis order.

- 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

If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIR-MATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to GI-53, "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 CON-

.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > [LED HEADLAMP]

Inspect according to Diagnostic Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to GI-53, "Intermittent Incident".

8.REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 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.

LED HEADLAMP OPERATION INSPECTION

< BASIC INSPECTION > [LED HEADLAMP]

LED HEADLAMP OPERATION INSPECTION

Diagnosis Procedure

1.CHECK START

- 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.
- 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-114, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Symptom Table".

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[LED HEADLAMP]

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Component Function Check

INFOID:0000000010121341

1. CHECK HEADLAMP (HI) OPERATION

(P)CONSULT ACTIVE TEST

1. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".

2. While operating the test items, check that the headlamp (HI) is turned ON.

Hi : Headlamp (HI) ON
Off : Headlamp (HI) OFF

NOTE:

ON/OFF is repeated 1 second each.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-84, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure".

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure INFOID.

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

- Turn power switch OFF.
- 2. Disconnect front combination lamp connector.
- 3. Turn power switch ON.
- 4. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. While operating the test items, check voltage between IPDM E/R harness connector and ground.

	(+) IPDM E/R		(-)	Test	Voltage (Approx.)				
Conr	nector	Terminal				(, 155, 671)			
RH		49 50				Hi	Battery voltage		
КП	E15		49	49	40	Ground	EXTERNAL	Off	0 V
	EIS		Ground	LAMPS	Hi	Battery voltage			
	LH	30			Off	0 V			

Is the inspection result normal?

YES >> GO TO 2. NO >> GO TO 3.

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

- 1. Turn power switch OFF.
- Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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	IPDM E/R Front combination lamp			Continuity		
Coni	nector	Terminal	Connector Terminal		Continuity	
RH	E15	49	E86	5	Yes	
LH		50	E85	· 3	163	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

3.CHECK HEADLAMP (HI) FUSE

- 1. Turn power switch OFF.
- 2. Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Headlamp HI (RH)	IPDM E/R	51	10 A
Headlamp HI (LH)	IF DIVI L/IX	52	10 A

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> GO TO 4.

4. CHECK HEADLAMP HIGH (HI) SHORT CIRCUIT

Disconnect IPDM E/R connector.

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

	IPDM E/R		Continuity		
Connector		Terminal	Ground	Continuity	
RH	E15	49	Ground	No	
LH E15		50		NO	

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if the fuse is blown again.)

NO >> Replace the blown fuse after repairing the affected circuit.

5. CHECK HEADLAMP (HI) GROUND OPEN CIRCUIT

- Disconnect front combination lamp connector.
- Check continuity between front combination lamp harness connector and ground.

	Front combination lamp		Continuity	
Connector		Terminal	Ground	Continuity
RH	E86	6	Giouna	Yes
LH	E85	0		165

Is the inspection result normal?

YES >> Replace headlamp (HI) bulb.

NO >> Repair or replace harness.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Component Function Check INFOID:000000010121343

1. CHECK HEADLAMP (HI) OPERATION

(P)CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the headlamp (HI) is turned ON.

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Hi : Headlamp (HI) ON
Off : Headlamp (HI) OFF

NOTE:

ON/OFF is repeated 1 second each.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-86, "WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure".

WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000010121344

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

- 1. Turn power switch OFF.
- 2. Disconnect headlamp high connector.
- 3. Turn power switch ON.
- 4. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check voltage between IPDM E/R harness connector and ground.

	(+) IPDM E/R		(-)	Test	Voltage (Approx.)		
Conr	nector	Terminal				(/ (pp.c///)	
RH		49	Ground		Hi	Battery voltage	
КП	E15	49		EXTERNAL	Off	0 V	
	EIS	LAMPS		LAMPS	Hi	Battery voltage	
LH	LH	50			Off	0 V	

Is the inspection result normal?

YES >> GO TO 2. NO >> GO TO 3.

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector.
- 3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

IPDM E/R			Front comb	Continuity		
Con	nector	Terminal	Connector Terminal		Continuity	
RH	E15	49	E86	E	Yes	
LH	LIS	50	E85	3	res	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

3.CHECK HEADLAMP (HI) FUSE

- 1. Turn power switch OFF.
- Check that the following fuses are not blown:

Unit	Locatio	n	Fuse No.	Capacity
Headlamp HI (RH)			51	- Capacity
Headlamp HI (LH)	IPDM E	:/R	52	10 A
the inspection result i	normal?			
	DM E/R. Refer to PC	S-29, "Remov	al and Installation".	
NO >> GO TO 4.				
.CHECK HEADLAMF	' (HI) SHORT CIRCL	JIT		
Disconnect IPDM E		rnaaa aannaat	or and around	
Check continuity be	tween IPDM E/R hai	mess connect	or and ground.	
	IPDM E/R			Continuity
Conn	ector	Termina	l Ground	Continuity
RH	E15	49	Ordana	No
LH		50		
the inspection result i		(-		
	se. (Replace IPDM E e blown fuse after rep			
CHECK ILLUMINATI		•	oted circuit.	
heck illumination statu				
Which headlamp does r	•			
RH >> GO TO 6.	iot tam orv.			
LH >> GO TO 9.				
CHECK HEADLAMF	HI (RH) GROUND (OPEN CIRCU	IT-1	
 Remove daytime ru Check continuity be harness connector. 	inning light relay. etween daytime runn	ing light relay	harness connector an	
			namess connector ar	d front combination lamp i
				d front combination lamp i
·	ning light relay		nt combination lamp RH	Continuity
Connector	Terminal	Connect	nt combination lamp RH or Terminal	Continuity
Connector E84	Terminal 3		nt combination lamp RH	
Connector E84 s the inspection result in	Terminal 3	Connect	nt combination lamp RH or Terminal	Continuity
Connector E84 s the inspection result I YES >> GO TO 7.	Terminal 3	Connect	nt combination lamp RH or Terminal	Continuity
Connector E84 s the inspection result I YES >> GO TO 7.	Terminal 3 normal? eplace harness.	Connect E86	nt combination lamp RH for Terminal 6	Continuity
Connector E84 s the inspection result if the inspection result in the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (Connect E86	nt combination lamp RH for Terminal 6	Continuity Yes
Connector E84 S the inspection result of the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running li	Connect E86	nt combination lamp RH for Terminal 6	Continuity Yes
Connector E84 S the inspection result of the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay	Connect E86 OPEN CIRCU ght relay harn	nt combination lamp RH for Terminal 6 IT-2 ess connector and gro	Continuity Yes
Connector E84 S the inspection result in the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal	Connect E86 OPEN CIRCU ght relay harn	nt combination lamp RH for Terminal 6	Continuity Yes Fund. Continuity
Connector E84 S the inspection result of the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal	Connect E86 OPEN CIRCU ght relay harn	nt combination lamp RH for Terminal 6 IT-2 ess connector and gro	Continuity Yes
Connector E84 S the inspection result of the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal	Connect E86 OPEN CIRCU ght relay harn	nt combination lamp RH for Terminal 6 IT-2 ess connector and gro	Continuity Yes Fund. Continuity
Connector E84 Sthe inspection result in YES >> GO TO 7. NO >> Repair or result in YES CHECK HEADLAMF Check continuity between Connector E84 Sthe inspection result in YES >> GO TO 8.	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal	Connect E86 OPEN CIRCU ght relay harn	nt combination lamp RH for Terminal 6 IT-2 ess connector and gro	Continuity Yes Fund. Continuity
Connector E84 Sthe inspection result in the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal 4 normal? eplace harness.	Connect E86 OPEN CIRCU ght relay harn	or Terminal 6 IT-2 ess connector and gro	Continuity Yes Fund. Continuity
Connector E84 Sthe inspection result in the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal 4 normal? eplace harness. P HI (RH) DAYTIME F	Connect E86 OPEN CIRCU ght relay harn nal	or Terminal 6 IT-2 ess connector and gro Ground	Continuity Yes Fund. Continuity
Connector E84 Sthe inspection result of the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal 4 normal? eplace harness. P HI (RH) DAYTIME Fen terminal 3 - 4 of daytime running light relay	Connect E86 OPEN CIRCU ght relay harn nal	or Terminal 6 IT-2 ess connector and gro Ground	Continuity Yes Fund. Continuity
Connector E84 Sthe inspection result of the	Terminal 3 normal? eplace harness. P HI (RH) GROUND (en daytime running light relay Terminal 4 normal? eplace harness. P HI (RH) DAYTIME F	Connect E86 OPEN CIRCU ght relay harn nal	IT-2 ess connector and gro Ground HT RELAY CIRCUIT g light relay.	Continuity Yes Fund. Continuity

Yes

3 - 4

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal?

[LED HEADLAMP]

YES >> Replace headlamp (HI) bulb. (Bulb socket is abnormal.)

NO >> Replace daytime running light relay.

 $9.\mathsf{CHECK}$ HEADLAMP HI (LH) GROUND OPEN CIRCUIT

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

Front com	bination lamp LH		Continuity
Connector	Connector Terminal		Continuity
E85	6		Yes

Is the inspection result normal?

YES >> Replace headlamp (HI) bulb. (Bulb socket is abnormal.)

NO >> Repair or replace harness.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000010121345

1. CHECK HEADLAMP (LO) OPERATION

®CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the headlamp (LO) is turned ON.

: Headlamp (LO) ON Lo Off : Headlamp (LO) OFF

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Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.

NO >> Refer to EXL-89, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121346

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

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1. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

- Turn power switch OFF.
- Disconnect front combination lamp connector.
- Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. While operating the test items, check voltage between IPDM E/R harness connector and ground.

	(+) IPDM E/R		(-)	Test item		Voltage (Approx.)	
Conr	nector	Terminal				(pp. 6x.)	
RH	52			Lo	Battery voltage		
KII	E15	32	Cround	Ground EX	EXTERNAL	Off	0 V
LH		Ground	LAMPS	Lo	Battery voltage		
LIT		31			Off	0 V	

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK HEADLAMP (LO) OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

IPDM E/R		Front combination lamp		Continuity	
Coni	nector	Terminal	Connector Terminal		Continuity
RH	E15	52	E86	2	Yes
LH	E15	51	E85	2	165

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to EXL-94, "Diagnosis Procedure".

NO >> Repair or replace harness.

EXL-89 Revision: May 2014 2014 LEAF **EXL**

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HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

3.CHECK HEADLAMP (LO) FUSE

- 1. Turn power switch OFF.
- 2. Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	54	15 A
Headlamp LO (LH)	IF DIVI L/IX	53	13 A

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> GO TO 4.

4. CHECK HEADLAMP (LO) SHORT CIRCUIT-1

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

IPDM E/R				Continuity
Connector		Terminal	Ground	Continuity
RH	E15	52	Ground	No
LH	E13	51		INO

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace the blown fuse after repairing the affected circuit.

5. CHECK HEADLAMP (LO) SHORT CIRCUIT-2

(P)CONSULT ACTIVE TEST

- 1. Replace fuse.
- 2. Connect IPDM E/R connector.
- 3. Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. Check that fuse is not blown when Lo button is operated.

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

6.CHECK HEADLAMP (LO) SHORT CIRCUIT-3

- Turn power switch OFF.
- Connect front combination lamp connector.
- 3. Check that headlamp turns ON when lighting switch is in the 2ND position.

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace LED headlamp control module. Refer to EXL-130, "Removal and Installation"

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:0000000010121347

1.CHECK DAYTIME RUNNING LIGHT OPERATION

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CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that daytime running light operation.

: EXTERNAL LAMPS Hi On Off : EXTERNAL LAMPS Off

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal. NO >> Refer to EXL-91, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121348

Regarding Wiring Diagram information. Refer to EXL-35, "Wiring Diagram".

1. CHECK DAYTIME RUNNING LIGHT RELAY FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

Unit	Fuse No.	Capacity
Daytime running light relay	37	10 A

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2.CHECK DAYTIME RUNNING LIGHT RELAY POWER SUPPLY

- Remove daytime running light relay.
- Check voltage between daytime running light relay harness connector and ground.

(Daytime runi	+) ning light relay	(-)	Voltage (Approx.)	
Connector	Terminal			
E84	1	Ground	Battery voltage	
L0 4	5	Giodila	Dattery Voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DAYTIME RUNNING LIGHT RELAY

Check daytime running light relay. Refer to EXL-92, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace daytime running light relay.

PCONSULT ACTIVE TEST

- Install daytime running light relay.
- Turn power switch ON.

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 $oldsymbol{4}.$ CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OUTPUT

EXL-91 Revision: May 2014 2014 LEAF

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test item, check voltage between IPDM E/R harness connector and ground.

(+) IPDM E/R		(-) Test		item	Voltage (Approx.)
Connector	Terminal				, , ,
E13	28	Ground	External Lamps	On	0 V
LIJ	20 Giouna	Giodila	External Lamps	Off	Battery voltage

Is the inspection result normal?

YES >> Daytime running light relay circuit is OK.

NO-1 (Fixed at 0 V)>>GO TO 5.

NO-2 (Fixed at battery voltage) >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

${f 5.}$ CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OPEN CIRCUIT

- Turn power switch OFF.
- 2. Remove daytime running light relay.
- 3. Disconnect IPDM E/R harness connector.
- Check continuity between IPDM E/R harness connector and daytime running light relay harness connector.

IPDI	M E/R	Daytime runr	ning light relay	Continuity
Connector	Terminal	Connector Terminal		Continuity
E13	28	E84	2	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6. CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL SHORT CIRCUIT

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

IPDI	/I E/R		Continuity
Connector	Connector Terminal		Continuity
E13	28		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> Repair or replace harness.

Component Inspection

INFOID:0000000010121349

1. CHECK DAYTIME RUNNING LIGHT RELAY

- 1. Turn the power switch OFF.
- Remove daytime running light relay.
- 3. Apply battery voltage to daytime running light relay between terminals 1 and 2.
- 4. Check continuity between daytime running light relay terminals.

Da	Daytime running light relay		Condition		Continuity
Terminal		Condition		Continuity	
	5	5 ————————————————————————————————————	Voltage	Apply	Yes
E84				Not Apply	No
	4			Apply	No
	4			Not Apply	Yes

Is the inspection result normal?

YES >> Daytime running light relay is normal.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

NO >> Replace daytime running light relay.

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[LED HEADLAMP]

LED HEADLAMP

Diagnosis Procedure

INFOID:0000000010121350

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK HEADLAMP (LO) GROUND OPEN CIRCUIT

- 1. Turn power switch OFF.
- 2. Disconnect front combination lamp connector.
- 3. Check continuity between front combination lamp harness connector and ground.

Front combination lamp				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E86	0	Giouna	Yes	
LH	E85	9		165	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.CHECK LED HEADLAMP CONTROL MODULE

Install the normal LED headlamp control module to the applicable headlamp. Check that the lighting switch is turned ON. Refer to <u>EXL-83</u>, "<u>Diagnosis Procedure</u>".

Is the headlamp turned ON?

YES >> Replace LED headlamp control module. Refer to EXL-130, "Removal and Installation".

NO >> GO TO 3.

3.CHECK HEADLAMP

Install the normal headlamp to the applicable headlamp. Check that the headlamp is turned ON. Refer to <u>EXL-83</u>, "<u>Diagnosis Procedure</u>".

Is the headlamp turned ON?

YES >> Replace headlamp. Refer to EXL-130, "Removal and Installation".

NO >> LED headlamp is normal. Check headlamp control system.

HEADLAMP WARNING LAMP

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

HEADLAMP WARNING LAMP

Component Function Check

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- 1. CHECK HEADLAMP WARNING LAMP OPERATION
- Turn power switch OFF.
 Disconnect front combination lamp connector.
- 3. Check that headlamp warning lamp on combination meter turns ON when power switch is turned ON.

Is the inspection result normal?

YES >> Headlamp warning lamp is normal.

NO >> Refer to EXL-95. "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121352

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1.LED HEADLAMP CONTROL MODULE FUSE

- Turn power switch OFF.
- 2. Check that the following fuse is not blown:

Unit	Fuse No.	Capacity
LED headlamp control module	5	10 A

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2. CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect front combination lamp connector.
- 2. Turn power switch ON.
- Check voltage between front combination lamp harness connector and ground.

(+) Front combination lamp		(-)	Voltage (Approx.)			
Cor	nnector	Terminal				
RH	E86	Ground		2	Ground	Battery voltage
LH	E85	2				

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

${f 3.}$ CHECK HEADLAMP WARNING LAMP SIGNAL CIRCUIT

Check voltage between front combination lamp harness connector and ground.

(+) Front combination lamp			(-)	Voltage (Approx.)
Connector T		Terminal		
RH	E86	1	Ground	Less than 0.5 V
LH	E85	· · ·		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace LED headlamp control module. Refer to EXL-130, "Removal and Installation".

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HEADLAMP WARNING LAMP

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

4. CHECK HEADLAMP WARNING LAMP SIGNAL SHORT CIRCUIT

- 1. Turn power switch OFF.
- 2. Disconnect combination meter connector.
- 3. Check continuity between combination meter harness connector and ground.

Combination meter				Continuity	
	Connector	Terminal	Ground	Continuity	
RH	M34	38	Ground	No	
LH	10154	39			

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK COMBINATION METER

Check combination meter. Refer to MWI-80, "Work flow".

Is the inspection result normal?

YES >> Refer to EXL-122, "Diagnosis Procedure".

NO >> Repair or replace malfunctioning part.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000010121353

1. CHECK PARKING LAMP OPERATION

CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the parking lamp is turned ON.

: Parking lamp ON TAIL Off : Parking lamp OFF

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Is the inspection result normal?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-97, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121354

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

1. CHECK PARKING LAMP FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

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Unit	Location	Fuse No.	Capacity
Parking lampFront side marker lampTail lamp (LH)	IPDM E/R	47	10 A

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

2.CHECK PARKING LAMP SHORT CIRCUIT

- Disconnect the following connectors:
- IPDM E/R
- Front combination lamps
- Front side marker lamps
- Rear combination lamp (LH)
- d.

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

IPDN	/I E/R		Continuity	
Connector	Terminal	Ground	Continuity	
E14	43	Giodila	No	
	44		INO	

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if blown fuse is found again.)

NO >> Replace the blown fuse after repairing the affected circuit.

3.CHECK PARKING LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace bulb.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

4. CHECK PARKING LAMP OUTPUT VOLTAGE

®CONSULT ACTIVE TEST

- 1. Disconnect front combination lamp connector.
- 2. Turn power switch ON.
- 3. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 4. While operating the test items, check voltage between IPDM E/R harness connector and ground.

	+) M E/R	(-)	Test	item	Voltage (Approx.)	
Connector	Terminal				()	
E14	43	Ground	EXTERNAL	TAIL	Battery voltage	
E14	43	Ground	LAMPS	Off	0 V	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

5. CHECK PARKING LAMP OPEN CIRCUIT

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

	IPDM E/R		Front combination lamp Connector Terminal		Continuity	
Conr	nector	Terminal			Continuity	
RH	E14	43	E86	4	Yes	
LH	C14	43	E85	4	165	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6. CHECK PARKING LAMP GROUND OPEN CIRCUIT

Check continuity between front combination lamp harness connector and ground.

Front combination lamp				Continuity
Coni	Connector Terminal		Ground	Continuity
RH	E86	7	Giodila	Yes
LH	E85	/		165

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000010121355

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

TAIL

Off

NO >> Check parking lamp circuit. Refer to EXL-97, "Component Function Check".

2.CHECK FRONT SIDE MARKER LAMP OPERATION

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PCONSULT ACTIVE TEST

Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".

: Front side marker lamp ON

: Front side marker lamp OFF

2. While operating the test items, check that the front side marker lamp is turned ON.

Is the inspection result normal?

YES >> Front side marker lamp circuit is normal.

NO >> Refer to EXL-99, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121356

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

${f 1}$. CHECK FRONT SIDE MARKER LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

>> GO TO 2. YES

NO >> Replace bulb.

K

2.CHECK FRONT SIDE MARKER LAMP OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector and front side marker lamp connector.
- Check continuity between IPDM E/R harness connector and front side marker lamp harness connector.

	IPDM E/R		Front side marker lamp Connector Terminal		Continuity	
Coni	nector	Terminal				
RH	E14	43	E16	1	Yes	
LH		43	E10	- I		

Is the inspection result normal?

>> GO TO 3. YES

NO >> Repair or replace harness.

3.CHECK FRONT SIDE MARKER LAMP GROUND OPEN CIRCUIT

Check continuity between front side marker lamp harness connector and ground.

	Front side marker lamp		Continuity	
Connector		Terminal	Ground	Continuity
RH	E16	2	Giouria	Yes
LH	E10	2		168

Is the inspection result normal?

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FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

>> Check corresponding bulb socket and harness. Repair or replace if necessary. >> Repair or replace harness. YES

NO

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000010121357

1. CHECK TAIL LAMP OPERATION

CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the tail lamp is turned ON.

TAIL : Tail Lamp ON Off : Tail lamp OFF

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Is the inspection result normal?

YES >> Tail lamp circuit is normal.

NO >> Refer to EXL-101, "Diagnosis Procedure". Е

Diagnosis Procedure

INFOID:0000000010121358

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

Н

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES-1 [When tail lamp (LH) does not turn ON.]>>GO TO 5.

YES-2 [When tail lamp (RH) does not turn ON.]>>GO TO 2.

>> Check parking lamp circuit. Refer to EXL-97, "Component Function Check".

2.CHECK TAIL LAMP (LH) FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

		U

Unit	Location	Fuse No.	Capacity
Tail lamp (RH)	IPDM E/R	46	10 A

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Is the inspection result normal?

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

3.CHECK TAIL LAMP (RH) OUTPUT VOLTAGE

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®CONSULT ACTIVE TEST

- Disconnect rear combination lamp (RH) connector.
- Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check voltage between IPDM E/R harness connector and ground.

	+) M E/R	(–)	Test item		Voltage (Approx.)
Connector	Terminal				(Approx.)
E14	38	Ground	EXTERNAL	TAIL	Battery voltage
214 30	Glound	LAMPS	Off	0 V	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

4. CHECK TAIL LAMP (RH) SHORT CIRCUIT

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

_	IPDN	M E/R		Continuity	
	Connector	Terminal	Ground		
	E14	38		No	

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if blown is found again.)

NO >> Replace the blown fuse after repairing the affected circuit.

5. CHECK TAIL LAMP OPEN CIRCUIT

- 1. Turn power switch OFF.
- 2. Disconnect IPDM E/R connector and rear combination lamp connector.
- 3. Check continuity between IPDM E/R harness connector and rear combination lamp harness connector.

IPDM E/R		Rear comb	Continuity		
Coni	nector	Terminal	Connector Terminal		Continuity
RH	E14	38	B59	6	Yes
LH	C14	44	B80	- 6	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6. CHECK TAIL LAMP GROUND OPEN CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp				Continuity
Coni	Connector		Ground	Continuity
RH	B59	E	Giouna	Yes
LH	B80	3		165

Is the inspection result normal?

YES >> Replace rear combination lamp. Refer to EXL-130, "Removal and Installation".

NO >> Repair or replace harness.

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000010121359

1. CHECK TAIL LAMP (RH) OPERATION

Check that the tail lamp (RH) is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check tail lamp circuit. Refer to EXL-101, "Component Function Check". 2.CHECK LICENSE PLATE LAMP OPERATION

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PCONSULT ACTIVE TEST

Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".

While operating the lighting switch, check that the license plate lamp is turned ON.

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TAIL : License plate lamp ON Off : License plate lamp OFF

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Is the inspection result normal?

YES >> License plate lamp circuit is normal.

NO >> Refer to EXL-103, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121360

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

1. CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

>> GO TO 2. YES

NO >> Replace bulb.

K

2.CHECK LICENSE PLATE LAMP OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector and license plate lamp connector.
- Check continuity between IPDM E/R harness connector and license plate lamp harness connector.

IPDM E/R			License ;	Continuity	
Co	Connector Terminal		Connector	Terminal	Continuity
RH	E14	38	B58	1	Yes
LH		30	B57	I	

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Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

N

${f 3.}$ CHECK LICENSE PLATE LAMP GROUND OPEN CIRCUIT

Check continuity between license plate lamp harness connector and ground.

	License plate lamp			Continuity
	Connector	Terminal	Ground	Continuity
RH	B58	2	Ground	Yes
LH	B57	2		168

Is the inspection result normal?

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000010121361

${f 1}$. CHECK FRONT FOG LAMP OPERATION

CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the front fog lamp is turned ON.

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: Front fog lamp ON Fog Off : Front fog lamp OFF

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Is the measurement normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-105, "Diagnosis Procedure". Е

Diagnosis Procedure

INFOID:0000000010121362

Regarding Wiring Diagram information. Refer to EXL-54, "Wiring Diagram".

Location

IPDM E/R

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1. CHECK FRONT FOG LAMP FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

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Capacity

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Front fog lamp Is the inspection result normal?

Unit

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK FRONT FOG LAMP SHORT CIRCUIT

- Disconnect front fog connector and IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and ground. 2.

IPDM E/R				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E12	19	Ground	No	
LH		20			

Fuse No.

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Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if the fuse is blown again.)

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

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3.CHECK FRONT FOG LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 4.

NO

NO >> Replace bulb.

f 4.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

©CONSULT ACTIVE TEST

- Disconnect front fog lamp connector.
- Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".

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EXL-105 Revision: May 2014 2014 LEAF

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

4. While operating the test items, check the voltage between IPDM E/R harness connector and ground.

	(+) IPDM E/R			(–) Test item		Voltage (Approx.)		
Conr	nector	Terminal				(· .ppiox.)		
RH		19	-	Ground		Fog	Battery voltage	
IXII	E12				Ground	EXTERNAL	Off	0 V
LH	L 12				20	20	20	Giouria
ЦΠ	LH	20			Off	0 V		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

5. CHECK FRONT FOG LAMP OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector.
- 3. Check continuity between IPDM E/R harness connector and front fog lamp harness connector.

IPDM E/R Front fog lamp				Continuity	
Con	nector	Terminal	Connector Terminal		Continuity
RH	E12	19	E48	1	Yes
LH	E12	20	E30	- 1	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6. CHECK FRONT FOG LAMP GROUND CIRCUIT OPEN CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E48	2	Ground	Yes	
LH	E30	2		ies	

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000010121363

INFOID:0000000010121364

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1. CHECK TURN SIGNAL LAMP

(P)CONSULT ACTIVE TEST

- 1. Select "FLASHER" in "Active Test" of "BCM (FLASHER)".
- 2. While operating the test items, check that the turn signal lamps is turned ON.

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-107, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information. Refer to EXL-59, "Wiring Diagram".

1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

- 1. Turn power switch OFF.
- 2. Disconnect front combination lamp connector and rear combination lamp connector.
- 3. Turn power switch ON.
- 4. While operating the turn signal switch, check voltage between BCM harness connector and ground.

(+) BCM		(–) Con		dition	Voltage (Approx.)		
(Connector	Terminal				(Арргох.)	
LH		60			LH	(V) 15 10 5 0 1 s	
	M25		Ground	Turn signal	OFF	0 V	
RH	- M25	61	Ground	switch	RH	(V) 15 10 5 0 1 s	
					OFF	0 V	

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TURN SIGNAL LAMP CIRCUIT

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

3.check turn signal lamp open circuit

- 1. Turn power switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between BCM harness connector and front combination lamp, side turn signal lamp or rear combination lamp harness connector.

Front turn signal lamp

BCM			Front comb	Continuity	
Connector		Terminal	Connector Terminal		Continuity
RH	M25	61	E86	0	Yes
LH	IVIZO	60	E85	0	165

Rear turn signal lamp

ВСМ			Rear comb	Continuity	
Connector		Terminal	Connector	Terminal	Continuity
RH	M25	61	B59	4	Yes
LH	IVIZO	60	B80	4	ies

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between BCM harness connector and ground.

BCM				Continuity	
Connector		Terminal	Ground	Continuity	
RH	M25	61	Ground	No	
LH	IVIZO	60		INO	

Is the inspection result normal?

YES >> Check each bulb socket for internal short circuit, and if check result is normal, replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

5. CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

Check continuity between BCM harness connector and front combination lamp or rear combination lamp and ground.

Front turn signal lamp

. •	Tonk tarr orginal tarrp						
-	Front combination lamp				Continuity		
-	Connector		Terminal	Ground	Continuity		
_	RH	E86	7	Oround	Yes		
_	LH	E85	,		163		

Rear turn signal lamp

	Rear combination	lamp		Continuity	
-	Connector	Terminal	Ground	Continuity	
RH	B59	7	Giouna	Yes	
LH	B80	I		168	

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

OPTICAL SENSOR

Component Function Check

INFOID:0000000010121365

1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

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©CONSULT DATA MONITOR

- 1. Turn power switch ON.
- Select "OPTISEN (DTCT)" 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.)
OPTISEN (DTCT)	Optical sensor	When illuminating	3.1 V or more *
OF HOLIN (DTOT)	OPTISEN (DTCT) Optical serisor	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 <u>EXL-109</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000010121366

Regarding Wiring Diagram information. Refer to <a>EXL-41, "Wiring Diagram".

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

Optica	(+) Optical sensor		Voltage (Approx.)
Connector	Terminal		(Αφριολ.)
M16	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.

(+) Optical sensor			Malla e a	
		(–)	Voltage (Approx.)	
Connector	Terminal		() - /	
M16	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.

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(+	,	(-)	Condition		Voltage (Approx.)
Connector	Terminal				(FF - 7
M16	2	Ground	Optical sensor When illuminating		3.1 V or more *
IVITO	2	Ground	Optical serisor	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. Refer to EXL-138, "Removal and Installation".

4. CHECK OPTICAL SENSOR OPEN CIRCUIT

- Turn power switch OFF.
- Disconnect optical sensor connector and BCM connector.
- 3. Check continuity between optical sensor harness connector and BCM harness connector.

Optica	Optical sensor		BCM	
Connector	Terminal	Connector	Terminal	Continuity
M16	1	M24	17	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			Continuity
Connector	Terminal	Ground	Continuity
M16	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

$\mathsf{6}.$ CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optica	Optical sensor		BCM	
Connector	Terminal	Connector	Terminal	Continuity
M16	3	M24	18	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

- Turn power 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		всм		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M16	2	M24	14	Yes

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Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

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8. CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M16	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-72</u>, "Removal and Installation".

NO >> Repair or replace harness.

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HAZARD SWITCH

Component Function Check

INFOID:0000000010121367

1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

®CONSULT DATA MONITOR

- Turn power switch ON.
- Select "HAZARD SW" in "Data Monitor" of "BCM (FLASHER)".
- 3. While operating the hazard switch, check the monitor status.

Monitor item	Col	Monitor status	
HAZARD SW	Hazard switch	ON	On
TIAZAIND OW	Hazard Switch	OFF	Off

Is the inspection result normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-112, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121368

Regarding Wiring Diagram information. Refer to EXL-59, "Wiring Diagram".

1. CHECK HAZARD SWITCH SIGNAL INPUT

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

(+) Hazard switch			Voltage (Approx.)
		(–)	
Connector	Connector Terminal		
M45	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

- Disconnect BCM connector.
- Check continuity between hazard switch harness connector and BCM harness connector.

Hazar	Hazard switch		ВСМ	
Connector	Terminal	Connector	Terminal	Continuity
M45	2	M24	29	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			Continuity
Connector	Terminal	Ground	Continuity
M45	2		No

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M45	1		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-139, "Removal and Installation".

NO >> Repair or replace harness.

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[LED HEADLAMP]

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Symptom Table

INFOID:0000000010121369

CAUTION:

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

Symp	otom	Possible cause	Inspection item	
Headlamp (HI) is not turned ON.	One side	Fuse Halogen bulb (HI) Harness between IPDM E/R and front combination lamp Harness between front combination lamp and ground IPDM E/R	Headlamp (HI) circuit Refer to EXL-84, "WITHOUT DAY- TIME RUNNING LIGHT SYSTEM: Component Function Check".	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to EXL-120, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM Diagnosis Procedure".		
High beam indicator lamp [Headlamp (HI) is turned C		Combination meter	Combination meter Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"	
Headlamp (LO) is not turned ON. [Headlamp warning lamp	One side	Fuse Harness between IPDM E/R and front combination lamp IPDM E/R LED headlamp control module	Headlamp (LO) circuit Refer to EXL-89, "Component Function Check".	
is not turned ON.]	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-122, "Diagnosis Procedure".		
LED is turned ON.	Headlamp (LO) is not turned ON, or only 1 piece of LED is turned ON. [Headlamp warning lamp is turned ON.]		LED headlamp Refer to EXL-94, "Diagnosis Procedure".	
Each lamp is not turned O	N/OFF using lighting	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-71, "Symptom Table".	
switch AUTO.		Optical sensor Harness between optical sensor and BCM BCM	Optical sensor Refer to EXL-109, "Component Function Check".	
Parking lamp is not turned ON.		Fuse Parking lamp bulb Parking lamp bulb socket Harness between IPDM E/R and front combination lamp Harness between front combination lamp and ground IPDM E/R	Parking lamp circuit Refer to EXL-97, "Component Function Check".	

< SYMPTOM DIAGNOSIS >

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Symp	otom	Possible cause	Inspection item
Front side marker lamp is not turned ON.		 Fuse Front side marker lamp bulb Front side marker lamp bulb socket Harness between IPDM E/R and front side marker lamp Harness between front side marker lamp and ground 	Front side marker lamp circuit Refer to EXL-99, "Component Function Check".
Tail lamp and rear side ma ON.	rker lamp are not turned	 Fuse Harness between IPDM E/R and rear combination lamp Harness between rear combination lamp and ground Rear combination lamp 	Tail lamp circuit Refer to EXL-101, "Component Function Check".
License plate lamp is not t	urned ON.	 License plate lamp bulb License plate lamp bulb socket Harness between IPDM E/R and license plate lamp Harness between license plate lamp and ground 	License plate lamp circuit Refer to EXL-103, "Component Function Check".
Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned OFF.		Symptom diagnosis "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-123, "Diagnosis Procedure".	
Tail lamp indicator lamp is not turned ON. (Parking lamp, side marker lamp, tail lamp and license plate lamp are turned ON.)		Combination meter	 Combination meter Data monitor "LIGHT IND" BCM (HEAD LAMP) Active test "TAIL LAMP"
Turn signal lamp does not	Indicator lamp is nor- mal. (Applicable side per- forms high flasher acti- vation.)	 Turn signal lamp bulb Turn signal lamp bulb socket Harness between BCM and each turn signal lamp 	Turn signal lamp circuit Refer to EXL-107, "Component Function Check".
blink.	Indicator lamp is included.	Combination switchHarness between combination switch and BCMBCM	Combination switch Refer to BCS-71, "Symptom Table"
	One side	Combination meter	_
Turn signal indicator lamp does not blink. (Turn signal lamp is nor-	Both sides (Always)	Turn signal indicator lamp signalBCMCombination meter	Combination meter Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
mal.)	Both sides (Only when activating hazard warning lamp with power switch OFF)	 Combination meter power supply and ground circuit Combination meter 	Combination meter Power supply and ground circuit Refer to MWI-85. "COMBINATION METER: Diagnosis Procedure".
Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.)		Hazard switchHarness between hazard switch and BCM	Hazard switch Refer to EXL-112, "Component Function Check".

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< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symptom		Possible cause	Inspection item
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and front fog lamp IPDM E/R	Front fog lamp circuit Refer to EXL-105, "Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-124, "Diagnosis Procedure".	
Front fog lamp indicator is not turned ON. (Front fog lamp is turned ON.)		Combination meter	Combination meter Data monitor "FR FOG IND" BCM (HEAD LAMP) Active test "FR FOG LAMP"

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Symptom Table

INFOID:0000000010121370

CAUTION:

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

Sym	ptom	Possible cause	Inspection item
	One side	Fuse Halogen bulb (HI) Harness between IPDM E/R and headlamp (HI) Harness between headlamp (HI) and ground IPDM E/R	Headlamp (HI) circuit Refer to EXL-85, "WITH DAYTIME RUNNING LIGHT SYSTEM: Component Function Check".
Headlamp (HI) is not turned ON.		Harness between IPDM E/R and daytime running light relay Daytime running light relay IPDM E/R	Daytime running light relay circuit Refer to EXL-91, "Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to EXL-120, "WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure".	
High beam indicator lamp is not turned ON. [Headlamp (HI) is turned ON.]		Combination meter	Combination meter Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp (LO) is not turned ON.	One side	Fuse Harness between IPDM E/R and headlamp lamp (LO) IPDM E/R LED headlamp control module	Headlamp (LO) circuit Refer to EXL-89, "Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-122, "Diagnosis Procedure".	
Each lamp is not turned ON/OFF with lighting switch AUTO.		Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-71, "Symptom Table".
		Optical sensor Harness between optical sensor and BCM BCM	Optical sensor Refer to EXL-109, "Component Function Check".

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symp	otom	Possible cause	Inspection item
Daytime running light is not turned ON. [Headlamp (HI) is turned ON.]		 Fuse Harness between IPDM E/R and daytime running light relay Daytime running light relay IPDM E/R BCM ECM Combination meter 	Daytime running light relay circuit Refer to EXL-91, "Component Function Check". BCM (HEADLAMP) Data monitor "ENGINE STATE" Combination meter Data monitor "PKB SW" BCM (HEADLAMP) Active test "DAYTIME RUNNING LIGHT"
Parking lamp is not turned	ON.	 Fuse Parking lamp bulb Harness between IPDM E/R and front combination lamp IPDM E/R 	Parking lamp circuit Refer to EXL-97, "Component Function Check".
Front side marker lamp is	not turned ON.	Front side marker lamp bulb Harness between IPDM E/R and front side marker lamp Harness between front side marker lamp and ground IPDM E/R	Front side marker lamp circuit Refer to EXL-99, "Component Function Check".
Tail lamp (Rear side marker lamp) is not turned ON.		 Fuse Tail lamp bulb Harness between IPDM E/R and rear combination lamp Harness between and rear combination lamp and ground 	Tail lamp circuit Refer to EXL-101, "Component Function Check".
License plate lamp is not turned ON.		 License plate lamp bulb Harness between IPDM E/R and license plate lamp Harness between license plate lamp and ground 	License plate lamp circuit Refer to EXL-103, "Component Function Check".
Parking lamp, side marker cense plate lamp are not t		Symptom diagnosis "PARKING, SIDE MARKER, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-123, "Diagnosis Procedure".	
Tail lamp indicator is not tu (Exterior lamps are turned		Combination meter	 Combination meter Data monitor "LIGHT IND" BCM (HEADLAMP) Active test "TAIL LAMP"
Turn signal lamp does not blink.	Indicator lamp is nor- mal. (Applicable side per- forms high flasher acti- vation.)	 Turn signal lamp bulb Door mirror Harness between BCM and each turn signal lamp Harness between each turn signal lamp and ground 	Turn signal lamp circuit Refer to EXL-107, "Component Function Check".
	Indicator lamp is included.	Combination switchHarness between combination switch and BCMBCM	Combination switch Refer to BCS-71, "Symptom Table".
	One side	Combination meter	_
Turn signal indicator lamp does not blink. (Turn signal lamp is normal.)	Both sides (Always)	Turn signal indicator lamp signalBCMCombination meter	Combination meter Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
	Both sides (Only when activating hazard warning lamp with power switch OFF)	Combination meter power supply and ground circuitCombination meter	Combination meter Power supply and ground circuit Refer to MWI-85, "COMBINATION METER: Diagnosis Procedure".

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< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symptom		Possible cause	Inspection item
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.) 		Hazard switch Harness between hazard switch and BCM Harness between hazard switch and ground BCM	Hazard switch circuit Refer to EXL-112, "Component Function Check".
One side Front fog lamp is not turned ON. Both sides		Front fog lamp bulb Harness between IPDM E/R and front fog lamp Harness between front fog lamp and ground IPDM E/R	Front fog lamp circuit Refer to EXL-105, "Component Function Check".
		Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS Refer to EXL-124, "Diagnosis Proc	

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

NORMAL OPERATING CONDITION

Description INFOID:000000010121371

LED HEADLAMP

- LED brightness and color may slightly change until the temperature becomes stable. This is not malfunction.
- Illumination time lag may occur between right and left. This is not malfunction.
- Brightness may be reduced due to aged deterioration of LED.
- Because of the dummy portion of connecting part of front combination lamp, water may be seemed as if it enters in headlamp after the vehicle is washed or after the rain. But, actually water is not entered in headlamp, and this is not malfunction.

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 WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Description

INFOID:0000000010121372

INFOID:0000000010121373

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

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

- 1. Select "HL HI REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Cor	Monitor status	
HL HI REQ	Lighting switch	HI or PASS	On
HEHINEQ	(2ND)	LO	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-72, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check headlamp (HI) circuit. Refer to EXL-84, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Repair or replace the malfunctioning part.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Description

INFOID:0000000010121374

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

WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000010121375

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

PCONSULT DATA MONITOR

- Select "HL HI REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Cor	Monitor status	
HL HI REQ	Lighting switch	HI or PASS	On
TIETH NEQ	(2ND)	LO	Off

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON [LED HEADLAMP] < SYMPTOM DIAGNOSIS > Is the inspection result normal? Α YES >> GO TO 3. NO >> Replace BCM. Refer to BCS-72, "Removal and Installation". 3.HEADLAMP (HI) CIRCUIT INSPECTION В Check headlamp (HI) circuit. Refer to EXL-85, "WITH DAYTIME RUNNING LIGHT SYSTEM: Component Function Check". Is the inspection result normal? C YES >> Refer to GI-53, "Intermittent Incident". NO >> Repair or replace the malfunctioning part. D Е F Н

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:0000000010121376

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

Diagnosis Procedure

INFOID:0000000010121377

1. CHECK COMBINATION SWITCH

Check combination switch. Refer to BCS-71, "Symptom Table".

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 "HL LO REQ" in "Data Monitor" of "IPDM E/R".
- 2. With operating the lighting switch, check the monitor status.

Monitor item	Cor	Monitor status	
HL LO REQ	Lighting switch	2ND	On
		OFF	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-72, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check headlamp (LO) circuit. Refer to EXL-89, "Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Repair or replace the malfunctioning part.

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:0000000010121378

The parking, license plate, side marker, tail lamps and each illumination are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000010121379

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1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

PCONSULT DATA MONITOR

- 1. Select "TAIL & CLR REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1ST	On
IAIL & OLIVINLQ		OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-72</u>. "Removal and Installation".

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BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000010121380

The front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000010121381

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK FUSE

Check that the following fuse is not blown:

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	50	15 A

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning part.

3.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

- 1. Select "FR FOG REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG 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-29, "Removal and Installation".

NO >> Replace BCM. Refer to BCS-72, "Removal and Installation".

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description INFOID:000000010121382 B

PREPARATION BEFORE ADJUSTING

NOTE:

- · For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the trunk room.)

NOTE:

Do not remove the on-vehicle tool.

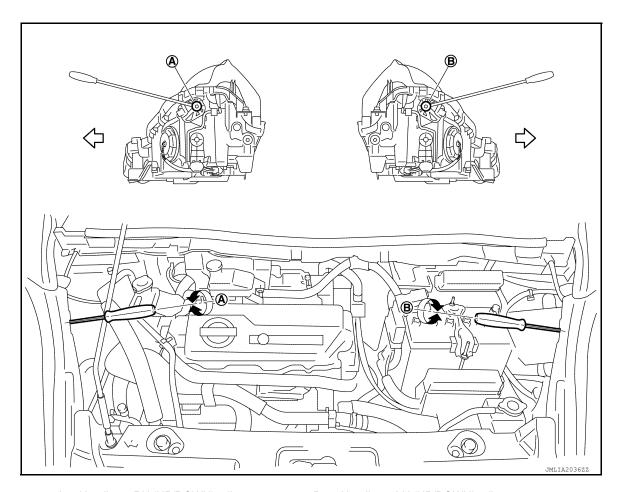
Wipe out dirt on the headlamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW



A Headlamp RH (UP/DOWN) adjustment screw B. Headlamp LH (UP/DOWN) adjustment screw

: Vehicle center

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	Adjustment screw	Rotation	Facing direction
A Headlamp RH (U	Headlamn PH (LIP/DOW/N)	Clockwise	DOWN
	Headianip KH (GF/DOWN)	Counterclockwise	UP
B Headlamp LH (UP/DOWN)	Hoodiams I H (LIP/DOWN)	Clockwise	DOWN
	neadiamp En (OF/DOWN)	Counterclockwise	UP

Aiming Adjustment Procedure

INFOID:0000000010121383

1. Place the screen.

NOTE:

- · Stop the vehicle facing the wall.
- Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the headlamp center and the screen.
- 3. Start the engine. Turn the headlamp (LO) ON.

NOTE:

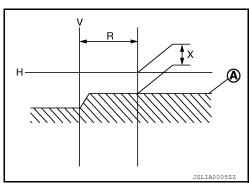
Shut off the headlamp light with the board to prevent from illuminating the adjustment screen. **CAUTION:**

Never cover the lens surface with a tape etc. The lens is made of resin.

4. Measure the distance (X) between the horizontal center line of headlamp (H) and the cutoff line (A) within the light axis measurement range (R) from the vertical center line ahead of headlamp (V).

Light axis measurement range (R) : 350 ± 175 mm (13.78 ± 6.89 in)

Low beam distribution on the screen

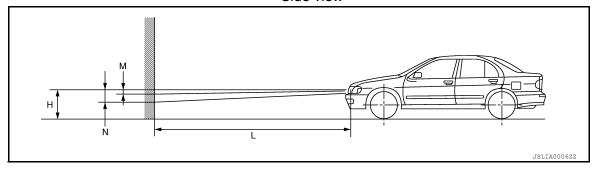


5. Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

unit: mm (in)

Horizontal center line of headlamp (H)	Highest cutoff line height (M)	Lowest cutoff line height (N)
700 (27.56) or less	4 (0.16)	30 (1.18)
701(27.60) – 800 (31.50)	4 (0.16)	30 (1.18)
801 (31.54) or more	17 (0.67)	44 (1.73)

Side view



Distance between the headlamp center and the screen (L) : 10 m (32.8 ft)

FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

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FRONT FOG LAMP AIMING ADJUSTMENT

Description INFOID:0000000010121384

PREPARATION BEFORE ADJUSTING

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the fog lamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the trunk room.)

NOTE:

Do not remove the temporary tire, jack and on-vehicle tool.

Wipe out dirt on the fog lamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW

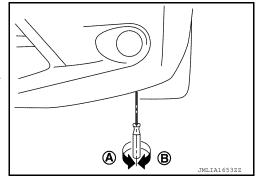
· Turn the aiming adjusting screw for adjustment.

A: DOWN B: UP

 For the position and direction of the adjusting screw, refer to the figure.

NOTE:

A screwdriver or hexagonal wrench [6 mm (0.24 in)] can be used for adjustment.



INFOID:0000000010121385

Aiming Adjustment Procedure

1. Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- · Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.
- Start the motor. Turn the front fog lamp ON.

NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen. **CAUTION:**

Never cover the lens surface with a tape etc. The lens is made of resin.

Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 150 mm (5.906 in).

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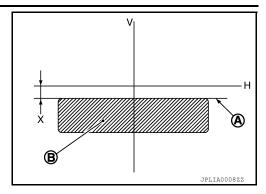
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FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

Front fog lamp light distribution on the screen



A : Cutoff line

B : High illuminance area

H : Horizontal center line of front fog lampV : Vertical center line of front fog lamp

X : Cutoff line height

[LED HEADLAMP]

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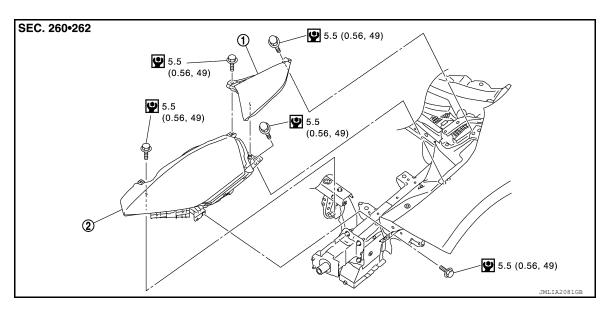
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REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

REMOVAL



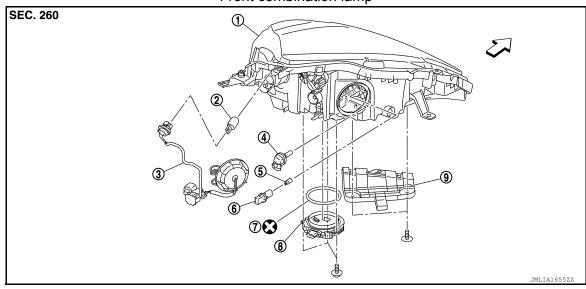
1. Front side marker lamp

2. Front combination lamp

: N·m (kg-m, in-lb)

DISASSEMBLY

Front combination lamp



1. Housing assembly

4. Halogen bulb (HI)

7. Seal packing

- 2. Front turn signal lamp bulb
- 5. Parking lamp bulb
- 8. LED headlamp control module
- 3. Harness
- 6. Parking lamp bulb socket
- 9. Bumper bracket

: Always replace after every disassembly.

CAUTION:

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- Disconnect the 12V battery negative terminal or remove the fuse to electric leakage. Refer to <u>EXL-8</u>, "<u>Precaution for Removing 12V Battery</u>".
- Never disassemble LED headlamp (LO) unit assembly.
- Replace front combination lamp, when malfunction LED headlamp unit.

Removal and Installation

INFOID:0000000010121387

REMOVAL

- 1. Remove front bumper fascia. Refer to EXT-13, "Removal and Installation".
- 2. Remove front side marker lamp mounting bolts.
- 3. Pull up front side marker lamp, disconnect front side marker lamp harness connector and remove front side marker lamp.
- 4. Remove front combination lamp mounting bolts.
- 5. Pull out front combination lamp forward the vehicle, and then disconnect the connector before removing front combination lamp.

INSTALLATION

Note the following item, and then install in the reverse order of removal.

NOTE:

After installation, perform aiming adjustment. Refer to EXL-125, "Description".

Bulb Replacement

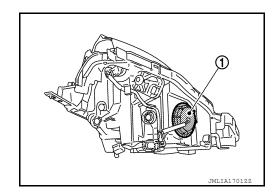
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CAUTION:

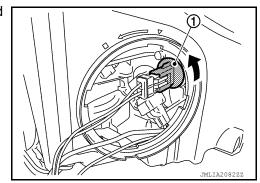
- Disconnect the 12V battery negative terminal or remove the fuse to electric leakage. Refer to <u>EXL-8</u>, "Precaution for Removing 12V Battery".
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

PARKING LAMP BULB

1. Rotate resin cap (1) counterclockwise and unlock it.



Rotate parking lamp bulb socket (1) counterclockwise and unlock it.



Remove parking lamp bulb from bulb socket.

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

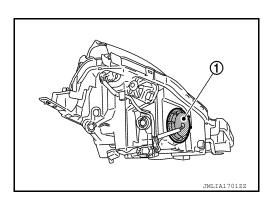
[LED HEADLAMP]

HEADLAMP BULB (LO)

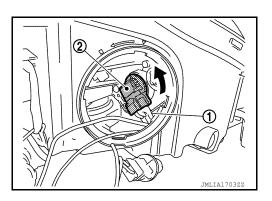
LED is used for headlamp bulb (LO). Always replace front combination lamp assembly as a unit, when bulb is to be replaced because of malfunction. Refer to EXL-130, "Removal and Installation".

HEADLAMP BULB (HI)

1. Rotate resin cap (1) counterclockwise and unlock it.



- Remove parking lamp bulb and socket.
- 3. Rotate headlamp bulb (HI) (2) counterclockwise and unlock it.
- 4. Disconnect headlamp bulb (HI) harness connector (1).



5. Remove headlamp bulb (HI) from the headlamp housing assembly.

FRONT TURN SIGNAL LAMP BULB

- 1. Rotate bulb socket counterclockwise and unlock it.
- 2. Remove bulb from the bulb socket.

Disassembly and Assembly

INFOID:0000000010121389

DISASSEMBLY

- Rotate resin cap counterclockwise and unlock it.
- Rotate parking lamp bulb socket counterclockwise and unlock it.
- 3. Disconnect parking lamp harness connector.
- 4. Rotate headlamp bulb (HI) counterclockwise and unlock it.
- Disconnect headlamp bulb (HI) harness connector.
- Rotate turn signal lamp bulb socket counterclockwise and unlock it.
- 7. Remove turn signal lamp bulb from bulb socket.
- Remove LED headlamp control module mounting screws.
- 9. Disconnect LED headlamp control module harness connector, and then remove LED headlamp control module.
- 10. Remove combination lamp harness connector.

ASSEMBLY

Note the following items, and then assemble in the reverse order of disassembly.

CAUTION:

- Install LED headlamp control module securely.
- Always replace seal packing, when remove/replace LED headlamp control module.
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.

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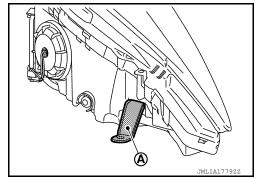
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Installing service bracket

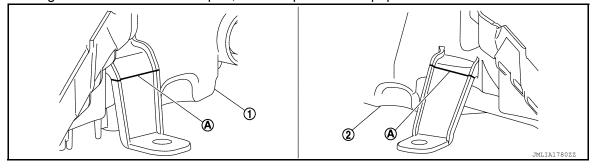
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If only installation part (A) as shown in the figure is damaged, and front combination lamp housing itself is not damaged, repair can be completed easily by installing service brackets.



Removal

- 1. Remove front combination lamp. Refer to EXL-130, "Removal and Installation".
- 2. Cut damaged section of installation part, then shape with sandpaper.

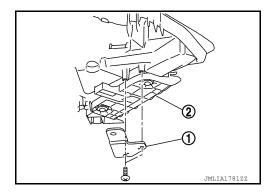


- 1. Front combination lamp RH
- A. Cut line (R end)

2. Front combination lamp LH

Installation

1. Install service bracket (1) to headlamp housing (2) with screws.



2. Install front combination lamp to the vehicle.

NOTE:

After installation, perform aiming adjustment. Refer to EXL-125. "Description".

[LED HEADLAMP]

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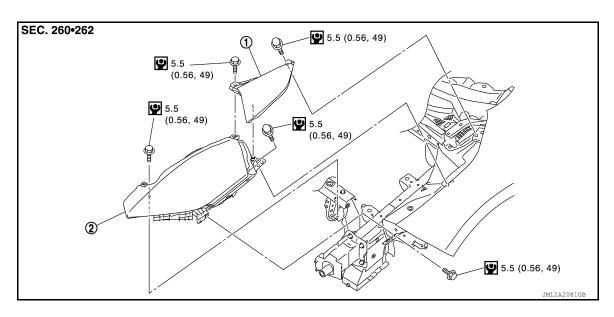
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FRONT SIDE MARKER LAMP

Exploded View

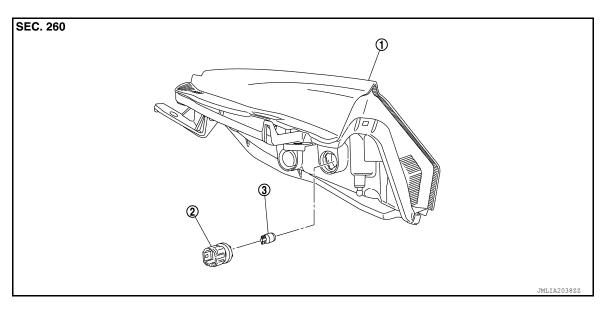
REMOVAL



1. Front side marker lamp

2. Front combination lamp

DISASSEMBLY



1. Front side marker lamp housing

Pront side marker lamp bulb socket 3. Front side marker lamp bulb

REMOVAL

- 1. Remove front side marker lamp mounting bolts.
- 2. Pull up front side marker lamp and disconnect the harness connector.
- 3. Remove front side marker lamp.

Removal and Installation

Bulb Replacement

CAUTION:

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FRONT SIDE MARKER LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- · After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

FRONT SIDE MARKER LAMP BULB

- Rotate bulb socket counterclockwise and unlock it.
- 2. Remove bulb from the bulb socket.

[LED HEADLAMP]

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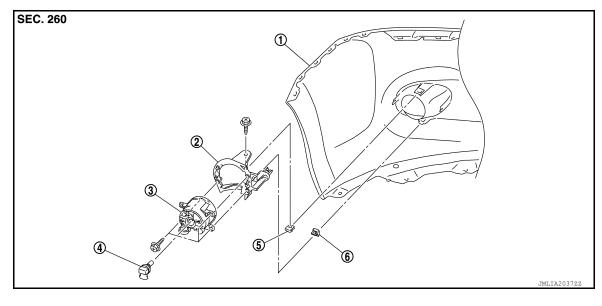
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FRONT FOG LAMP

Exploded View



- Front bumper fascia
- Front fog lamp bulb
- Front fog lamp bracket
- J nut

- Front fog lamp 3.
- Metal clip

Removal and Installation

REMOVAL

Remove the front under cover. Refer to EXT-23, "FRONT UNDER COVER: Removal and Installation".

- Remove the fender protector (LH/RH). Refer to EXT-21, "FENDER PROTECTOR: Removal and Installation".
- Disconnect the front fog lamp harness connector.
- Remove the front fog lamp fixing screws and remove front fog lamp.

INSTALLATION

Note the following item, and then install in the reverse order of removal.

NOTE:

After installation, perform aiming adjustment. Refer to EXL-127, "Description"

Replacement

CAUTION:

- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- · Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

FRONT FOG LAMP BULB

Remove front under cover. Refer to <u>EXT-23</u>, "<u>FRONT UNDER COVER</u>: <u>Removal and Installation</u>".

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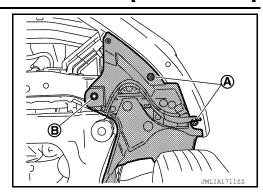
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FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

2. Remove front fender protector mounting bolts (A) and clip (B).



- 3. Remove front fog lamp bulb connector.
- 4. Rotate bulb counterclockwise and unlock it.

LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

LIGHTING & TURN SIGNAL SWITCH

Exploded View

The lighting & turn signal switch is integrated in the combination switch. Refer to <u>BCS-73</u>, "Removal and <u>Installation"</u>.

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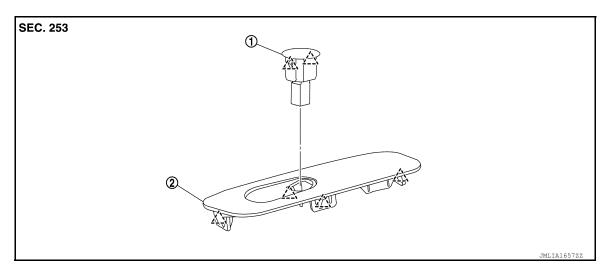
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OPTICAL SENSOR

Exploded View



Optical sensor
 Pawl

2. Switch panel

Removal and Installation

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REMOVAL

- 1. Insert suitable tool between the switch panel and the instrument upper panel. Pull out the optical sensor upward.
- 2. Disconnect the optical sensor connector.
- 3. Remove optical sensor from switch panel.

INSTALLATION

Install in the reverse order of removal.

HAZARD SWITCH

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

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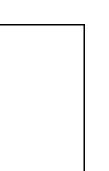
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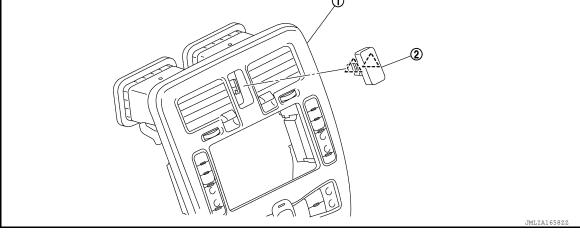
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HAZARD SWITCH

SEC. 251

Exploded View





1. Cluster lid C

Hazard switch

______: Pawl

Removal and Installation

INFOID:0000000010121401

REMOVAL

- 1. Remove cluster lid C. Refer to IP-17, "Removal and Installation".
- Disengage hazard switch fixing pawls, and then remove hazard switch.

INSTALLATION

Install in the reverse order of removal.

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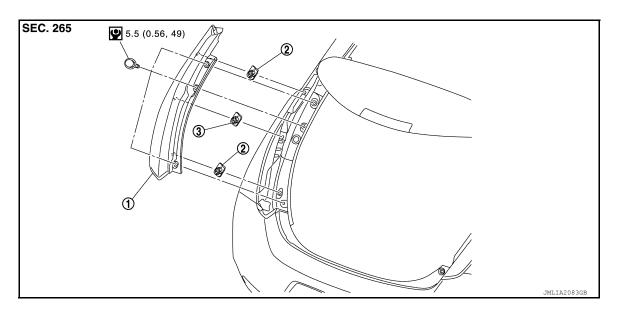
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REAR COMBINATION LAMP

Exploded View

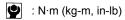
REMOVAL



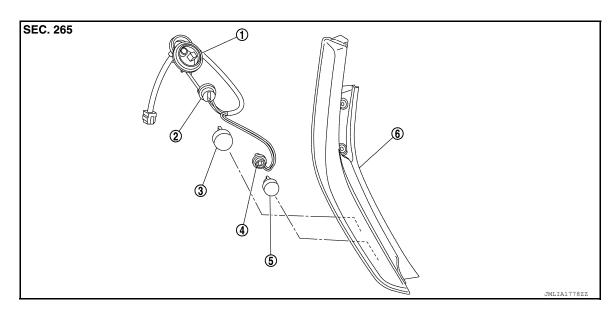
1. Rear combination lamp

2. Grommet A

3. Grommet B



DISASSEMBLY



- 1. Rear combination lamp harness
- 1. Buck-up lamp bulb socket
- . Rear turn signal bulb socket
- 5. Buck-up lamp bulb
- Rear turn signal bulb
- 6. Rear combination lamp housing assembly

Removal and Installation

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CAUTION:

Disconnect the 12V battery negative terminal or remove the fuse. Refer to <u>EXL-8</u>, "<u>Precaution for Removing 12V Battery</u>".

[LED HEADLAMP]

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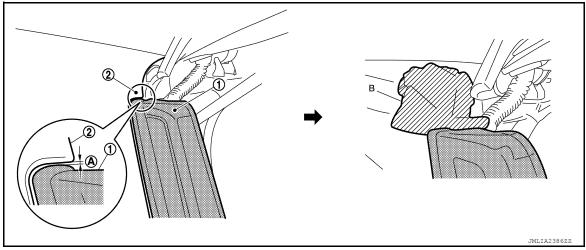
 Fogging of rear combination lamp inside is not a malfunction. Never replace parts. Fogging is a symptom in which inner surface of lens becomes whitely clouded, without there being visible water drops or water spots, as if lens is made of frosted-glass.

REMOVAL

- 1. Remove luggage side lower finisher. Refer to INT-43, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect rear combination lamp connector.
- 3. Remove rear combination lamp mounting bolts.
- 4. Insert a shop cloth (B) into clearance (A) between rear combination lamp (1) and rear fender panel (2), or apply protective tape.

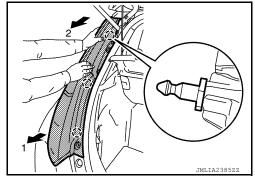
CAUTION:

- To prevent rear fender panel paint surface from being damaged, always apply protection using a shop cloth or protective tape.
- When using protective tape, apply protective tape to both rear fender panel and rear combination lamp.



5. Pull rear combination lamp toward vehicle rear side, as shown by the arrow in the figure.





6. Remove rear combination lamp.

INSTALLATION

Note the following item, and then install in the reverse order of removal. **CAUTION:**

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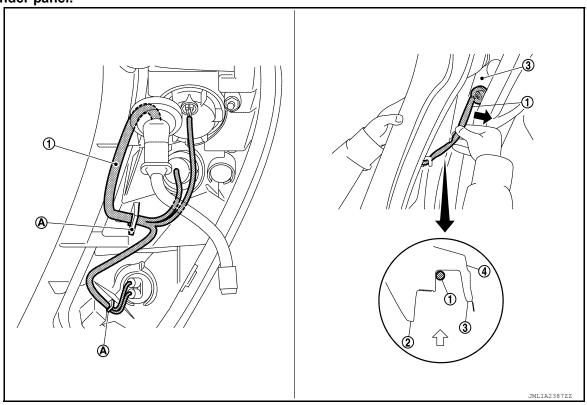
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When installing rear combination lamp, fix harness using harness fixing hook (A) on backside of rear combination lamp housing and place harness toward vehicle inside so that harness is not pinched by rear fender panel.



Harness

- Rear fender panel
- 3. Rear fender extension

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Rear inner panel

Replacement

CAUTION:

- Disconnect the 12V battery negative terminal or remove the fuse. Refer to EXL-8, "Precaution for Removing 12V Battery".
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it. Never touch bulb by hand while it is lit or right after being turned off.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

STOP/TAIL LAMP BULB

LED is used for stop/tail lamp bulb. Always replace rear combination lamp assembly as a unit, when bulb is to be replaced because of malfunction.

REAR TURN SIGNAL LAMP BULB

- 1. Remove rear combination lamp mounting bolts.
- 2. Insert a shop cloth (B) into clearance (A) between rear combination lamp (1) and rear fender panel (2), or apply protective tape.

CAUTION:

 To prevent rear fender panel paint surface from being damaged, always apply protection using a shop cloth or protective tape.

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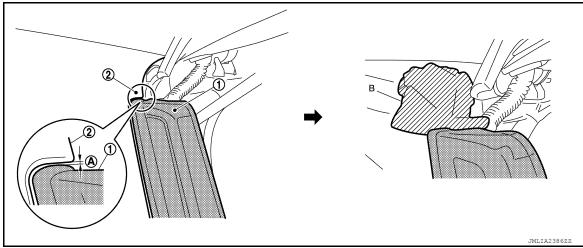
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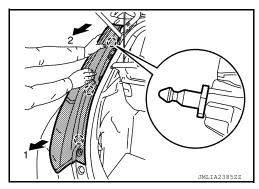
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· When using protective tape, apply protective tape to both rear fender panel and rear combination lamp.



3. Pull rear combination lamp toward vehicle rear side, as shown by the arrow in the figure.





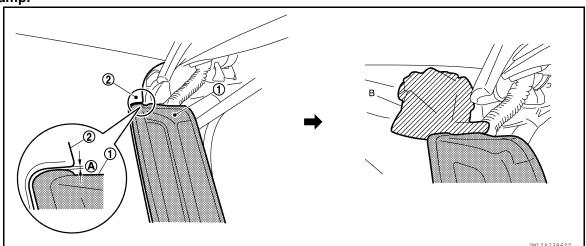
- Rotate bulb socket counterclockwise and unlock it.
- Remove bulb from the socket.

BACK-UP LAMP BULB

- 1. Remove rear combination lamp mounting bolts.
- 2. Insert a shop cloth (B) into clearance (A) between rear combination lamp (1) and rear fender panel (2), or apply protective tape.

CAUTION:

- To prevent rear fender panel paint surface from being damaged, always apply protection using a shop cloth or protective tape.
- When using protective tape, apply protective tape to both rear fender panel and rear combination lamp.



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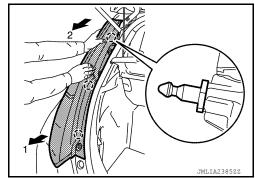
REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

3. Pull rear combination lamp toward vehicle rear side, as shown by the arrow in the figure.





- 4. Rotate bulb socket counterclockwise and unlock it.
- 5. Remove bulb from the socket.

[LED HEADLAMP]

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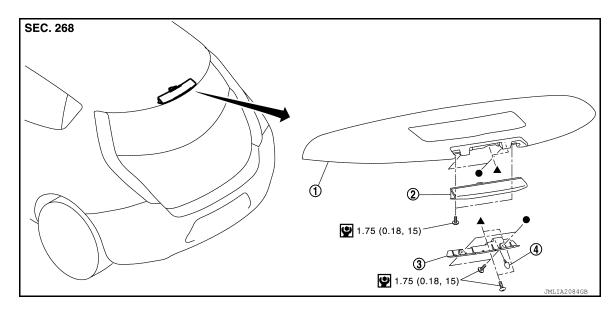
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HIGH-MOUNTED STOP LAMP

Exploded View



1. Rear spoiler

- 2. High-mounted stop lamp
- 3. High-mounted stop lamp cover

- 4. Rear washer nozzle
- : N·m (kg-m, in-lb)
- ●,▲: Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

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REMOVAL

- Remove rear spoiler. Refer to <u>EXT-36</u>, "Removal and Installation".
- 2. Remove high-mounted stop lamp cover mounting screws, and then remove high-mounted stop lamp cover.
- 3. Remove high-mounted stop lamp mounting screws.
- 4. Disconnect high-mounted stop lamp harness connector.
- 5. Remove high-mounted stop lamp.

INSTALLATION

Install in the reverse order of removal.

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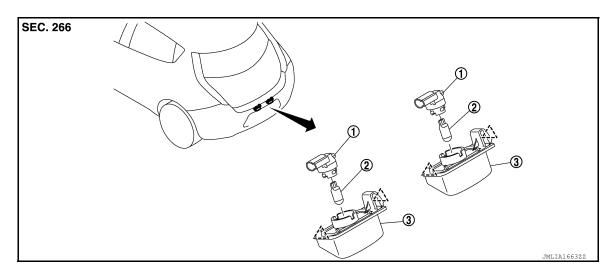
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LICENSE PLATE LAMP

Exploded View



- License plate lamp bulb socket
- 2. License plate lamp bulb
- 3. License plate lamp housing



Removal and Installation

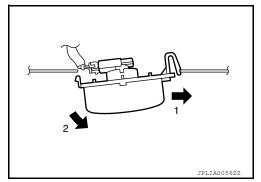
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CAUTION:

Disconnect the 12V battery negative terminal or remove the fuse to electric leakage. Refer to <u>EXL-8</u>, <u>"Precaution for Removing 12V Battery"</u>.

REMOVAL

 Remove license plate lamp in numerical order shown in the figure.



2. Disconnect license plate lamp connector, and then remove license plate lamp.

INSTALLATION

Install in the reverse order of removal.

Replacement INFOID:000000010121409

CAUTION:

- Disconnect the 12V battery negative terminal or remove the fuse to electric leakage. Refer to <u>EXL-8</u>, "<u>Precaution for Removing 12V Battery</u>".
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

LICENSE PLATE LAMP BULB

LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

1. Remove license plate lamp.

2. Turn the bulb socket counterclockwise and unlock it.

3. Remove the bulb from the socket.

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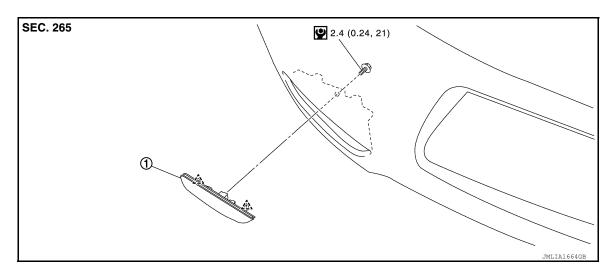
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[LED HEADLAMP]

REAR REFLEX REFLECTOR

Exploded View



1. Reflex refractor

^` : Pawl

: N·m (kg-m, in-lb)

Removal and Installation

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REMOVAL

- 1. Remove rear bumper fascia. Refer to EXT-17, "Removal and Installation".
- 2. Remove rear reflex reflector fixing screws and disengage fixing pawls, and then remove rear reflex reflector.

INSTALLATION

Install in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[LED HEADLAMP]

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

Item		Туре	Wattage (W)*		
	Headlamp (HI)	H9 (Halogen)	65		
Front combination lamp	Headlamp (LO)	LED	_		
Front combination lamp	Front turn signal lamp	3457NAK (Amber)	27		
	Parking lamp	W5W	5		
Front side maker lamp		W5W	5		
Front fog lamp		H11	55		
Rear combination lamp	Stop lamp/Tail lamp	LED	_		
	Rear turn signal lamp	WY21W (Amber)	21		
	Back-up lamp	W16W	16		
	Rear side maker lamp	LED	_		
License plate lamp		W5W	5		
High-mounted stop lamp		LED	_		

^{*:} Always check with the Parts Department for the latest parts info.

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PRECAUTION

PRECAUTIONS

Precaution for Technicians Using Medical Electric

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OPERATION PROHIBITION

WARNING:

- Parts with strong magnet is used in this vehicle.
- Technicians using a medical electric device such as pacemaker must never perform operation on the vehicle, as magnetic field can affect the device function by approaching to such parts.

NORMAL CHARGE PRECAUTION

WARNING:

- If a technician uses a medical electric device such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator, the possible effects on the devices must be checked with the device manufacturer before starting the charge operation.
- As radiated electromagnetic wave generated by PDM (Power Delivery Module) at normal charge operation may affect medical electric devices, a technician using a medical electric device such as implantable cardiac pacemaker or an implantable cardioverter defibrillator must not approach motor room [PDM (Power Delivery Module)] at the hood-opened condition during normal charge operation.

PRECAUTION AT TELEMATICS SYSTEM OPERATION

WARNING:

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of TCU might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), when using the service, etc.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of TCU might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before TCU use.

PRECAUTION AT INTELLIGENT KEY SYSTEM OPERATION

WARNING:

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of Intelligent Key might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), at door operation, at each request switch operation, or at engine starting.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of Intelligent Key might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before Intelligent Key use.

Point to Be Checked Before Starting Maintenance Work

The high voltage system may starts automatically. It is required to check that the timer air conditioner and timer charge (during EVSE connection) are not set before starting maintenance work.

NOTE:

If the timer air conditioner or timer charge (during EVSE connection) is set, the high voltage system starts automatically even when the power switch is in OFF state.

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS

PRECAUTIONS

< PRECAUTION >

[HALOGEN HEADLAMP]

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Precaution for Removing 12V Battery

1. Check that EVSE is not connected.

NOTE:

If EVSE is connected, the air conditioning system may be automatically activated by the timer A/C function.

- 2. Turn the power switch OFF \rightarrow ON \rightarrow OFF. Get out of the vehicle. Close all doors (including back door).
- 3. Check that the charge status indicator lamp does not blink and wait for 5 minutes or more.

NOTE:

If the battery is removed within 5 minutes after the power switch is turned OFF, plural DTCs may be detected.

Remove 12V battery within 1 hour after turning the power switch OFF → ON → OFF.

NOTE

- The 12V battery automatic charge control may start automatically even when the power switch is in OFF state.
- Once the power switch is turned ON → OFF, the 12V battery automatic charge control does not start for approximately 1 hour.

CAUTION:

- After all doors (including back door) are closed, if a door (including back door) is opened before battery terminals are disconnected, start over from Step 1.
- After turning the power switch OFF, if "Remote A/C" is activated by user operation, stop the air conditioner and start over from Step 1.

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Revision: May 2014 EXL-151 2014 LEAF

PREPARATION

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[HALOGEN HEADLAMP]

PREPARATION

PREPARATION

Special Service Tool

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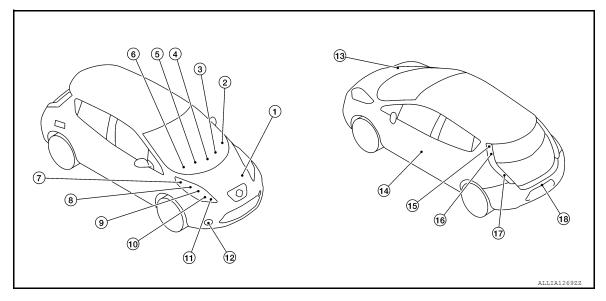
Tool number (TechMate No.) Tool name		Description
— (J-46534) Trim Tool Set	AWJIAO483ZZ	Removing trim components

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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



No.	Part	Function
1.	IPDM E/R	 Controls the integrated relay, and supplies voltage to the load according to the request from BCM (via CAN communication). Refer to PCS-6. "Component Parts Location" for detailed installation location.
2.	Combination switch (Lighting & turn signal switch)	Refer to BCS-8, "COMBINATION SWITCH READING SYSTEM: System Description".
3.	Combination meter	 Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM (via CAN communication). Turns the tail lamp indicator lamp, high beam indicator lamp, front fog lamp indicator lamp and rear fog lamp indicator lamp ON according to the request from BCM (via CAN communication).
4.	Hazard switch	Refer to EXL-154, "Hazard Switch".
5.	ВСМ	 Detects each switch condition by the combination switch reading function Judges that the exterior lamps are turned ON according to the vehicle condition Requests the headlamp relay (HI/LO), tail lamp relay and front fog lamp relay ON to IPDM E/R (via CAN communication) Requests the high beam indicator lamp, tail lamp indicator lamp and front fog lamp indicator lamp ON to the combination meter (via CAN communication) Judges the outside brightness from the optical sensor signal. Judges the ON/OFF timing according to the vehicle condition. Judges the ON/OFF status of the exterior lamp according to the outside brightness and the vehicle condition. Refer to BCS-5. "BODY CONTROL SYSTEM: Component Parts Location" for detailed installation location.
6.	Optical sensor	Refer to EXL-154, "Optical Sensor".
7.	Front side marker lamp	Refer to EXL-282, "Bulb Specifications".
8.	Front turn signal lamp	Refer to EXL-282, "Bulb Specifications".
9.	Headlamp LO	Refer to EXL-282, "Bulb Specifications"
10.	Headlamp HI	Refer to EXL-282, "Bulb Specifications".
11.	Parking Lamp	Refer to EXL-282, "Bulb Specifications".
12.	Front fog lamp (if equipped)	Refer to EXL-282, "Bulb Specifications".

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

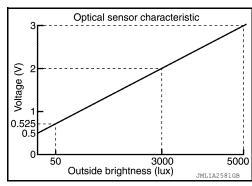
No.	Part	Function
13.	Daytime running light relay*	Headlamp HI ground circuit is switched according to request from IPDM E/R.
14.	Front door switch (LH)	Refer to DLK-20, "Door Switch".
15.	Rear side marker lamp	Refer to EXL-282, "Bulb Specifications".
16.	Tail lamp	Refer to EXL-282, "Bulb Specifications".
17.	Rear turn signal lamp	Refer to EXL-282, "Bulb Specifications".
18.	License plate lamp	Refer to EXL-282. "Bulb Specifications".

^{*:} With daytime running light system

Optical Sensor

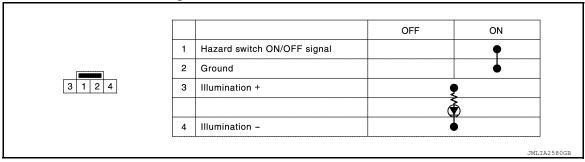
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Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.



Hazard Switch

Inputs the hazard switch ON/OFF signal to BCM.



SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM: System Description

INFOID:0000000010121421

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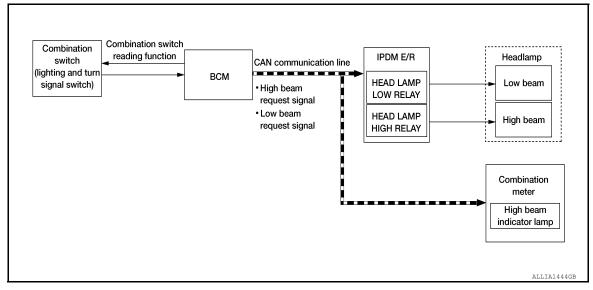
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SYSTEM DIAGRAM



OUTLINE

Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and relay 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 power 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 power 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 integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

HEADLAMP 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

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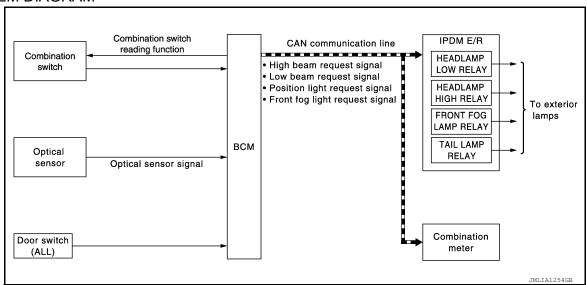
Control part	Fail-safe operation
Headlamp	 Turns ON the headlamp low relay when the power switch is turned ON Turns OFF the headlamp low relay when the power switch is turned OFF Headlamp high relay OFF

AUTO LIGHT SYSTEM (EXCEPT FOR CANADA)

AUTO LIGHT SYSTEM (EXCEPT FOR CANADA): System Description

INFOID:0000000010121423

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

- Combination switch reading function
- Headlamp control function
- Auto light function
- Delay timer function
- Wiper linked auto lighting function
- Auto light adjustment system

Control by IPDM E/R:

- Relay control function
- Auto light system has the auto light function (with twilight lighting function), wiper linked auto lighting function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps* and each illumination automatically, depending on the outside brightness.
- Wiper linked auto lighting function automatically turns ON/OFF the exterior lamps* and each illumination when the light switch is in the AUTO position, according to a front wiper operation.
- When auto light system turns the exterior lamps ON with the power 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, tail lamp, front fog lamp and side marker lamp (Headlamp HI and front fog lamp depend on the combination switch condition.)

NOTE:

The settings of the twilight lighting function and the wiper linked auto lighting function can be changed with CONSULT. Refer to BCS-17, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

AUTO LIGHT FUNCTION (WITH TWILIGHT LIGHTING FUNCTION)

Description

- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to the optical sensor when the power switch is turned ON or ACC.

SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- BCM filters outside brightness based on the optical sensor signal and judges outside brightness.
- BCM detects change status of outside brightness according to outside brightness from the optical sensor signal and filtered outside brightness. Based on the change status, BCM judges ON/OFF condition of the exterior lamp.
- 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:

As to ON/OFF timing, the sensitivity depends on settings. The settings can be changed with CONSULT. Refer to BCS-17, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

WIPER LINKED AUTO LIGHTING FUNCTION

BCM turns the exterior lamps ON when detecting 4 operations of the front wiper work the light switch in AUTO position.

NOTE:

BCM turns OFF the headlamps 3 seconds after the front wiper switch is turned from ON⇒OFF.

AUTO LIGHT ADJUSTMENT SYSTEM

The auto light adjustment system automatically, dims/brightens the display and combination meter, according to brightness outside the vehicle, when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to INL-12, "AUTO LIGHT ADJUSTMENT SYSTEM: System Description".

DELAY TIMER FUNCTION

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

- Turns the exterior lamps OFF 5 minutes after detecting that any door opens. (Door switch ON).
- Turns the exterior lamps OFF a certain period of time* after closing all doors. (Door switch ON→OFF).
- Turns the exterior lamps OFF with the power switch ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>BCS-17</u>, "<u>HEAD-LAMP</u>: CONSULT Function (BCM HEAD LAMP)".

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.

FOG OVERRIDE FUNCTION

When front fog lamp switch is ON while power switch is in ON position and lighting switch is in AUTO position, BCM turns ON exterior lamps* regardless of outside brightness.

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

NOTE:

- Headlamp (HI) depending on the combination switch condition.
- Front fog light reminder warning is cancelled when fog override function is Off.

How to Set

(P)With CONSULT

- Turn power switch ON.
- Select "INT LAMP" of "BCM" using CONSULT.
- 3. Select "FOG LAMP OVERRIDE" in "Work Support" mode.

Service item	Setting item	Setting
FOG LAMP OVERRIDE	On	With fog override function
1 OO LAWII OVERRIBE	Off	Without fog override function

AUTO LIGHT SYSTEM (FOR CANADA)

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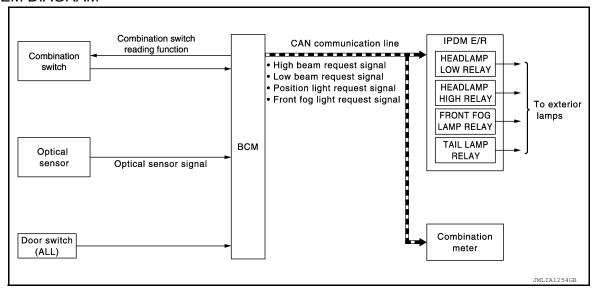
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Revision: May 2014 EXL-157 2014 LEAF

AUTO LIGHT SYSTEM (FOR CANADA): System Description

INFOID:0000000010121425

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

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

Control by IPDM E/R:

- Relay control function
- 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 power 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 power 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-17, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

AUTO LIGHT ADJUSTMENT SYSTEM

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 INL-12, "AUTO LIGHT ADJUSTMENT SYSTEM: System Description".

DELAY TIMER FUNCTION

[HALOGEN HEADLAMP]

BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the power 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 power switch ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>BCS-17</u>, "<u>HEAD-LAMP</u>: CONSULT Function (BCM HEAD LAMP)".

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.

FOG OVERRIDE FUNCTION

When front fog lamp switch is ON while power switch is in ON position and lighting switch is in AUTO position, BCM turns ON exterior lamps* regardless of outside brightness.

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

NOTE

- · Headlamp (HI) depending on the combination switch condition.
- · Front fog light reminder warning is cancelled when fog override function is Off.

How to Set

(II) With CONSULT

- 1. Turn power switch ON.
- 2. Select "INT LAMP" of "BCM" using CONSULT.
- 3. Select "FOG LAMP OVERRIDE" in "Work Support" mode.

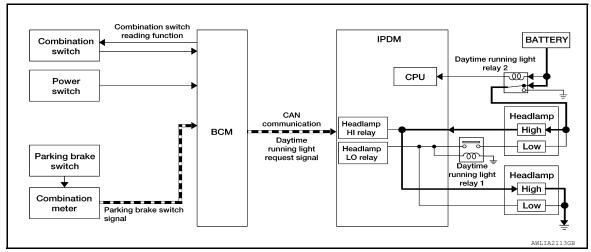
Service item	Setting item	Setting
FOG LAMP OVERRIDE	On	With fog override function
1 OG LAWIF OVERNIDE	Off	Without fog override function

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM: System Description

INFOID:0000000010121427

SYSTEM DIAGRAM



OUTLINE

- Turns the headlamp high ON (high beam at approximately half illumination) as the daytime running light.
- Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and relay control function 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 power switch
- BCM detects the parking brake condition by the parking brake switch signal received from combination meter using CAN communication.

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< SYSTEM DESCRIPTION >

 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:

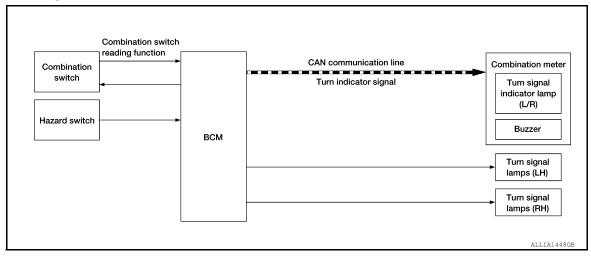
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO, and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay 2 (ground-side) to turn ON according to the daytime running light request signal.
- Power is supplied from the daytime running light relay through headlamp high RH and IPDM E/R to headlamp high LH. And high beam headlamps are illuminated (approximately half illumination) as the daytime running light.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Description

INFOID:0000000010121428

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 power 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.

3-TIME FLASHER FUNCTION

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

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.

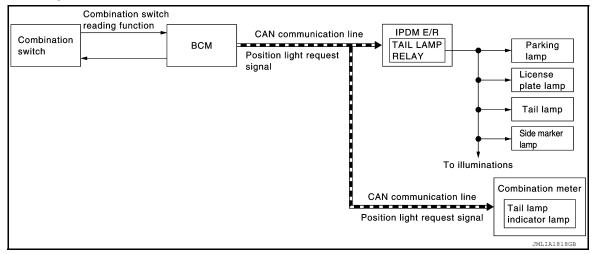
NOTE:

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 Description

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 relay control function 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 power switch ON
- IPDM E/R turns the integrated tail lamp relay ON and 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:000000010121431

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
Parking lampLicense plate lampIlluminationTail lampSide marker lamp	 Turns ON the tail lamp relay when the power switch is turned ON Turns OFF the tail lamp relay when the power switch is turned OFF

FRONT FOG LAMP SYSTEM

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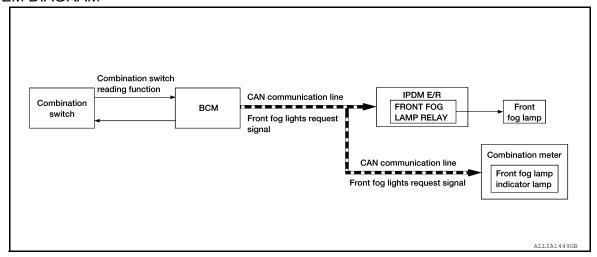
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FRONT FOG LAMP SYSTEM: System Description

INFOID:0000000010121432

SYSTEM DIAGRAM



OUTLINE

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

FRONT FOG LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the front fog 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 condition is satisfied (except for the high beam ON):
- Lighting switch 2ND
- Lighting switch AUTO and the power switch ON

IPDM E/R turns the integrated front fog lamp relay ON, and 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:0000000010121434

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 relay OFF	

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM: System Description

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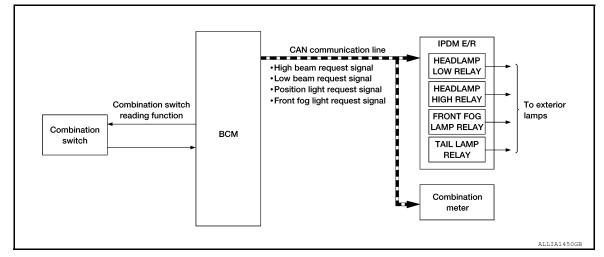
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SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

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

Control by IPDM E/R:

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

NOTE:

- Headlamp control function turns the exterior lamps ON normally when the power 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.

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010519555

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	 The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM. 	
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.	

SYSTEM APPLICATION

BCM can perform the following functions.

				Direct [Diagnosti	c Mode		
System	Sub System	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			×	×	×		
Air conditioner	AIR CONDITIONER			×	×			
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×	×		
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Trunk open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

HEADLAMP

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

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DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of power 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]	
TURN SIGNAL L [On/Off]	_
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.
HEAD LAMP SW 2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.
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.
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ACTIVE TEST

Test Item	Description	<u></u>
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].	K
HEAD LAMP	This test is able to check headlamp operation [Off/Low/Hi].	
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].	EVI
TAIL LAMP	This test is able to check taillamp operation [Off/On].	EXL

WORK SUPPORT

Support Item	Setting	Description
	MODE6	
	MODE5	Autolamp function OFF.
	MODE4	
AUTO LIGHT LOGIC SET	MODE3	Autolamp function ON at twilight.
	MODE2	Autolamp function ON at twilight or with wiper LO and HI operation.
	MODE1*	Autolamp function ON at twilight or with wiper INT, LO and HI operation.
BATTERY SAVER SET	Off	Exterior lamp battery saver function OFF.
	On*	Exterior lamp battery saver function ON.

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Support Item	Setting		Description	
	MODE4		Less sensitive than normal setting (turns ON later).	
CUSTOM A/LIGHT SETTING	MODE3		More sensitive than MODE2.	
COSTONI A/LIGHT SETTING	MODE2		More sensitive than normal setting (turns ON earlier).	
	MODE1*		Normal setting.	
	MODE 8	180 sec.		
	MODE 7	150 sec.		
	MODE 6	120 sec.		
ILL DELAY SET	MODE 4	90 sec.	Autolamp delay timer operation time.	
ILL DELAT SET	MODE 5	60 sec.	Autolamp delay timer operation time.	
	MODE 3	30 sec.		
	MODE 2	OFF		
	MODE 1*	45 sec.		

^{*:} Initial setting

FLASHER

FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000010519557

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 power switch.	
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.	
TURN SIGNAL L [On/Off]		
HAZARD SW [On/Off]	Indicates condition of hazard switch.	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.	
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.	
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.	

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
	Lock/Unlock	Hazard warning lamp answer back for LOCK and UNLOCK with request switch or Intelligent Key.
HAZARD ANSWER BACK	Unlock Only	Hazard warning lamp answer back for UNLOCK only with request switch or Intelligent Key.
	Lock Only	Hazard warning lamp answer back for LOCK only with request switch or Intelligent Key.
	Off	Hazard warning lamp answer back OFF.

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

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AUTO ACTIVE TEST

Description

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

- Rear window defogger
- Front wiper motor
- Parking lamp
- · License plate lamp
- Tail lamp
- · Front fog lamp
- Side marker lamp
- Headlamp (LO, HI)

Operation Procedure

NOTE:

Never perform auto active test in the following conditions.

- · CONSULT is connected.
- · Passenger door is open.
- 1. Turn the power switch OFF.
- Turn the power switch ON, and within 20 seconds, press the driver door switch 10 times. Then turn the power switch OFF.
- 3. Turn the power switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.

NOTE:

Never depress brake pedal while operating power switch so that auto active test is not activated.

4. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

- When auto active test mode has to be cancelled halfway through test, turn the power switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to <u>DLK-102</u>.
 "Component Function Check".

Inspection in Auto Active Test Mode

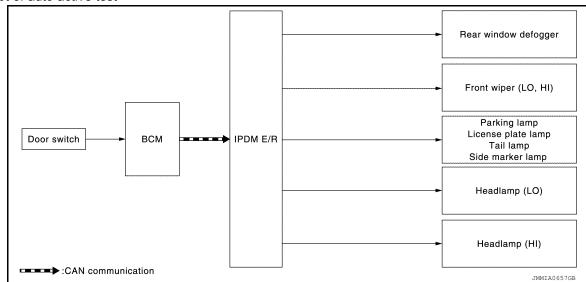
When auto active test mode is actuated, the following operation sequence is repeated 3 times.

Operation sequence	Inspection location	Operation
1	Rear window defogger	10 seconds
2	Front wiper motor	LO for 5 seconds → HI for 5 seconds
3	Parking lamp License plate lamp Tail lamp Front fog lamp Side marker lamp	10 seconds
4	Headlamp	LO for 10 seconds →HI ON ⇔ OFF 5 times

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Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
		YES	BCM signal input circuit
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	NO	Rear window defogger Rear window defogger ground circuit Harness or connector between IPDM E/R and rear window defogger IPDM E/R
Any of the following components do not		YES	BCM signal input circuit
operate Parking lamp License plate lamp Tail lamp Front fog lamp Headlamp (HI, LO) Side marker lamp Front wiper motor	Perform auto active test. Does the applicable system operate?	NO	Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000010519559

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.

SELF DIAGNOSTIC RESULT

Refer to PCS-18, "DTC Index".

DATA MONITOR

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Monitor Item [Unit]	Main Signals	Description
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation
IGN RLY1 -REQ [On/Off]		Indicates power switch ON signal received from BCM on CAN communication line
IGN RLY [On/Off]	×	Indicates condition of ignition relay-1
PUSH SW [On/Off]		Indicates condition of power switch
DETENT SW [On/Off]		Indicates condition of shift position (park position switch)
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communication line
HOOD SW [On/Off]		Indicates condition of hood switch
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line

ACTIVE TEST

Test item	Description	
HORN	This test is able to check horn operation [On].	
REAR DEFOGGER	This test is able to check rear window defogger operation [On/Off].	
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].	
EXTERNAL LAMPS	This test is able to check external lamp operation [Fog/Hi/Lo/TAIL/Off].	

CAN DIAG SUPPORT MNTR

Refer to LAN-14, "CAN Diagnostic Support Monitor".

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ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

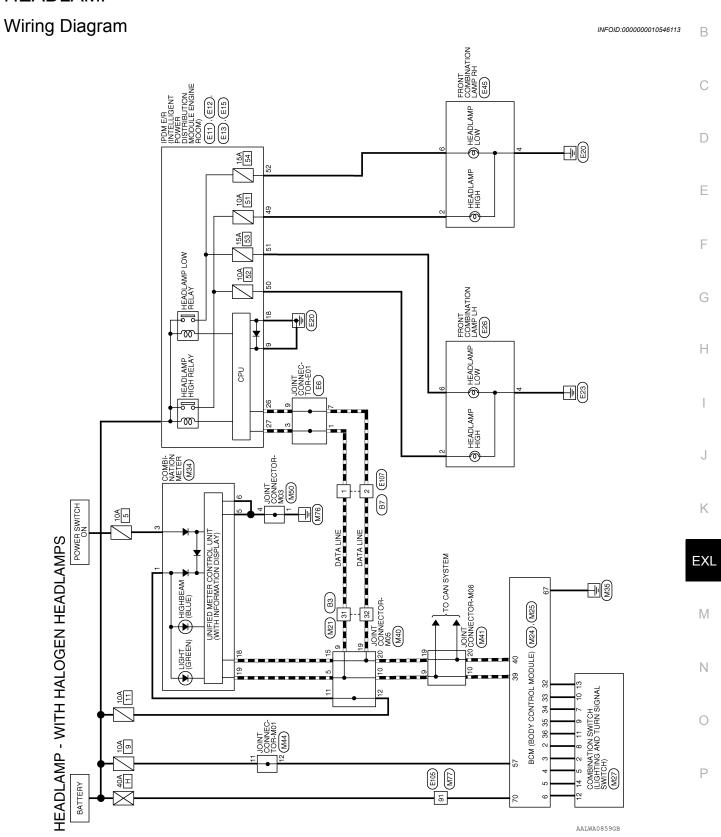
INFOID:0000000010121442

ECU	Reference
	BCS-28, "Reference Value"
BCM	BCS-46, "Fail-safe"
BOW	BCS-47, "DTC Inspection Priority Chart"
	BCS-48, "DTC Index"
	PCS-14, "Reference Value"
IPDM E/R	PCS-17, "Fail-Safe"
	PCS-18, "DTC_Index"

Α

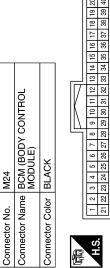
WIRING DIAGRAM

HEADLAMP



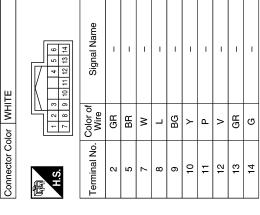
										ı				.
Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L			COMBINATION METER	TE	
Color of Wire	g	>	GR	>	>	BG	۵	7	Ь		M34	-	or WHITE	
Terminal No.	5	9	32	33	34	35	36	39	40		Connector No.	Connector Name	Connector Color	H.S.
				<u> </u>										

Connector Name COMBINATION METER				2 1 22 21							
Connector Name COI	MBINATION METER	믤		11 10 9 8 7 6 5 4 3 31 30 29 28 27 26 25 24 23		BAT	NÐI	GND	GND	CAN-L	CAN-H
Connector Na Connector Na Connector Na Connector Co H.S. A.S. 18 17 16 40 39 38 37 36 17 16 18 17 16 18 17 16 18 17 18 18 18 18 18 18	me CO	lor WH		15 14 13 35 34 33	Color of Wire	ГG	GR	Ф	В	Ь	٦
	Connector Na	Connector Co	明 H.S.	19 18 17 16 39 38 37 36		-	ဇ	5	9	18	19



	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
	Color of Wire	7	GR	BR
	erminal No. Wire	2	3	4

	M27	Connector Name COMBINATION SWITCH	
	Connector No.	Connector Name	

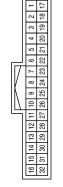




HEADLAMP WITH HALOGEN HEADLAMPS CONNECTORS

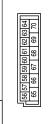
Connector Name WIRE TO WIRE Connector Color WHITE

Connector No. M21



Signal Name	1	1
Color of Wire	٦	Ь
Terminal No.	31	32

Connector No. M25 Connector Name BCM (BODY CONTROL MODULE) Connector Color WHITE								
Connector Name BCM (BODY CONTRC MODULE) Connector Color WHITE Solution Color C	Connector No.	M	32					
Connector Color WHITE	Connector Name	MC	MO	18 18 18 18 18 18 18 18 18 18 18 18 18 1	ارق ت	Š	ĮN.	ROL
156 57 58 59 10 10 10 10 10 10 10 10 10 10 10 10 10	Connector Color	≶	토	ш				
		565	7 58	59 67 67	9061	62 6 69	364	





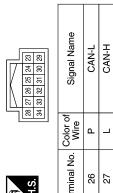
H.S.		

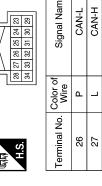
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Connector No.	vo. M40 Vame JOIN	Connector No. M40 Connector Name JOINT CONNECTOR-M05	Connector No. Connector Nar	lo. M41 lame JOINT	Connector No. M41 Connector Name JOINT CONNECTOR-M06		Connector No.	No. M44 Name JOINT	Connector No. M44 Connector Name JOINT CONNECTOR-M01
Connector Color	Solor BLUE	JE	Connector Color	color BLUE			Connector Color	Solor GRAY	
原 H.S.	10 9 8 7	7 6 5 4 3 2 1 3 17 16 15 14 13 12 11	H.S.	10 9 8	10 9 8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13 12 11		原 H.S.	10 9 8 7 6	6 5 4 3 2 1 16 15 14 13 12 11
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name		Terminal No.	Color of Wire	Signal Name
2	_	ı	o	_	1	T	=	۵	1
6	٦	ı	10	7	1		12	۵	ı
10	l	ı	19	Ь	1				
11	ГG	ı	20	Ь	1				
12	ГG	ı							
15	۵	I							
19	۵	ı							
20	۵	1							
	ΙГ								
Connector No.	No. M50	Connector No. M50	Connector No.	Connector No. M77	O WIRE		Connector No.	No. E6	Connector No. E6
Connector Color PINK	Solor PIN	K CONTROL	Connector C	Connector Color WHITE			Connector Color	Solor BLUE	
	10 9 8	10 9 8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13 12 11		08	60 40	20		12 11 10 9	11 10 9 8 7 6 5 4 3 2 1
Ö E				96 91 82	71 61 51 72 62 52	22 12 6 1	E S		
Terminal No.	Color of Wire	Signal Name		36	73 63 53 43 74 64 54 44		Terminal No.	Color of Wire	Signal Name
-	В	ı		-+	75 65 55 45 35 76 66 56 46 36	-	-	_	1
4	В	ı		94	77 67 57 47	,	က	_	I
				100 95 88	78 68 58 48 38 79 69 59 49 39 70 50 50	29 19 30	7	<u>а</u> а	1 1
			_						
			Terminal No.	Color of Wire	Signal Name				
			91	<u> </u>	1				
C	N	EX	J	I	G	F	D	С	В
)								>	3

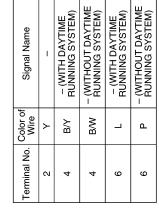
Revision: May 2014 EXL-173 2014 LEAF

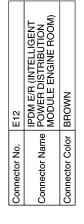
Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM	
TIMMITE	ELLIGENT SIBUTION INE ROOM)

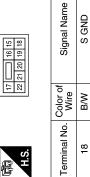












200	S GND	
Wire	B/W	
	18	

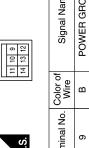
E26	FRONT COMBINATION LAMP LH (WITH HALOGEN HEADLAMPS)	GRAY
Connector No.	Connector Name	Connector Color GRAY

Signal Na	I	1	ı
Color of Wire	Э	В/У	Γ
Terminal No.	2	4	9

H/LAMP HI LH H/LAMP LO LH H/LAMP LO RH

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E11	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	BLACK
Connector No.	Connector Name	Connector Color BLACK



Signal Name	POWER GROUI	
Color of Wire	В	
Terminal No.	6	

P

E15	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

55 52 51 50 50 47 48 47 50 52 61 60 59 55 54	Signal Name	H/LAMP HI RH	H/LAMP HI LH
53 52 5	Color of Wire	>	G
呵可 H.S.	Terminal No.	49	20

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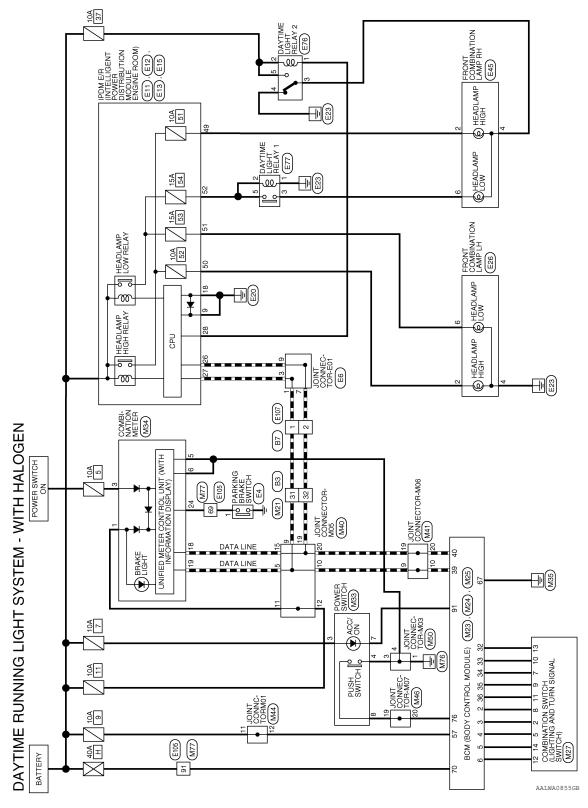
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<u> </u>	A
No. B3 Name WIRE TO WIRE Color WHITE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 Color of Signal Name L	Е
Connector No. B3 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signa 31 L Signa 32 P	
No. B3 Name WIH Color of WIF 18 18 18 18 18 18 18 18 18 18 18 18 18	
Connector No. Connector Name Connector Color Terminal No. Co	E
	F
NIRE Signal Name	G
E107 NHRE TO WIRE NHITE	F
48me WIRE T Color of Wire P P P P P P P P P P P P P P P P P P P	1
Connector No. E107 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signa 1 L 2 P Reminal No. Mire 2 P	J
98 88 80 1	K
80 81 81 81 81 81 81 81 81 81 81 81 81 81	Yame (4)
O WIRE Signal Name	B7 WHRE TO WIRE WHITE WHITE Or of Signal Name
Connector No. E105 Connector Name WIRE TO WIRE Connector Color WHITE The transport of the color of the col	
Connector No. Connector Name Connector Color 1	ctor No
Connec Connec Connec Termin	Conne
	AALIA2501GB

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DAYTIME LIGHT SYSTEM

Wiring Diagram



DAYTIME RUNNING LIGHT SYSTEM WITH HALOGEN CONNECTORS

Connector No.	M21	Connecto
Connector Name	Connector Name WIRE TO WIRE	Connecto
Connector Color WHITE	WHITE	
		Connecto
16 15 14	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	偃
_	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	SH
	_	

M23

			8 89 90 8109110			
Connector Name BCM (BODY CONTROL	MODULE)	ITE	H.S. 1.2 72 73 74 75 76 77 78 79 10 10 10 10 10 10 10 1	Signal Name	ENG START SW	POWER POSITION LED
me BC	Ĭ	lor WF	76 77 78 86 97 98	Color of Wire	SB	>
Connector Na		Connector Color WHITE	H.S.	Terminal No. Wire	9/	91
		7	19 18 17			
Connector Name WIRE TO WIRE	里		10 9 8 7 6 5 4 26 25 24 23 22 21 20	Signal Name	ı	1
me WIF	lor		31 30 29 28 27 11	Color of Wire	_	Ъ
onnector Na	Connector Color WHITE		H.S.	Terminal No. Wire	31	32

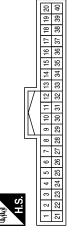
M25	Connector Name BCM (BODY CONTROL MODULE)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



#	56 57 56 59 60 61 62 63 64 65 66 67 68 69 70	Signal Name	BATTERY (FUSE)	GND	RATTERY (F/I)
lor WH	1565	Color of Wire	Ь	В	>
Connector Color WHITE	原南 H.S.	Terminal No.	25	29	70

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
	သ	သ	COM) MOD	COM	COM	MOO		
Color of Wire	9	۸	GR	Å	Μ	ВВ	Ь	٦	Ь
Terminal No.	5	9	32	33	34	32	36	39	40

M24	Connector Name BCM (BODY CONTROL MODULE)	LACK	
Connector No.	Connector Name	Connector Color BLACK	



Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
Color of Wire	٦	GR	BR
Ferminal No. Wire	2	3	4

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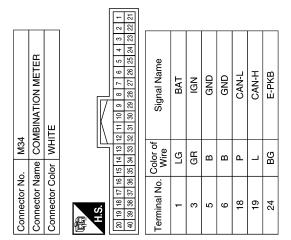
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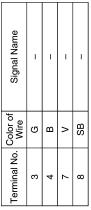
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4	JOINT CONNECTOR-M01	AY	10 9 8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13 12 11	Signal Name	ı	ı
. M44		lor GRAY	10 9 8 20 19 18	Color of Wire	۵	Ъ
Connector No.	Connector Name	Connector Color	原列 H.S.	Terminal No.	11	12

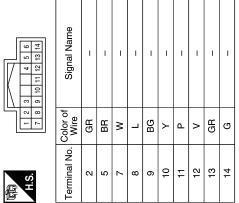
M33	Connector Name POWER SWITCH	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



Signal Name	-	1	I	-	
Color of Wire	9	В	>	SB	
Terminal No. Wire	8	4	7	8	

	JOINT CONNECTOR-M06	JE .	20 19 18 17 16 15 14 13 12 11	Signal Name	ı	-	_	ı
. M41		lor BLUE	10 9 8 20 19 18	Color of Wire	_	_	Ь	۵
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	6	10	19	20

Connector No.	M27
Connector Name	Connector Name COMBINATION SWITCH
Connector Color WHITE	WHITE



NT CO NT CO JE 7 6 5 17 16 15	Signal Name	1	I	1	I	-	ı	1
	Wire	_	_	ГG	ГG	Ь	Ь	Ь
	Terminal No.	6	10	11	12	15	19	20

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DAYTIME LIGHT SYSTEM

[HALOGEN HEADLAMP]

< WIRING DIAGRAM >

	Connector No. M46 Connector Name JOINT CC Connector Color ORANGE	No. M46 Name JOINT CC Color OBANGE	Connector No. M46 Connector Name JOINT CONNECTOR-M07 Connector Color ORANGE	Connector No. Connector Color		M50 JOINT CONNECTOR-M03 PINK	-M03	Connector No. Connector Name Connector Color	No. M77 Name WIRE 1	Connector No. M77 Connector Name WIRE TO WIRE Connector Color WHITE		
	οj	20 19 18 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	14 13 12	H.S.	20 19 8	77 16 13 14 13	-55, -55,	H.S.	80 6	60 40 40 41 31	20 11	
	Terminal No.	Color of Wire SB	Signal Name -	Terminal No.	No. Color of Wire	Signal Name	е 	96 91	72 73	52 42 53 43 54 44 44 44		- N
	50	SB	1	8 4 3	<u>а</u> а	1 1		88 83	85 75 6 86 76 6 87 77 8	65 55 45 35 66 56 46 36 67 57 47 37	25 15 8 26 16 9 27 17	w 4
								100 95	79	48 49 50	28 18 10 30 30	υ D
								Terminal No.	Color of Wire	Signal Name	lame	
								69	BB >	1 1		
	Connector No.	Jo. E4		Connector No.	or No. E6			Connector No.	No. E11			
	Connector Name	_	PARKING BRAKE SWITCH BLACK	Connector Name Connector Color		JOINT CONNECTOR-E01 BLUE	ł-E01	Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODILL E ENGINE BOOM)	IGENT	
	E	⊣			-			Connector Color	-	CK CK		
	S.T.	-		H.S.	12 11 10	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 1	原 H.S.	11 41	11 10 9 14 13 12		
	Terminal No.	Color of Wire	Signal Name	Terminal No.	No. Color of Wire	Signal Name	er er	Terminal No.	Color of Wire	Signal Name	lame	
AA	-	В	1	-	_	I		6	В	POWER GROUND	ROUND	
LIA248				8 7	_ L	1 1						
32GB				6		1 1						
Р	0	N	EXL	J	I	Н	F G	Е	D	С	В	А

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Connector No.	E15
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE

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

Connector Name

E13

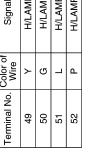
Connector No.

Connector Color WHITE

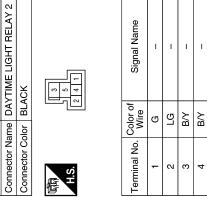






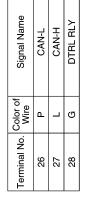












FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS)	GRAY	3 2 4
Connector Name	Connector Color GRAY	S H



Signal Nam	I	1	_
Color of Wire	>	В/У	٦
Terminal No. Wire	2	4	9

	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	7	
E12	IPDM E POWEF MODUL	BROW	
Connector No.	Connector Name	Connector Color BROWN	





Connector No.	E26
Connector Name	Connector Name LAMP LH (WITH HALOGE) HEADLAMPS)
Connector Color GRAY	GRAY

Connector No.





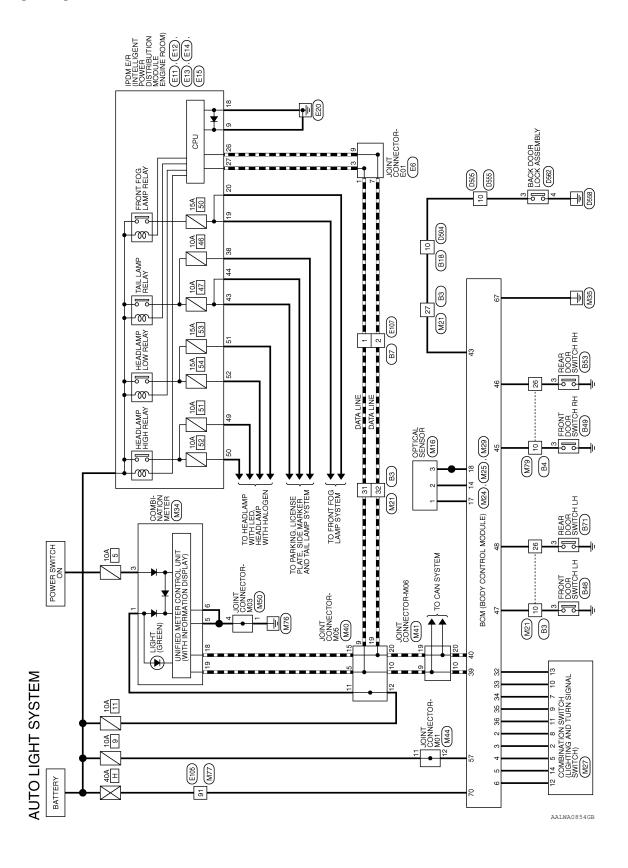
Signal Name	1	ı	ı
Color of Wire	ŋ	В/Υ	L
Terminal No. Wire	2	4	9

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Signal Name	1	1						TO WIRE	щ	12 11 10 9 8 7 6 5 4 3 2 1	Signal Name	1 1		
Color of Wire	В	>						o. B7 ame WIRE	olor	12 11 10 9 24 23 22 21	Color of Wire	_ A		
Terminal No.	69	16						Connector No. B7 Connector Name WIRE TO WIRE	Connector Color WHITE	原 H.S.	Terminal No.	- 2		
		1	96	92 97	93 98	94 99 95 100				13 14 15 16 29 30 31 32			ı	
			80 71 81 72 82 91	73 83	75 85	78 88				10 11 12 26 27 28	Signal Name			
= TO WIRE			40 60 41 51 61 42 52 62	43 53	45 55 65	44 58	8	E TO WIRE	世	5 6 7 8 9 21 22 23 24 25	Signal			
Connector Name WIRE TO WIRE	Color WHITE		11 21 31 22 32	13 23 33 14 24 34	15 25 35	3 2 8	8	Connector No. B3 Connector Name WIRE TO WIRE	Color WHITE	17 18 19 20 3	Color of Wire	_ A		
Connector Nan	Connector Color	献 H.S.	-	2 7	_	5 10		Connector No.	Connector Color	用.S.	Terminal No.	32		
		1											1	
Connector No. E / / Connector Name DAYTIME LIGHT BELAY 1			Signal Name	1 1	1	1 1		TO WIRE		5 6 7 8 9 10 11 12	Signal Name	1 1		
ĮĘ	Connector Color BLUE		Color of Wire	B/B		1 4		Connector No. E107 Connector Name WIRE TO WIRE	Connector Color WHITE	13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	 Ъ		
Connector No.			Terminal No.					Connector No.	Col	لللا	Terminal No.			

AUTO LIGHT SYSTEM

Wiring Diagram



BATTERY (FUSE)

BATTERY (F/L)

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AUTO LIGHT SYSTEM CONNECTORS

	M16 OPTICAL SENSOR WHITE	Connector No.
	WHITE	Connector Color
Sonnector Color WHITE	OPTICAL SENSOR	Connector Name
Connector Name OPTICAL SENSOR Connector Color WHITE	M16	Connector No.

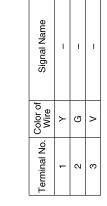
Connector Name WIRE TO WIRE

M21

Connector No.

Connector Color WHITE





Signal Name

Color of Wire

Terminal No.

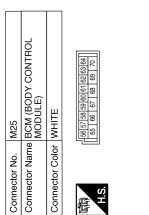
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Connector Name BCM (BODY CONTROL MODULE)		56 57 58 59 50 61 62 63 64 65 65 65 65 65 65 65	Signal Name
me BCN MOE	lor WHI	1 56 57 65 (65 (65 (Color of Wire
Connector Na	Connector Color WHITE	明.S.	Terminal No. Wire

						_			_		_
Signal Name	COMBINATION SW INPUT 1	AUTO LIGHT SENSOR INPUT	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT	KEYLESS TUNER, AUTO LIGHT SENSOR GND	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	H-NYO	CAN-L
Color of Wire	>	Ö	>	Г	GR	Y	W	BG	Ь	Т	Ь
Terminal No.	9	14	17	18	32	33	34	35	36	39	40

			9 50 39 40						
A (BODY CONTROL DULE)	CK		14 15 16 17 18 34 35 36 37 38		Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2
me BCI MO			6 7 8 26 27 28		Color of Wire		GR	BR	ű
Connector Na	Connector Co	(南) H.S.	1 2 3 4 5 21 22 23 24 25		Terminal No.	2	8	4	5
	Connector Name BCM (BODY CONTROL MODULE)	Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK	Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK H.S.	BCM (BODY CONTROL MODULE) BLACK 8 9 10 11 12 13 14 15 16 17 18 19 7 28 29 30 31 32 33 34 35 38 37 38 38	BCM (BODY CONTROL MODULE) BLACK	BCM (BODY CONTROL MODULE) BLACK 8 9 10 11 12 13 14 15 16 17 18 19 12 29 20 31 32 23 34 35 28 37 38 39 30 15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	BCM (BODY CONTROL MODULE) BLACK 8 9 10 11 12 13 14 15 16 17 18 19 7 of Signal Name COMBINATION SW	BCM (BODY CONTROL MODULE) BLACK 8 10 11 12 13 14 15 16 17 18 19 19 10 10 10 10 10 10	BCM (BODY CONTROL MODULE) BLACK 8 9 10 11 12 14 15 16 17 18 19 19 19 19 19 19 19

	Ö	Ö	Ŏ	Ö	
Color of Wire		GR	BR	ŋ	
Terminal No.	2	8	4	5	

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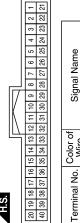
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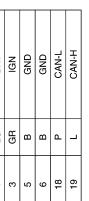
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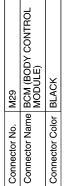




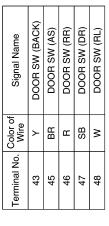
Signal Name	BAT	NÐI	GN5	GND	CAN-L	CAN-H
Color of Wire	LG	GR	В	В	۵	٦
rminal No.	-	3	5	9	18	19



	Connector Name JOINT CONNECTOR-M06	JE .	10 9 8 7 6 5 4 3 2 1 1 20 19 18 17 16 15 14 13 12 11	Signal Name	-	ı	-	ı
M41	Ime JOI	lor BLL	10 9 8 20 19 18	Color of Wire	٦	_	Ь	Д
Connector No.	Connector Na	Connector Color BLUE	是 H.S.	Terminal No.	6	10	19	20

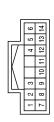


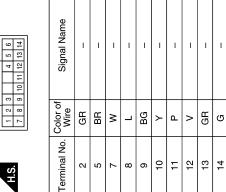




Signal Name	I	I	ı	I	I	I
Color of Wire	Т	ГG	LG	Ь	Ь	Ь
Terminal No.	10	11	12	15	19	20

Connector No.	Σ	M27				
Connector Name COMBINATION SWITCH	ŭ	≥	BINA	5	N S	WITCH
Connector Color WHITE	≥		ш			
		Щ	IK.	$\overline{17}$		
	ŀ	_	ŀ			_
SI	1	3		4	9 9	
	1	٠	17 07 07 77 07	,	",	





	Connector Name JOINT CONNECTOR-M05	<u> </u>	10 9 8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13 12 11	Signal Name	-	-
). M40	Ime JOII	olor BLL	20 19 18	Color of Wire	L	Τ
Connector No.	Connector Na	Connector Color BLUE	高 A.S.	Terminal No. Wire	5	6

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Connector No. M77 Connector Name WHRE TO WIRE	Connector No. E11 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK H.S. Terminal No. Vire B POWER GROUND	A B C D
Connector No. M50	Connector No. E6 Connector Name JOINT CONNECTOR-E01 Connector Color BLUE	G H J
Connector No. M44	Connector No. M79 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal Name 10 BR	M N

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Signal Name

Color of Wire

Terminal No. 91

45 47 48 49 49 49 49 49	Signal Name	TAIL 1 (WITHOUT SOLAR CELL)	TAIL 1 (WITH SOLAR CELL)	CLEARANCE/L LH	TAIL 2
46 44	Color of Wire	LG	Œ	0	В
H.S.	erminal No.	38	38	43	44

Signal Name CAN-L CAN-H

Color of Wire ݐ

> Terminal No. 26 27



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						Г		\neg							
							96		26	86		66	100		
							91	L	92	88		94	92		
					8	<u> </u>	88	8	8	88	98	8/	88	88	8
						71	72	73	74	75	9/	77	78	79	
					_	_			_		_		_	_	_
				- [_	99	61	8	ß	24	65	99	67	88	8	20
	WIRE TO WIRE					5	25	ß	72	55	26	22	88	29	
	16				_	_	_					_	_		_
	ļĔ.	ш			8	4	42	5	4	45	46	47	84	\$	င္သ
E105	뿐	WHITE		5		હ	33	g	엃	32	36	37	88	စ္တ	
155	۱≅	∣₹													
-					20	2	83	೫	24	52	26	27	88	భ	8
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Ĭ	Ιž	Ιŏ				_						$\Box \Gamma$		7	
tor	햦	혖					9	^	.	œ	6		9		
Connector No.	Connector Name	Connector Color	H.S.			ľ	-	^		က	4		2	1	
18	၂ဂွ	ᆼ	框									L		╛	
		_		L											

E13	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE
Connector No.	Connector Name	Connector Color WHITE

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

Connector Name Connector Color

E12

Connector No.

BROWN



Signal Name	S GND	FR FOG RH	FR FOG LH	
Color of Wire	B/W	M	۸	
nal No.	8	6	0	

Signal Name	S GND	FR FOG RH	FR FOG LH	
Color of Wire	B/W	>	^	
inal No.	18	19	20	

			l					
	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ПЕ	50	Signal Name	H/LAMP HI RH	H/LAMP HI LH	H/LAMP LO LH	H/LAMP LO RH
. E15		lor WH	53 52 51 50 62 61 60 59	Color of Wire	>	G	_	Ь
Connector No.	Connector Name	Connector Color WHITE	明.S.	Terminal No.	49	50	51	52

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	32 16						
TO WIRE		Signal Name	1 1				
B4 ne WIRE or WHIT	3 4 5 20 21	Solor of Wire	£ æ				
Connector No. B4 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Wire	26				
	16						
TO WIRE	6 7 8 9 10 11 12 13 14 15 12 12 13 14 15 12 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 13 14 15 15 15 15 15 15 15	Signal Name	1 1	I	ı	ı	
B3 ne WIRE	2 3 4 6 19 20 21 2 4 5 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	color of Wire	re g	>	_	۵	
Connector No. B3 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 1718	Terminal No. Color of Wire	26	27	31	32	
E TO WIRE	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name	1				
E107 me WIRE or WHIT	2 3 4 15 16	Color of Wire	٦ ۵				
Connector No. E107 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Color of Wire	- 8				

COLLIECTO NO.		Connector No.	NO. B18		Connector No.	. B48	
ctor Nam	Connector Name WIRE TO WIRE	Connector	Vame WIRE	Connector Name WIRE TO WIRE	Connector Na	me FRO	Connector Name FRONT DOOR SWITCH LH
ctor Colo	Connector Color WHITE	Connector (Connector Color WHITE	E	Connector Color WHITE	lor WHI	д
H.S. 24 23	24 28 22 21 20 19 18 17 16 15 14 13	H.S.	1 2 8 7 8 9 9 41 14 14 14 14 14 14 14 14 14 14 14 14	10 11 12 13 19 20 15 16 17 18 19 20	斯 H.S.		4 6 2
Terminal No. Color of Wire	olor of Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
	-	10	>	ı	ဇ	SB	I
2	1						

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Revision: May 2014 EXL-187 2014 LEAF

Connector No.	lo. B49		O	Connector No.). B53		0	Connector No.). B71	
Connector Name FRONT DOO	ame FRO	NT DOOR SWITCH RH	10	onnector Na	ıme REA	Connector Name REAR DOOR SWITCH RH	<u> </u>	Connector Na	me REA	Connector Name REAR DOOR SWITCH LH
Connector Color WHITE	olor WHI	TE	O	Connector Color WHITE	lor WHI	TE	0	Connector Color WHITE	lor WHI	E E
H.S.		 		原 H.S.		8 8		H.S.		#
Terminal No. Wire	Color of Wire	Signal Name	L <u>F</u>	Terminal No. Color of Wire	Color of Wire	Signal Name	<u> </u>	Terminal No. Color of Wire	Color of Wire	Signal Name
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55	Connector Name WIRE TO WIRE	ITE	6 8 8 6 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	ı
o. D5	ame WIF	olor WH	1 0 7	Color of Wire	SB
Connector No. D555	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	10
5	E TO WIRE	TE	10 9 8 3 7 7 6 11	Signal Name	ı
. D50	me WIR	lor	12 11 4 4	Color of Wire	SB
Connector No. D505	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	10
	Connector Name WIRE TO WIRE		17 12 14 8 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	ı
D504	ne WIR	or WHI	4 El 81	Solor of Wire	SB
Connector No. D504	nector Nar	Connector Color WHITE	H.S.	Terminal No. Color of Wire	9

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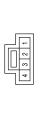
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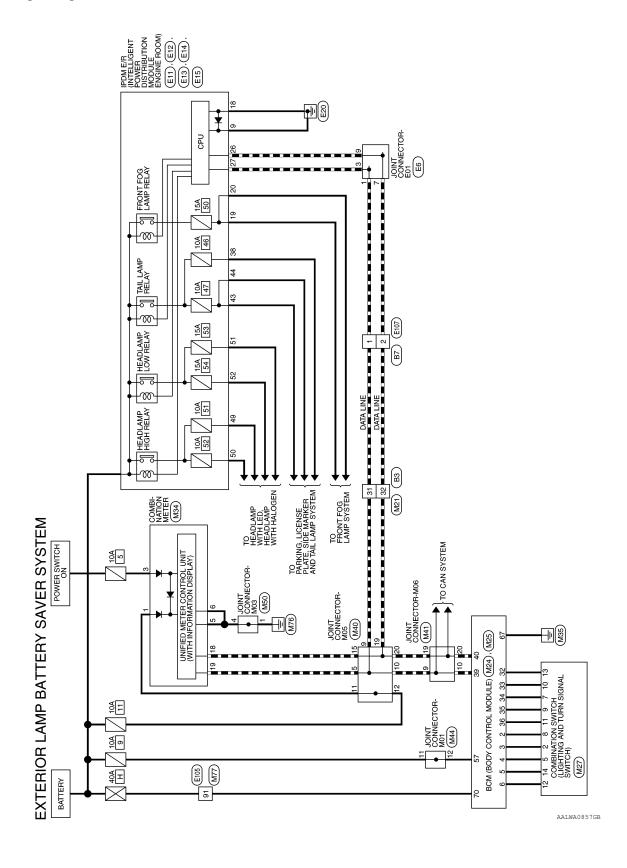
D562	onnector Name BACK DOOR LOCK ASSEMBLY	ır WHITE	
onnector No.	onnector Nam	onnector Color WHITE	



Signal Name	-	ı
Color of Wire	SB	В
Terminal No.	8	4

EXTERIOR LAMP BATTERY SAVER SYSTEM

Wiring Diagram



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lo. M24	Connector Name BCM (BODY CONTROL	MODULE)	Connector Color BLACK
Connector No. M24	Connector N		Connector C
M21	or Name WIRE TO WIRE	WHITE	
or No.	or Name	or Color WHITE	

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L	
Color of Wire	9	>	GR	>	>	BG	Ь	_	۵	
Terminal No. Wire	2	9	32	33	34	35	98	39	40	
				19 20	39 40					

_		161	ଞ୍ଚା	Ι.				
4		9 10 11 12 13 14 15 16 17 18 19	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39		Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
IOI DEA		6 7 8 9	26 27 28 2		Color of Wire	Т	GR	BR
COLINECTOR COIOR BLACK	原 H.S.	1 2 3 4 5	21 22 23 24 25		Terminal No. Wire	2	3	4

		-	17] _@			l
		2	8	a			l
		က	19		Ηī	l i	l
		4	20	Signal Name	'		l
		2	21	ig			l
	凵	9	22	"			l
	117	7	ន				l
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	IN.	6	52	ם לון	,		l
		10	92		_		l
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		12	28	6			l
		13	29				l
7.5		6 15 14 13 12 11	2 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	erminal No. Color of Wire	31	32	
H.S.		15	31] ["	``	
\mathbf{a}	- 1	9	N	1 1 55	1	l	ı

Signal Name	_	1	_	_	1	_	_
Color of Wire	٦	BG	٨	Ь	>	GR	В
Terminal No. Wire	8	6	10	11	12	13	14

_	Connector Name COMBINATION SWITCH	ІТЕ	8 9 9 10 11 1 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name
. M27	me CO	lor WH	1 2 8 2 1 2	Color of
Connector No.	Connector Na	Connector Color WHITE	明 H.S.	Terminal No Color of

Connector Name		COMBINATION SWI
Connector Color	lor WHITE	里
所 H.S.	7 1 2 8	3 10 11 12 13 14
Terminal No.	Color of Wire	Signal Nar
2	GR	_
2	BR	1
7	M	ı

Connector No.	M25
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE
H.S.	Se 577 Se Se GO G1 G2 G3 G4
Terminal No. Color of	or of Signal Name

Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)
Color of Wire	Д	В	У
Terminal No. Wire	22	29	70

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EXTERIOR LAMP BATTERY SAVER SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

	Connector Color BLUE	H.S.	Terminal No. Color of Signal Name	- T		ا ۵	20 P –						Connector No. M77	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	\(\frac{1}{4}\)	81 71 61 51 41 31	83 73 63 53 43 33 23 13	84 74 64 54 44 34 24 14	+	77 67 57 47 37 27 17	100 95 88 78 68 58 48 38 28 18 10 5 8 8 79 89 79 69 59 49 39 29 19	70 50 30	Terminal No. Color of Signal Name	- Y 16
M40 JOINT CONNECTOR-M05	JE	7 6 5 4 3 2 1 17 16 15 14 13 12 11	Signal Name	1	ı	ı	1	1	1	ı	ı		0	Connector Name JOINT CONNECTOR-M03	×	6 5 4 3 2 1 16 15 14 13 12 11		Signal Name	ı	ı						
4	Connector Color BLUE	H.S.	Terminal No. Color of Wire	5 L		+	+	1			20 P		Connector No. M50	Connector Name JOI	Connector Color PINK	(新) 10 9 8 7 日 20 19 18 17 日 3		Terminal No. Wire	- B	4 B						
M34 COMBINATION METER	WHIIE		12 11 10 9 8 7 6 5 4 3 2 1 32 31 30 29 28 27 26 25 24 23 22 21		Signal Name	BAT	NSI	GND	GND	CAN-L	CAN-H		44	JINT CONNECTOR-M01	GRAY	7 6 5 4 3 2 1 17 16 15 14 13 12 11		of Signal Name	ı	ı						
	Connector Color Wh	H.S.	20 19 18 17 16 15 14 13 40 39 38 37 36 35 34 33		Terminal No. Wire	1 LG	3 GR	2 B	9 9	18 P	19 L	-	Connector No. M44	Connector Name JOINT CONNECT	Connector Color GR	10 9 8 7 6 6 7 6 4 8 7 16 H.S.		Terminal No. Wire	±	12 P						

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	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	NMC	22 21 20 19 18	Signal Name	S GND	FR FOG RH	FR FOG LH
. E12	me PO	lor BR(17 [22 2	Color of Wire	B/W	>	>
Connector No.	Connector Na	Connector Color BROWN	雨 H.S.	Terminal No. Wire	18	19	20

		, ,	1						
	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	BROWN	17	Signal Name	S GND	FR FOG RH	FR FOG LH		
E12	e Pov		17 🗆 22 25	color of Wire	B/W	*	>		
Connector No.	Connector Nan	Connector Color	H.S.	Terminal No. Wire	18	19	20		
	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	CK	14 18 12 14 18 12	Signal Name	POWER GROUND				
<u>E</u>	e Pov	or BLACK		color of Wire	В				
Connector No.	Connector Nan	Connector Color	H.S.	Terminal No. Wire	6				
	-					•			
	R-E01			ıme					

	JOINT CONNECTOR-E01	JE .	8 7 6 5 4 3 2 1	Signal Name	-	1	ı	-
. E6		lor BLUE	12 11 10 9	Color of Wire	7	_	۵	Ь
Connector No.	Connector Name	Connector Color	EI S.H	Terminal No. Wire	1	3		6

E14		Connector No.	E15	
PON MOI	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	SENT FION ROOM)
BRC	BROWN	Connector Color	WHITE	
38 45	44 43 42 41 40	(新) (S) (S) (S) (S) (S) (S) (S) (S) (S) (S	53 52 51 50 60 49 48 47 62 61 60 59 58 57 56 55 54	
or of ire	Signal Name	Terminal No. Wire	or of Signal Name	me
G	TAIL 1 (WITHOUT	49	Y H/LAMP HI RH	HH
	SOLAR CELL)	20	G H/LAMP HI LH	H
m	TAIL 1 (WITH SOLAR CELL)	51	L H/LAMP LO LH	H
	CLEARANCE/L LH	52	P H/LAMP LO RH	HH C
В	TAIL 2			

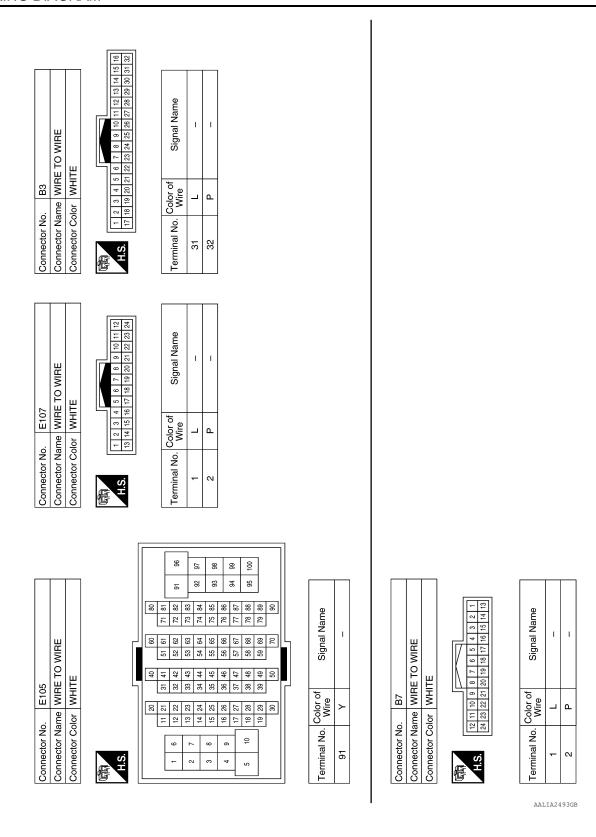
	IPDM E/R (INT POWER DISTI MODULE ENG	BROWN	37 36 35 43 42 41 40	Sign	TAIL 1 SOL/	TAIL SOL/	CLEAR	
_			39 38 64 46 45 44	Color of Wire	ГG	Я	0	В
	Connector Name	Connector Color	E.S.	Terminal No.	38	38	43	44

Oolo Wiii		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	11	28 23 13 13 13 13 13 13 13 13 13 13 13 13 13	Signal Name	CAN-L	CAN-H
Connector Na Connector Na Connector Co Connector Co Connector Co Connector Na Conne			lor WH	38 28 7 7 7 8 8 3 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Color of Wire	Ь	٦
	Connector No	Connector Na	Connector Co	明 H.S.	Terminal No.	56	22

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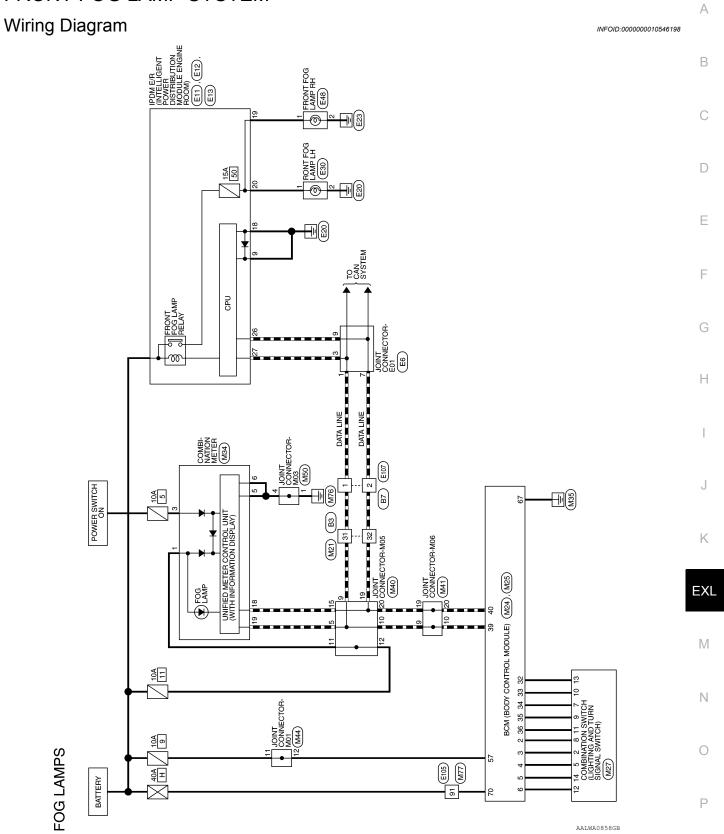
EXL-193 Revision: May 2014 **2014 LEAF**

Connector No.



Revision: May 2014 EXL-194 2014 LEAF

FRONT FOG LAMP SYSTEM



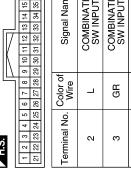
ame	TION UT 5	TION UT 4	TION UT 3	TION UT 2	TION UT 1	_	
Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	GR	>	M	BG	۵	٦	Ь
Terminal No.	32	33	34	35	36	39	40

Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L	
Color of Wire	GR	*	*	BG	۵	T	Ь	
Terminal No. Color of Wire	35	88	34	32	98	68	40	

Signal Name	1	-	1	ı	_	1
Color of Wire	BG	Υ	Ь	۸	GR	В
Terminal No.	6	10	11	12	13	14

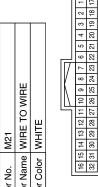
ပတ	ပတ	ပတ	ပတ									
>	>	BG	А	٦	۵					Color of Wire	BG	;
33	34	38	98	68	40					Terminal No.	6	9,
		19	38 39 40		<u> </u>		<u> </u>					
			37			.	l_	_	_	l I.	_	

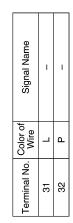
Connector No.	M24
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK



Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
Color of Wire	٦	GR	BR	ŋ	>
Ferminal No. Wire	2	3	4	5	9

	Connector Name COMBINATION SWITCH	ITE	2 2 3 8 9 9 10 11 12 13 14 4 5 6 6 8 9 9 10 11 12 13 14 4 5 6 6 8 9 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 12 13 14 9 10 11 11 12 13 14 9 10 11 11 12 13 14 9 10 11 11 12 13 14 9 10 11 11 12 13 14 9 10 11 11 11 11 11 11 11 11 11 11 11 11	Signal Name	-	ı	ı	1
. M27	me CO	lor WH		Color of Wire	GR	BR	M	7
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	2	5	7	8





M25	Connector Name BCM (BODY CONTROL MODULE)	WHITE	66 56 67 68 69 70
Connector No.	Connector Name	Connector Color WHITE	S.H

Terminal No. 57 67 70

FOG LAMPS CONNECTORS

Connector Name WIRE TO WIRE Connector Color WHITE Connector No.



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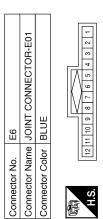
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nnector Name COMBI	ame COM olor WHI	nnector Name COMBINATION METER nnector Color WHITE	Connector Name JOINT	ime JOIN Jor BLUE	Connector Name JOINT CONNECTOR-M05 Connector Color BLUE	Connector Name Connector Color	me JOINT lor BLUE	Connector Name JOINT CONNECTOR-M06 Connector Color BLUE	
S. E.S.	ני		原 H.S.	10 9 8	8 7 6 5 4 3 2 1 8 17 16 15 14 18 12 11	H.S.	10 9 8 7	7 6 5 4 3 2 1	
19 18 17 16 39 38 37 36	15 14 13 1	19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 39 38 37 38 35 34 38 32 31 30 29 28 27 26 25 24 25 22 21							
rminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
-	LG	BAT	5	_	ı	6	_	ı	
က	GR	NDI	0	_	1	10	_	1	
ည	В	GND	10	_	ı	19	۵	1	
9	В	GND	Ξ	PJ	1	20	۵	1	
18	Ь	CAN-L	12	LG	1				
19	7	CAN-H	15	۵	ı				
			19	Ф	ı				
			20	Ъ	ı				
nnector No.	o. M44		Connector No.). M50					
nnector Na	ame JOII	nnector Name JOINT CONNECTOR-M01	Connector Na	ume JOIN	Connector Name JOINT CONNECTOR-M03				
nnector Color	olor GRAY	٩٧	Connector Color	olor PINK					
ſ			4						
E S	10 9 8	10 9 8 7 6 5 4 3 2 1	H.S.	10 9 8	20 19 18 17 16 15 14 13 12 11				
rminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name				
11	Ь	ı	-	В	ı				
12	Ь	1	4	В	ı				

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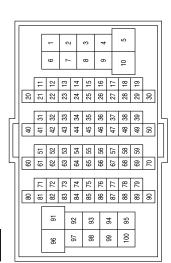
Revision: May 2014 EXL-197 2014 LEAF



Signal Name	1	1	1	1
Color of Wire	Τ	_	۵	Ь
Terminal No. Color of Wire	1	8	7	6

Connector No. Connector Name Connector Color H.S.	L L L L L L L L L	E13 PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE S
56	۵	CAN-L
27	_	CAN-H

Signal Name	ı	
Color of Wire	Y	
Terminal No.	91	



Connoctor No	E10
COLLIECTO INC.	L12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BROWN	BROWN
	17 16 15 22 21 20 19 18

Signal Nam	S GND	FR FOG RI	FR FOG LI	
Color of Wire	B/W	Μ	۸	
Terminal No. Color of Wire	18	19	20	

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										9	7	,	∞	o		9			
									=	12	13	14	15	16	1	18	£		
								20	73	22	23	54	22	56	27	28	83	8	
							Ш												
	Е					\perp	Ц		31	32	33	34	35	36	37	38	33		L
	WIRE TO WIRE							4	41	42	43	44	45	46	47	48	49	20	
	>					Ш	1												
	TC					Ш			55	25	53	\$	22	99	22	28	29		
7	3E	WHITE				4	ı	99	19	62	63	64	65	99	67	68	69	2	Г
M77	Ĭ.	I⇒I					Ш												
2							Ш		7	72	73	74	75	9/	11	78	79		
,	me	ō					Ш	8	81	82	83	84	85	98	87	88	8	96	
위	۱	၂ က					Ш		Г		ℸ						_		
tor	tor	tor (91		92	93		94	95			
Connector No.	Connector Name	Connector Color			E.S.				Ī	96		6	86		8	100			
Son	Con	Con	ØE	至	4				L		╧						_		
\circ	C	$^{\circ}$	L	9	7		Ľ												1

Connector Color BLACK
H.S. Color of Signal Name
S
Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)

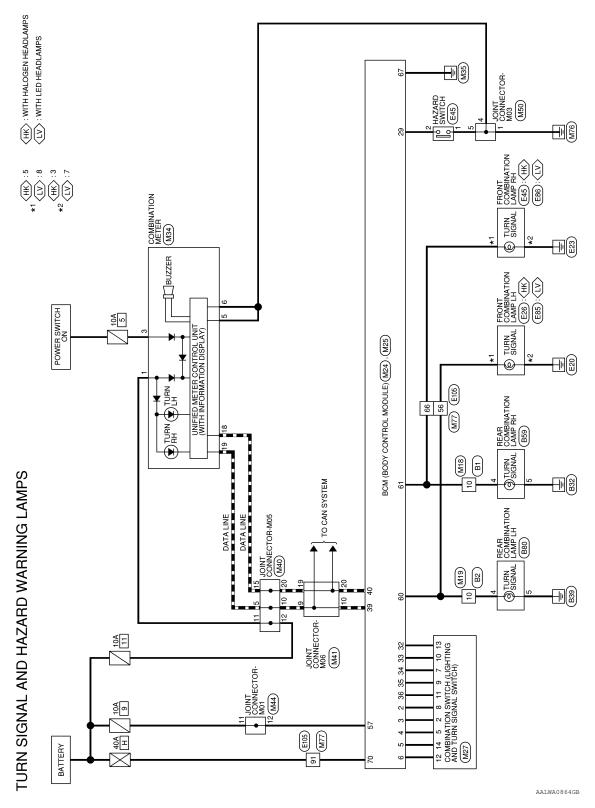
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Connector No. E105 Connector Name WIRE TO WIRE Connector Color WHITE	用S.	Terminal No. Color of Signal Name 1	Terminal No. Color of Signal Name
Connector No. E48 Connector Name FRONT FOG LAMP RH Connector Color BLACK	国际 H.S.	Terminal No. Color of Signal Name	Terminal No. Wire S. P. P. C.
Connector No. E30 Connector Name FRONT FOG LAMP LH Connector Color BLACK	H.S.	Terminal No. Wire Signal Name 1	Terminal No. Color of Signal Name 2 P P

Revision: May 2014 EXL-199 2014 LEAF

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram



TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

19	Connector Name WIRE TO WIRE	HITE	7 6 5 4	of Signal Name	-
. M19	me W	lor	7 6 5 14 16 15 14	Color o Wire	^
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	10
	E TO WIRE	TE TE	3 12 11 10 9 8	Signal Name	1
Connector No. M18	Connector Name WIRE TO WIRE	Connector Color WHITE	12 11 10 9	Terminal No. Color of Signal Name Wire	

2	M (BODY CONTROL DULE)	ITE	
Connector No. M25	Connector Name BCM (BODY CONTROL MODULE)	Connector Color WHITE	

Connector Name BCM (BODY CONTROL MODULE)	TE	S6 57 58 59 60 61 62 63 64	Signal Name	BATTERY (FUSE	FLASHER OUTPUT (LEFT)	FLASHER OUTPUT (RIGHT	GND	BATTERY (F/L)
me BCN	lor WHITE	56 57 58 k	Color of Wire	Д	>	Ж	В	>
Connector Na	Connector Color	朝 H.S.	Terminal No.	22	09	61	29	20
		· <u></u>						

Terminal No. Wire	Color of Wire	Signal Name
59	9	HAZARD SW
32	ВĐ	COMBINATION SW OUTPUT 5
33	Å	COMBINATION SW OUTPUT 4
34	M	COMBINATION SW OUTPUT 3
35	BG	COMBINATION SW OUTPUT 2
36	Ь	COMBINATION SW OUTPUT 1
39	٦	CAN-H
40	Ь	CAN-L

			19 20						
	BCM (BODY CONTROL MODULE)	Š	8 9 10 11 12 13 14 15 16 17 18 28 29 30 31 32 33 34 35 36 37 38	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION
. M24		lor BLACK	6 7 8	Color of Wire	_	GR	ВВ	g	>
Connector No.	Connector Name	Connector Color	H.S. 1 2 3 4 5 6 7 21 22 23 24 25 28 27	Terminal No.	2	င	4	5	ű

SW INPUT 1

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EXL-201 2014 LEAF Revision: May 2014

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM [HALOGEN HEADLAMP]

Connector Name | JOINT CONNECTOR-M05

Connector Name | COMBINATION METER

Connector Name COMBINATION SWITCH

M27

Connector No.

Connector Color WHITE

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M34

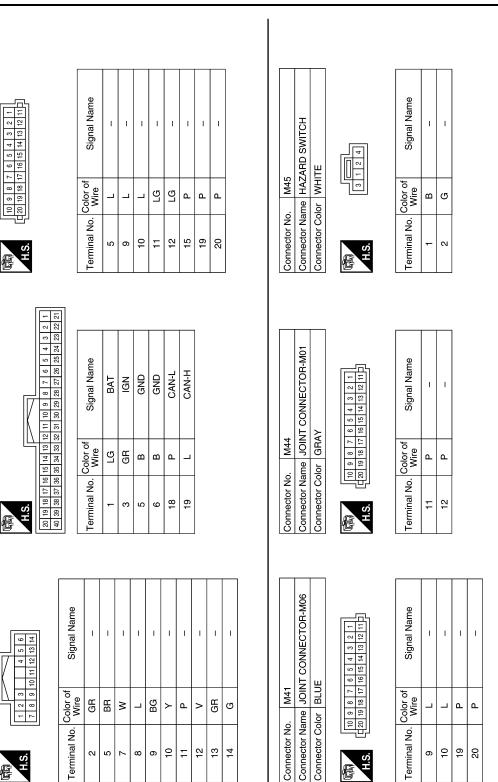
Connector No.

Connector Color WHITE

M40

Connector No.

Connector Color BLUE



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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

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Connector No. E26 FRONT COMBINATION Connector Color GRAY Connector Color of Signal Name 3 B/W - 5 Y - Connector Name S B/W - 5 Y -	Connector No. E86 Connector Name LAMP RH (WITH LED HEADLAMPS) Connector Color BLACK Solution State State	B C D
Φ ν Φ Φ L 2 E 4 R		F
E TO WIRE E A	E85 FRONT COMBINATION LEAPLAMPS) BLACK T of Signal Name N	Н
Connector No. M77 Connector Name WIRE TO WIRE Connector Color WHITE H.S. H.S. H.S. H.S. Terminal No. Wire Son Policy of Signa Si		I
Connector Name WIRE T Connector Name WIRE T Connector Color WHITE Connector Color WHITE (A.S.) (B. 94	Connector No. Connector Color Connector Color Terminal No. Www. 7 B. B	J
		K
Connector No. M50	E45 FRONT COMBINATION HEADLAMPS) GRAY Or of Signal Name Fee S	EXL
Connector No. M50 Connector Name JOINT Connector Color PINK H.S. Partial No. Wire 1 B 4 B 5 B 5 B		N
Connector Nar Connector Col Connector Col H.S. H.S. 5	Connector No. Connector Color Connector Color H.S. A.S. B. B. B. 5 6	0

EXL-203 Revision: May 2014 **2014 LEAF**

Connector No. B2 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Color of Wire Signal Name												
Connector No. B1 Connector Name WIRE TO WIRE Connector Color WHITE	2 3	Color of Signal Name Wire -						B80	REAR COMBINATION LAMP	WHITE	 ✓ ∅ I ↔ I → I →	Color of Signal Name Wire	SB	В
Connector No. Connector Name Connector Color	LS.	Terminal No. Co						Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Co	4	2
		11 1 1 1 1	96 94 99 90 90 90 90 90 90 90 90 90 90 90 90			ı			<u>a</u>					
E TO WIRE		2	46 55 66 77 77 87 48 88 88 88 88 88 88 88 88 88 88 88 88	Signal Name	1	1	1		Connector Name REAR COMBINATION LAMP RH	<u> </u>	1 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	1	1
lo. M105 lame WIRE T	_	11 21 31 12 22 32 14 24 34 34 34 34 34 34 34 34 34 34 34 34 34	30 28 27 28	Color of Wire	>	g	>	lo. B59	Jame REA	Solor WHITE	0 0	Color of Wire	>	В
Connector No. M105 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	φ r ω	8 01	Terminal No.	26	99	91	Connector No.	Connector N	Connector Color	所.S.H.S.	Terminal No.	4	2
												AALIA	2519	GB

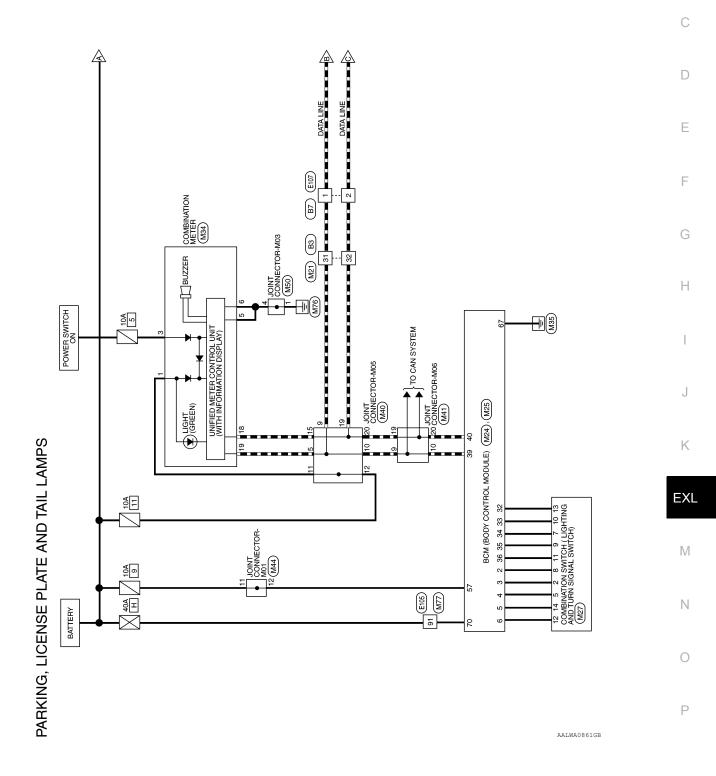
[HALOGEN HEADLAMP]

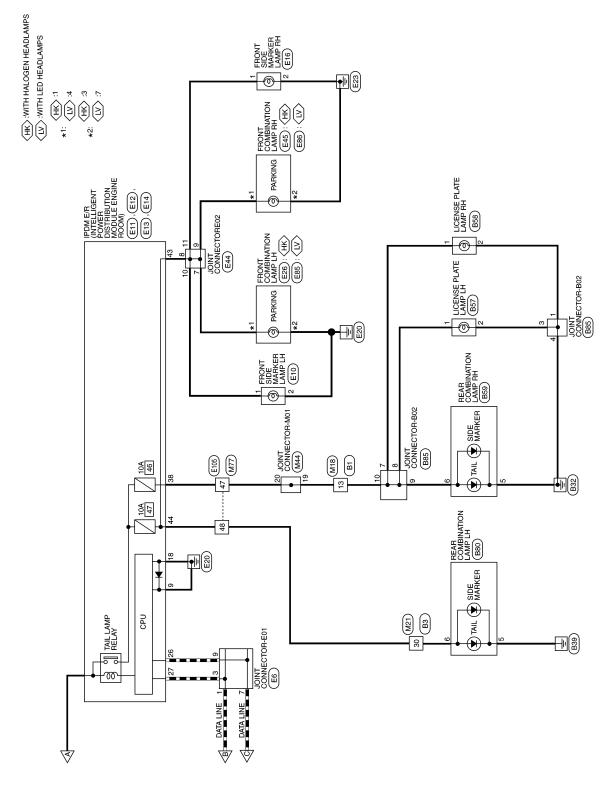
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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram





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Connector Name BCM (BODY CONTROL MODULE)

Connector No.

Connector Color WHITE

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CONNECTORS
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Connector No.	M18	Connector No.	M21
Connector Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE
Connector Color	WHITE	Connector Color	WHITE

	M21 WIRE TO WIRE WHITE	Connector Name Connector Color
	WHITE	Connector Color
Connector Color WHITE	WIRE TO WIRE	Connector Name
Connector Name WIRE TO WIRE Connector Color WHITE	M21	Connector No.

	16 15 14 13 12 11 10 9 8 7	32 31 30 29 28 27 26 25 24 23 22 21 20	Color of Signal Name Wire	- T	-
E	16		Terminal No.	30	31

Signal Name

Terminal No. 13

≥

Signal Name	ı	I	Ι	
Color of Wire	Τ	٦	Ь	
Terminal No. Wire	96	31	35	

Signal Name	-	ı	-	
Wire	Γ	٦	Д	
Terminal No. Wire	30	31	32	

Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	٦	GR	BR	9	>	GR	٨	W	BG	Ь	Т	۵
Terminal No. Wire	2	3	4	5	9	32	33	34	35	36	39	40

BATTERY (FUSE)

Ф ш

57 67 70

Signal Name

Terminal No. Color of Wire

| 56|57|58|59|60|61|62|63|64 | 65 | 66 | 67 | 68 | 69 | 70

BATTERY (F/L)

GND

ŭ	Connector No.	ec	ğ	ž	ا ن		M24	4										
ŭ	Connector Name BCM (BODY CONTROL MODULE)	ecl	ğ	ž	Ě	O)	88	BCM (BOE MODULE)	æ, H	DG(≿	\aleph	N	<u>E</u>	7			
ŭ	Connector Color BLACK	ec	ğ	ပြ	ᅙ	_	ᆸ	18	×									
值	H.S.	(Ġ						l II\	I IN	I IV	l 117						ı	
Ŀ	2	3	4	2	9	7	00	6	9	Ξ	10 11 12	13	14	15	13 14 15 16 17	18 19		20
2	22	22 23 24 25 26 27 28 29 30 31 32 33 34 35	24	25	56	27	78	53	8	31	32	33	34	ઝ	36 37	æ	စ္တ	8
	l	l	ı	ı	ı	ı	ı	ı	ı	ı	ı		ı	ı				

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EXL-207 Revision: May 2014 **2014 LEAF**

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

[HALOGEN HEADLAMP]

< WIRING DIAGRAM >

Connector Name	Name COMBII	Connector Name COMBINATION SWITCH Connector Color WHITE	Connector Name Connector Color	Vame COMBI	Connector Name COMBINATION METER Connector Color WHITE	Connector Name Connector Color	r Name JOINT	JOINT CONNECTOR-M05 BLUE
H.S.		2 3 4 5 6 8 9 10 11 12 13 14	H.S.	6 5 1 1 1 1	12 11 10 9 8 7 6 5 4 3 2	H.S.	10 9 8 7	8 7 6 5 4 3 2 1 18 17 16 15 14 13 12 11
Terminal No.	o. Color of Wire	Signal Name	40 39 38 37 3	35 34 33	31 30 29 28 27 26 25 24 23 22			
0	GB	ı	Terminal No.	o. Wire	Signal Name	Terminal No.	No. Color of Wire	Signal Name
2	BB	I	-	ГG	BAT	2	_	1
7	>	ı	ო	GR	IGN	6	_	1
∞	_	1	ß	В	GND	10		1
o :	BG	ı	9	В	GND	Ξ	re	1
우 :	> 1	ı	18	۵	CAN-L	12	P	ı
-	۵.	ı	19	٦	CAN-H	15	<u>a</u>	1
12	>	ı				19	<u> </u>	,
13	GR	ı				2 6		
14	5	1					-	
Connector No.	No.		Connector No.	No.		Connector No.	r No.	0
Connector Name	Vame JOI	JOINT CONNECTOR-M06	Connector Name		JOINT CONNECTOR-M01	Connector Name	r Name JO	JOINT CONNECTOR-M03
Connector Color	Color BLUE	Æ	Connector Color	—	γĄ	Connector Color	r Color PINK	¥
H.S.	10 9	8 7 6 5 4 3 2 1 18 17 16 15 14 13 12 11	原动 H.S.	10 9 8	8 7 6 5 4 3 2 1	用S.	10 9	9 8 7 6 5 4 3 2 1
Terminal No.	o. Wire	Signal Name	Terminal No.	o. Color of Wire	Signal Name	Terminal No.	No. Color of Wire	Signal Name
6	7	ı	11	Ь	1	-	В	1
10	٦	-	12	Ь	ı	4	В	ı
19	Ь	ı	19	M	1			
20	۵	I	20	*	ı			

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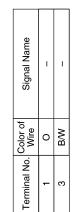
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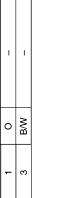
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Connector No. E10	TOR-E01 Connector Name FRONT SIDE MARKER LAMP LH	Connector Color GRAY	4321	H.S.	Signal Name Terminal No. Color of Signal Name	0 -	_ 2 B/W					Connector No. E13	LIGENT Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color WHITE	(本)	Signal Name Terminal No. Color of Signal Name	_
Connector No. E6	Connector Name JOINT CONNECTOR-E01	_	H.S. (121110 9 8 7 6 5 4		Terminal No. Color of Signal	1	3 L	<u>а</u> а				Connector No. E12	PDM E/R (INTELLIGENT Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color BROWN	17 17 16 15 15 H.S.	Terminal No. Color of Wire Signal I	
Connector No. M77	Connector Name WIRE TO WIRE		是 H.S.	80 60 40 20 81 71 61 51 41 31 21 11	83 73 63 53 43 33 23 83 83 83 83 83 83 83 83 83 83 83 83 83	+	86 76 66 56 46 36 26	77 67 57 47 37 78 68 58 48 38 79 69 59 49 39	Terminal No. Color of Signal Name	47 W –	J >-	Connector No. E11	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color BLACK	H.S. 11 10 9 14 13 12	Terminal No. Color of Wire Signal Name	

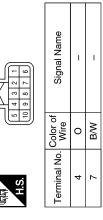
Revision: May 2014 EXL-209 2014 LEAF

Connector No.	E26
Connector Name	Connector Name LAMP LH (WITH HALOGEN HEADLAMPS)
Connector Color GRAY	GRAY

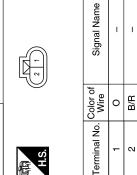








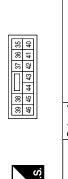
Sonnector No. E16 Connector Name FRONT SIDE MARKER LAMP RH Connector Color GRAY	Connector No. E16 Connector Name FRON Connector Color GRAY
GRAY	Connector Color
LAMP RH	
FRONT SIDE MARKER	connector Name
E16	Connector No.



Г	
Connector No.	E45
Connector Name	Connector Name LAMP RH (WITH HALOGEN HEADLAMPS)
Connector Color GRAY	GRAY

	Signal N	1	1
J	Color of Wire	0	В/Υ
	erminal No.	1	3

Connector No.	E14
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BROWN	BROWN



Terminal No. Color of Wire 38 LG 38 R 43 O 44 B	Signal Name	TAIL 1 (WITHOUT SOLAR CELL)	TAIL 1 (WITH SOLAR CELL)	CLEARANCE/L LH	TAIL 2
38 38 43 44	Color of	LG Wile	Œ	0	В
Ter	Terminal No.	38	38	43	44

Connector No.	E44
Connector Name	Connector Name JOINT CONNECTOR-E02
Connector Color BLUE	BLUE
H.S. 12	12 111 10 9 8 7 6 5 4 3 2 1

Signal Name	ı	-	_	ı	-
Color of Wire	0	0	0	0	0
Terminal No. Wire	7	8	6	10	11

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

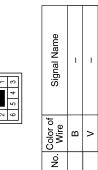
[HALOGEN HEADLAMP]

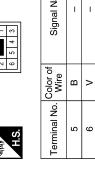
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Connector Name WIRE TO WIRE Connector Color WHITE Tarming IN Color of Sirval Name	Mire P P	Connector No. B7 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. (24 23 22 21 20 19 18 17 16 15 14 13 2 1 1	2 P L L	
8	86 86 80 001		15 16 31 32		
	44 58 68 774 88 64 64 64 64 64 64 64 64 64 64 64 64 64	TO WIRE	22 23 24 25 26 27 28 29 30 Signal Name	1 1 1	
300 WHT	Color of Kine B B B B B B B B B B B B B B B B B B B	ame WIRE T	1 2 3 4 5 17 18 19 20 21 Color of Wire	G G	
Connector Name WIRE TO WIRE Connector Color WHITE H.S. 1 2 2 2 2 4 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal No. 47 48 91	Connector No. B3 Connector Name WIRE TO WIRE Connector Color WHITE	S	32	
				\Box	
FRONT COMBINATION LAMP RH (WITH LED HEADLAMPS) BLACK \$\begin{align*} \begin{align*} alig	1 1	O WIRE	Signal Name		
1 . 1	Wire O O B/V	9 5	1 2 3 8 9 10 Color of Wire	2 >	
Connector Name Connector Color H.S. H.S.	4 7	Connector No. Connector Name Connector Color	S: minal No.	5	
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Revision: May 2014 EXL-211 2014 LEAF

Connector No.	B59
Connector Name	Connector Name REAR COMBINATION LAMP RH
Connector Color WHITE	WHITE

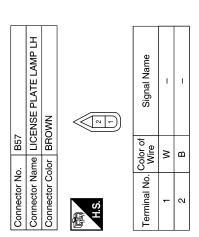




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Connector No.). B58	
Connector Na	me LICE	Connector Name LICENSE PLATE LAMP RH
Connector Color	olor BROWN	NWC
file H.S.		(a-)
Terminal No. Wire	Color of Wire	Signal Name

		Sign		
BROWN	[N -			
		Color of Wire	٦	В
Connector Color	昏 H.S.	Ferminal No.	1	2



	JOINT CONNECTOR-B02	4CK	8 7 6 5 4 3 2 1	18 17 16 15 14 13 12 11	Signal Name	ı	ı	I	I	ı	I	1
. B85		lor BLACK	10 9	20 19	Color of Wire	ω	Ф	ш	L	8	>	>
Connector No.	Connector Name	Connector Color	優	H.S.	Terminal No. Wire	-	က	4	2	80	6	10
				-								

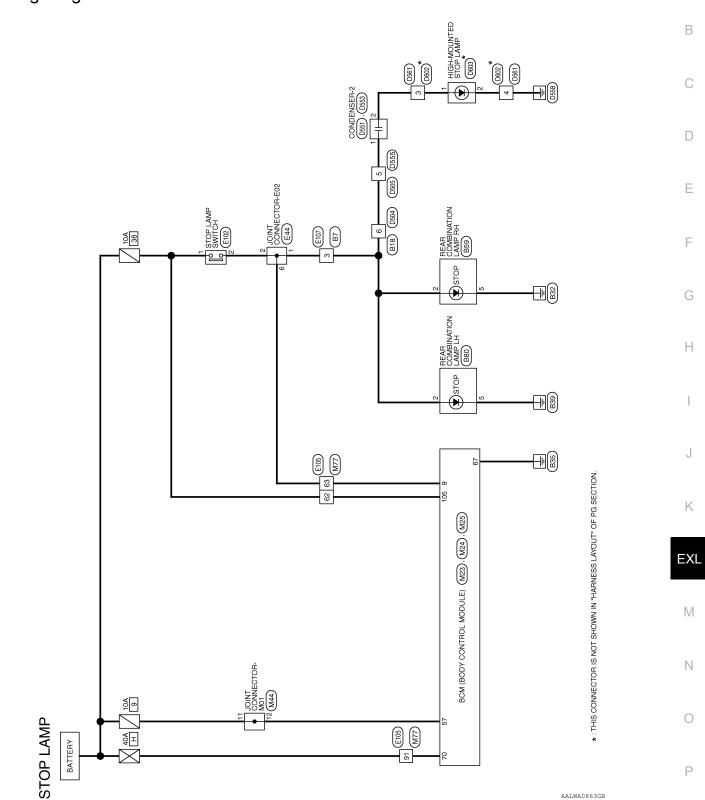
	REAR COMBINATION LAMP LH	1 1	6 5 4 3 1	Signal Name	ı	_
). B80	tme RE,	olor WH		Color of Wire	В	GR
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No. Wire	5	9

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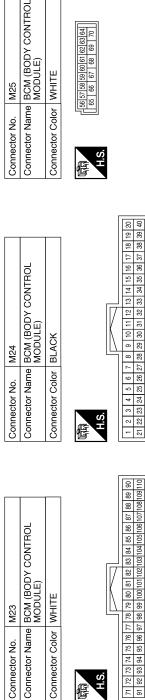
STOP LAMP

Wiring Diagram



M25

STOP LAMP CONNECTORS



Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)	
Wire	۵	В	>	
erminal No.	57	29	70	

Signal Name **BRAKE SW1**

Color of Wire

Terminal No.

Signal Name BRAKE SW2

Color of Wire ≥

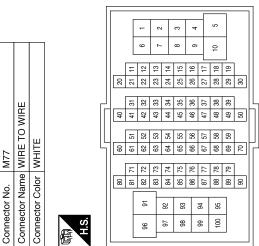
Terminal No. 105

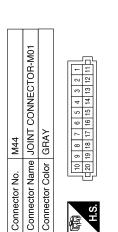
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ВВ

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Signal Name	ı	ı	I	
Color of Wire	8	BR	٨	
Terminal No.	62	63	91	
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Signal Name	ı	ı	
Color of Wire	Ь	Ь	
Terminal No. Wire	11	12	

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MIRE	В
Sign Si	С
Connector No. E107 Connector Name WIRE T Connector Color WHITE Terminal No. Color of 13 4 5 14 15 15 17 17 17 17 17 17	D
Connector No. Connector Nam Connector Colc H.S. Terminal No. 3	Е
	F
Signal Name	G
	Н
Connector No. E102 Connector Name STOP L Connector Color of WHITE Terminal No. Color of Wire 62 W 63 SB 91 Y 91 Y	I
Connector No. Connector Nam Connector Nam Connector Nam Terminal No. 62 63 91	J
10 98 98 98 98 98 98 98 98 98 98 98 98 98	K
1.10R-E02	EXI
T H H H H H H H H H H H H H H H H H H H	M
No. E44 No. E44 No. Color of Wire SB	N
Connector No. Connector Name Connector No. Conne	0
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Connector No. B59 Connector Name REAR COMBINATION LAMP RH Connector Color WHITE 2	Connector No. D505 Connector Name WIRE TO WIRE Connector Color WHITE \$\frac{5}{12} \frac{4}{11} \frac{10}{10} \frac{9}{8} \frac{7}{16}\$ Terminal No. Wire \$\frac{5}{8} \frac{1}{8} \frac{7}{16}\$ Terminal No. Wire
Connector No. B18 Connector Name WIRE TO WIRE Connector Color WHITE 1 2 3	Connector No. D504 Connector Name WIRE TO WIRE Connector Color WHITE 20 19 13 12 11 10 9 8 7 Terminal No. Color of Signal Name 6 R R —
Connector No. B7 Connector Name WIRE TO WIRE Connector Color WHITE To the second se	Connector No. B80 Connector Name REAR COMBINATION Connector Color WHITE ALS Terminal No. Color of Signal Name 2 SB - 5 B - 5 B -

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55	Connector Name WIRE TO WIRE	ITE	8 8 9 0 1 1 4 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Signal Name	ı	
D55	e WIF	r WH	1 2 9	color of Wire	۳	
or No.	or Nan	or Colc		o S O		
Connector No. D555	onnect	Connector Color WHITE	H.S.	Terminal No. Wire	5	
	•			-		
					ı	
	Connector Name CONDENSER-2	×	No.	Signal Name	ı	
Connector No. D553	e CON	Connector Color BLACK		olor of Wire	œ	
or No.	or Nam	or Colo		Š.		
onnecto	onnect	onnect	H.S.	Terminal No. Wire	2	
	10					
	Connector Name CONDENSER-2	<u> </u>		Signal Name	ı	
D551	COND	Connector Color BLACK		olor of Vire	<u>~</u>	
No.	r Name	Color		8 ^{>}		
Connector No.	nnecto	nnecto	H.S.	Terminal No. Wire	-	
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က	Connector Name HIGH-MOUNTED STOP LAMP	À		Signal Name	1	-
. De03	me HIGH-	lor GR/)	Color of Wire	В	В
Connector No.	Connector Na	Connector Color GRAY	所 H.S.	Terminal No.	1	2

2	E TO WIRE	11	2 3 4	Signal Name	ı	ı
. D602	ıme WIF	lor WH		Color of Wire	В	α
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	原 H.S.	Terminal No.	3	4

Signal Name	ı	1
Color of Wire	ш	В
Terminal No.	က	4

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Revision: May 2014 EXL-217 2014 LEAF

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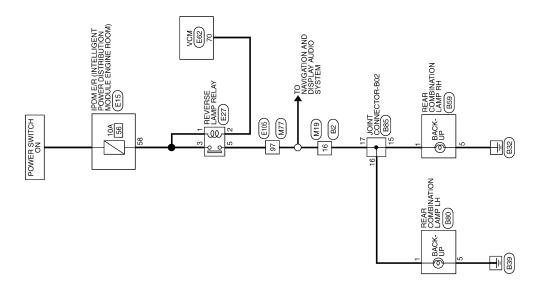
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BACK-UP LAMP

Wiring Diagram

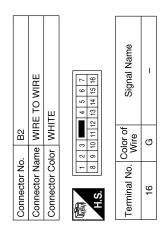
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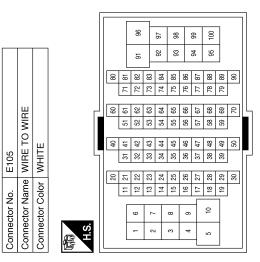
BACK-UP LAMP

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Signal Name		E62 March VCM Or March Mar	Signal Name REVERSE LAMP	
I No. Color of Wire		Connector No. E62 Connector Name VCM Connector Color BROV H.S. 66 67 68 69 70 79 66 67 68 69 70 105 69 105 105 105 105 105 105 105 105 105 105	No. Color of Wire SB	
Terminal No.		Connector No. Connector Name Connector Color H.S. Re 67 Re 6	Terminal No. 70	
	20 20 10 10 10 10 10 10 10 10 10 10 10 10 10	RELAY	lame	
M77 WIRE TO WIRE	60 61 55 4 4 1 31 66 66 66 66 67 67 4 4 1 31 66 66 67 67 67 67 67 67 67 67 67 67 67	E27 REVERSE LAMP RELAY BLUE	Signal Name	
Connector No. M77 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 96 91 78 78 78 78 78 78 78 78 78 78 78 78 78	Connector No. E Connector Color E Connector Color E H.S.	Terminal No. Color of 1 0 Wire 2 SB 3 0 5 5 G	
E TO WIRE	Signal Name	in Page 1 in Page 1 in Page 2 in Page 2 in Page 2 in Page 3 in Pag	Signal Name REV LAMP POWER	
Connector No. M19 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Sign 16 17 10 9 9 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	nnector No.	Terminal No. Color of Wire 58 O	
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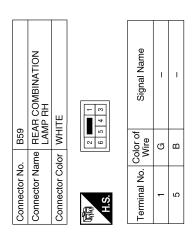


Signal Name	I	
Color of Wire	В	
Terminal No.	26	



Connector No.		B85	
Connector Name	ıme	g	JOINT CONNECTOR-B02
Connector Color	jo	BLACK	CK
H.S.	6 6	8 7 18 17	6 5 4 3 2 1 16 15 14 13 12 11
Terminal No.	Color of Wire	olor of Wire	Signal Name
15		G	1
16		U	1
17		G	1

	REAR COMBINATION LAMP LH		10	Signal Name	ı	ı
B80		lor WHITE	6 5 4	Color of Wire	G	В
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No. Wire	1	5



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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE

D Inspection start Е 1. Get information for symptom Get the detailed information about symptom from the customer 2. Check DTC Print out DTC and freeze frame data (or, write it down). Check related service bulletines. Symptom is described. Symptom is not described. Symptom is described. DTC is detected. DTC is detected. DTC is not detected. 3. Confirm the symptom 4. Confirm the symptom Try to confirm the symptom described Try to confirm the symptom described by the customer. by the customer. Also study the normal operation and failsafe related to the symptom. 5. Perform DTC CONFIRMATION PROCEDURE 6. Detect malfunctioning system by K SYMPTOM DIAGNOSIS 7. Detect malfunctioning part by Diagnosis Procedure Symptom is **EXL** Symptom is not described. 8. Repair or replace the malfunctioning part Check input/output signal or voltage DTC is 9. Final check Ν Symptom remains. detected. Check that the symptom is not detected. Perform DTC Confirmation Procedure again, and then check that the malfunction is repaired. DTC is not detected. Symptom does not remain. INSPECTION END Р

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

Are any symptoms described and any DTC detected?

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

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

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

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

4. CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

>> GO TO 6.

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time. If two or more DTCs are detected, refer to BCS-47, "DTC Inspection Priority Chart" (BCM) or PCS-18, "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-53, "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 CON-SULT.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

Inspect according to Diagnostic Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to GI-53, "Intermittent Incident".

8.repair or replace the malfunctioning part

- 1. Repair or replace the malfunctioning part.
- 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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Revision: May 2014 EXL-223 2014 LEAF

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Component Function Check

INFOID:0000000010121445

1. CHECK HEADLAMP (HI) OPERATION

PCONSULT ACTIVE TEST

1. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".

2. While operating the test items, check that the headlamp (HI) is turned ON.

Hi : Headlamp (HI) ON
Off : Headlamp (HI) OFF

NOTE:

ON/OFF is repeated 1 second each.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-224, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure".

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure INFOID:000000

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

- Turn power switch OFF.
- 2. Disconnect front combination lamp connector.
- 3. Turn power switch ON.
- 4. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. While operating the test items, check voltage between IPDM E/R harness connector and ground.

	(+) IPDM E/R		(-)	Test	Voltage (Approx.)		
Conr	Connector Terminal					(44.0)	
RH		49	- Ground		Hi	Battery voltage	
IXII	E15	49		EXTERNAL LAMPS	Off	0 V	
LH	LIJ	50	Glound		Hi	Battery voltage	
		50			Off	0 V	

Is the inspection result normal?

YES >> GO TO 2. NO >> GO TO 3.

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

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

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

	IPDM E/R		Front comb	Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E15	49	E45	2	Yes
LH	LIS	50	E26	2	165

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

3.CHECK HEADLAMP (HI) FUSE

- Turn power switch OFF.
- Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Headlamp HI (RH)	IPDM E/R	51	10 A
Headlamp HI (LH)	IFDIVI L/IX	52	10 A

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> GO TO 4.

f 4.CHECK HEADLAMP HIGH (HI) SHORT CIRCUIT

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

IPDM E/R				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E15	49	Ground	No	
LH	⊏10	50		INO	

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if the fuse is blown again.)

NO >> Replace the blown fuse after repairing the affected circuit.

${f 5.}$ CHECK HEADLAMP (HI) GROUND OPEN CIRCUIT

- Disconnect front combination lamp connector.
- Check continuity between front combination lamp harness connector and ground.

Front combination lamp				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E45	4	Ground	Yes	
LH	E26	4		165	

Is the inspection result normal?

>> Replace headlamp (HI) bulb. YES

NO >> Repair or replace harness.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Component Function Check INFOID:000000010121447

1. CHECK HEADLAMP (HI) OPERATION

(P)CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the headlamp (HI) is turned ON.

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Hi : Headlamp (HI) ON
Off : Headlamp (HI) OFF

NOTE:

ON/OFF is repeated 1 second each.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-226, "WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure".

WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000010121448

1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

PCONSULT ACTIVE TEST

- 1. Turn power switch OFF.
- 2. Disconnect headlamp high connector.
- 3. Turn power switch ON.
- 4. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. While operating the test items, check voltage between IPDM E/R harness connector and ground.

(+) IPDM E/R		(-)	Test	item	Voltage (Approx.)		
Conr	nector	Terminal				(
DU		40			Hi	Battery voltage	
RH	E45	49	49	0	EXTERNAL	Off	0 V
111	E15			50	Ground	LAMPS	Hi
LH		50			Off	0 V	

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

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

IPDM E/R			Front comb	Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E15	49	E45	2	Yes
LH	LIS	50	E26	2	165

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

3.CHECK HEADLAMP (HI) FUSE

- 1. Turn power switch OFF.
- Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Headlamp HI (RH)	IPDM E/R	51	10 A
Headlamp HI (LH)	IFDIVI L/IX	52	10 A

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> GO TO 4.

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

4. CHECK HEADLAMP (HI) SHORT CIRCUIT

- 1. Disconnect IPDM E/R connector. Refer to PCS-29, "Removal and Installation".
- 2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R				Continuity	
Connector		Terminal	Cround	Continuity	
RH	E15	49	Ground	No	
LH	E 13	50		INO	

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if the fuse is blown again.)

NO >> Replace the blown fuse after repairing the affected circuit.

5. CHECK ILLUMINATION STATUS OF HEADLAMPS

Check illumination status of headlamps.

Which headlamp does not turn ON?

RH >> GO TO 6.

LH >> GO TO 9.

6.CHECK HEADLAMP HI (RH) GROUND OPEN CIRCUIT-1

- 1. Remove daytime running light relay.
- Check continuity between daytime running light relay harness connector and front combination lamp RH harness connector.

Daytime running light relay		Front combin	Continuity		
Connector	Terminal	Connector Terminal		Continuity	
E76	3	E45	4	Yes	

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

.CHECK HEADLAMP HI (RH) GROUND OPEN CIRCUIT-2

Check continuity between daytime running light relay harness connector and ground.

Daytime re	unning light relay		Continuity	
Connector	Terminal	Ground	Continuity	
E76	4		Yes	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

8. CHECK HEADLAMP HI (RH) DAYTIME RUNNING LIGHT RELAY CIRCUIT

Check continuity between terminal 3 - 4 of daytime running light relay.

Daytime running light relay	Continuity	
Terminal	Continuity	
3 - 4	Yes	

Is the inspection result normal?

YES >> Replace headlamp (HI) bulb. (Bulb socket is abnormal.)

NO >> Replace daytime running light relay.

9. CHECK HEADLAMP HI (LH) GROUND OPEN CIRCUIT

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

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HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Front combination lamp LH			Continuity
Connector	Terminal	Ground	Continuity
E26	4		Yes

Is the inspection result normal?

YES >> Replace headlamp (HI) bulb. (Bulb socket is abnormal.)

NO >> Repair or replace harness.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

HEADLAMP (LO) CIRCUIT

Component Function Check

1. CHECK HEADLAMP (LO) OPERATION

®CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the headlamp (LO) is turned ON.

: Headlamp (LO) ON Lo Off : Headlamp (LO) OFF

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.

NO >> Refer to EXL-229, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

- Turn power switch OFF.
- Disconnect front combination lamp connector.
- Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. While operating the test items, check voltage between IPDM E/R harness connector and ground.

(+) IPDM E/R		(−) Test i		t item Voltage (Approx.				
Conr	nector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
RH		F.2			Lo	Battery voltage		
КП	E15	52	32	32	Ground	EXTERNAL	Off	0 V
LH	EIS		F.1	E4	51	Giodila	LAMPS	Lo
ЦΠ		31			Off	0 V		

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK HEADLAMP (LO) OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

	IPDM E/R		Front combination lamp		Continuity
Coni	nector	Terminal	Connector Terminal		Continuity
RH	E15	52	E45	6	Vos
LH	EIS	51	E26	6	Yes

Is the inspection result normal?

YES >> Replace headlamp bulb.

NO >> Repair or replace harness.

EXL-229 Revision: May 2014 2014 LEAF Α

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HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

3.CHECK HEADLAMP (LO) FUSE

- 1. Turn power switch OFF.
- 2. Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	54	15 A
Headlamp LO (LH)	IFDIVI L/IX	53	13 A

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> GO TO 4.

4. CHECK HEADLAMP (LO) SHORT CIRCUIT-1

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

IPDM E/R				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E15	52	Ground	No	
LH	L15	51		INO	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace the blown fuse after repairing the affected circuit.

5. CHECK HEADLAMP (LO) SHORT CIRCUIT-2

(P)CONSULT ACTIVE TEST

- 1. Replace fuse.
- 2. Connect IPDM E/R connector.
- 3. Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 5. Check that fuse is not blown when Lo button is operated.

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

6.CHECK HEADLAMP (LO) SHORT CIRCUIT-3

- 1. Turn power switch OFF.
- Connect front combination lamp connector.
- Check that headlamp turns ON when lighting switch is in the 2ND position.

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace headlamp bulb.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:0000000010121451

${f 1}$.CHECK DAYTIME RUNNING LIGHT OPERATION

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CONSULT ACTIVE TEST

On

Off

- Select "External Lamps" in "Active Test" of "BCM (HEADLAMP)".
- While operating the test items, check that daytime running light operation.

: Headlamp (HI) ON : Headlamp (HI) OFF D

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal. NO >> Refer to EXL-231, "Diagnosis Procedure".

Diagnosis Procedure INFOID:0000000010121452

Regarding Wiring Diagram information. Refer to EXL-35, "Wiring Diagram".

1. CHECK DAYTIME RUNNING LIGHT RELAY 2 FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

Unit	Fuse No.	Capacity
Daytime running light relay 2	37	10 A

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2.CHECK DAYTIME RUNNING LIGHT RELAY 2 POWER SUPPLY

- Remove daytime running light relay.
- Check voltage between daytime running light relay 2 harness connector and ground.

(+) Daytime running light relay 2		(-)	Voltage (Approx.)	
Connector	Terminal		(/ (pp. 0/)	
E76	2	Ground	Battery voltage	
L10	5	Giodila		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DAYTIME RUNNING LIGHT RELAY 2

Check daytime running light relay 2. Refer to EXL-232, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace daytime running light relay 2.

PCONSULT ACTIVE TEST

- Install daytime running light relay 2.
- Turn power switch ON.

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 $oldsymbol{4}.$ CHECK DAYTIME RUNNING LIGHT RELAY 2 CONTROL SIGNAL OUTPUT

EXL-231 Revision: May 2014 2014 LEAF

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

- Select "External Lamps" in "Active Test" of "BCM (HEADLAMP)".
- While operating the test item, check voltage between IPDM E/R harness connector and ground.

	+) M E/R	(-) Te		Test item	
Connector	Terminal		. Cot no		Voltage (Approx.)
E13	28	Ground	External Lamns	On	0 V
£13	20	Giodila	Ground External Lamps		Battery voltage

Is the inspection result normal?

YES >> Daytime running light relay 2 circuit is OK.

NO-1 (Fixed at 0 V)>>GO TO 5.

NO-2 (Fixed at battery voltage) >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

${f 5.}$ CHECK DAYTIME RUNNING LIGHT RELAY 2 CONTROL SIGNAL OPEN CIRCUIT

- Turn power switch OFF.
- 2. Remove daytime running light relay 2.
- 3. Disconnect IPDM E/R harness connector.
- Check continuity between IPDM E/R harness connector and daytime running light relay 2 harness connector.

IPDI	M E/R	Daytime running light relay 2		Continuity
Connector	Terminal	Connector Terminal		Continuity
E13	28	E76	1	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK DAYTIME RUNNING LIGHT RELAY 2 CONTROL SIGNAL SHORT CIRCUIT

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

IPDN	M E/R		Continuity	
Connector Terminal		Ground	Continuity	
E13	28		No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> Repair or replace harness.

Component Inspection

INFOID:0000000010121453

1. CHECK DAYTIME RUNNING LIGHT RELAY 2

- 1. Turn the power switch OFF.
- Remove daytime running light relay 2.
- 3. Apply battery voltage to daytime running light relay- between terminals 1 and 2.
- 4. Check continuity between daytime running light relay 2 terminals.

Daytime running light relay-2		Condition		Continuity	
Terminal				Continuity	
	E			Apply	Yes
E76	J	4	Voltage	Not Apply	No
Lio	3	4		Apply	No
			Not Apply	Yes	

Is the inspection result normal?

YES >> Daytime running light relay 2 is normal.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

>> Replace daytime running light relay 2. NO

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[HALOGEN HEADLAMP]

INFOID:0000000010121455

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000010121454

1. CHECK PARKING LAMP OPERATION

(P)CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the parking lamp is turned ON.

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

Is the inspection result normal?

YES >> Parking lamp circuit is normal.

>> Refer to EXL-234, "Diagnosis Procedure". NO

Diagnosis Procedure

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

1. CHECK PARKING LAMP FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

Unit	Location	Fuse No.	Capacity
Parking lamp Front side marker lamp Tail lamp (LH)	IPDM E/R	47	10 A

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

2.CHECK PARKING LAMP SHORT CIRCUIT

- Disconnect the following connectors:
- IPDM E/R
- Front combination lamps
- Front side marker lamps
- Rear combination lamp (LH)
- 2. Check continuity between IPDM E/R harness connector and ground.

IPDN	/I E/R		Continuity
Connector Terminal		Ground	Continuity
E14	43	Giodila	No
	44		NO

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if blown fuse is found again.)

NO >> Replace the blown fuse after repairing the affected circuit.

3.CHECK PARKING LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace bulb.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

4. CHECK PARKING LAMP OUTPUT VOLTAGE

©CONSULT ACTIVE TEST

- 1. Disconnect front combination lamp connector.
- 2. Turn power switch ON.
- 3. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 4. While operating the test items, check voltage between IPDM E/R harness connector and ground.

	+) M E/R	(-)	Test item		Voltage (Approx.)
Connector	Terminal				
E14	43	Ground EXTERNAL		TAIL	Battery voltage
E14	43	Giodila	LAMPS	Off	0 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

5. CHECK PARKING LAMP OPEN CIRCUIT

- 1. Turn power switch OFF.
- Disconnect IPDM E/R connector.
- 3. Check continuity between IPDM E/R harness connector and front combination lamp harness connector.

IPDM E/R		Front combination lamp		Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E14	43	E45	1	Yes
LH	E14	43	E26	l l	165

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK PARKING LAMP GROUND OPEN CIRCUIT

Check continuity between front combination lamp harness connector and ground.

	Front combination lamp		Continuity		
Connector		Terminal	Ground	Continuity	
RH	E45	2	Ground	Yes	
LH	E26	3		165	

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

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Revision: May 2014 EXL-235 2014 LEAF

FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000010121456

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check parking lamp circuit. Refer to EXL-234, "Component Function Check".

2.CHECK FRONT SIDE MARKER LAMP OPERATION

CONSULT ACTIVE TEST

- 1. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 2. While operating the test items, check that the front side marker lamp is turned ON.

TAIL : Front side marker lamp ON
Off : Front side marker lamp OFF

Is the inspection result normal?

YES >> Front side marker lamp circuit is normal. NO >> Refer to <u>EXL-236</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000010121457

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

1. CHECK FRONT SIDE MARKER LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb.

2.CHECK FRONT SIDE MARKER LAMP OPEN CIRCUIT

- 1. Turn power switch OFF.
- Disconnect IPDM E/R connector and front side marker lamp connector.
- 3. Check continuity between IPDM E/R harness connector and front side marker lamp harness connector.

IPDM E/R			Front side i	Continuity	
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E14	43	E16	1	Yes
LH	L 14	45	E10	I	165

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK FRONT SIDE MARKER LAMP GROUND OPEN CIRCUIT

Check continuity between front side marker lamp harness connector and ground.

Front side marker lamp				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E16	2	Giodila	Yes	
LH	E10	2		165	

Is the inspection result normal?

FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

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TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000010121458

1. CHECK TAIL LAMP OPERATION

®CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the tail lamp is turned ON.

TAIL : Tail Lamp ON
Off : Tail lamp OFF

Is the inspection result normal?

YES >> Tail lamp circuit is normal.

NO >> Refer to EXL-238, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121459

Regarding Wiring Diagram information. Refer to <a>EXL-64, "Wiring Diagram".

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES-1 [When tail lamp (LH) does not turn ON.]>>GO TO 5.

YES-2 [When tail lamp (RH) does not turn ON.]>>GO TO 2.

NO >> Check parking lamp circuit. Refer to EXL-234, "Component Function Check".

2.CHECK TAIL LAMP (LH) FUSE

- 1. Turn power switch OFF.
- 2. Check that the following fuse is not blown:

Unit	Location	Fuse No.	Capacity
Tail lamp (RH)	IPDM E/R	46	10 A

Is the inspection result normal?

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

3.CHECK TAIL LAMP (RH) OUTPUT VOLTAGE

®CONSULT ACTIVE TEST

- 1. Disconnect rear combination lamp (RH) connector.
- Turn power switch ON.
- 3. Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- 4. While operating the test items, check voltage between IPDM E/R harness connector and ground.

	(+) M E/R	(-)	Test item		Voltage (Approx.)
Connector	Terminal				
E14	20	Cround EXTERNAL		TAIL	Battery voltage
	38 Ground LAN	LAMPS	Off	0 V	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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4. CHECK TAIL LAMP (RH) SHORT CIRCUIT

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

IPDI	M E/R		Continuity
Connector	Terminal	Ground	Continuity
E14	38		No

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if blown fuse is found again.)

NO >> Replace the blown fuse after repairing the affected circuit.

5. CHECK TAIL LAMP OPEN CIRCUIT

- Turn power switch OFF.
- 2. Disconnect IPDM E/R connector and rear combination lamp connector.
- 3. Check continuity between IPDM E/R harness connector and rear combination lamp harness connector.

IPDM E/R		Rear combination lamp		Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E14	38	B59	6	Voc
LH	□ □ □ □ □	44	B80	6	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK TAIL LAMP GROUND OPEN CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp				Continuity	
Conr	Connector		Ground	Continuity	
RH	B59	F	Giouria	Yes	
LH	B80	3		Tes	

Is the inspection result normal?

YES >> Replace rear combination lamp. Refer to EXL-274, "Removal and Installation".

NO >> Repair or replace harness.

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[HALOGEN HEADLAMP]

INFOID:0000000010121460

INFOID:0000000010121461

< DTC/CIRCUIT DIAGNOSIS >

LICENSE PLATE LAMP CIRCUIT

Component Function Check

1. CHECK TAIL LAMP (RH) OPERATION

Check that the tail lamp (RH) is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check tail lamp circuit. Refer to EXL-238, "Component Function Check".

2.CHECK LICENSE PLATE LAMP OPERATION

(P)CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the lighting switch, check that the license plate lamp is turned ON.

TAIL : License plate lamp ON Off : License plate lamp OFF

Is the inspection result normal?

YES >> License plate lamp circuit is normal.

NO >> Refer to EXL-240, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information. Refer to EXL-64, "Wiring Diagram".

1. CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

>> GO TO 2. YES

NO >> Replace bulb.

2.CHECK LICENSE PLATE LAMP OPEN CIRCUIT

- Turn power switch OFF.
- Disconnect IPDM E/R connector and license plate lamp connector.
- Check continuity between IPDM E/R harness connector and license plate lamp harness connector.

IPDM E/R		License p	Continuity		
Co	onnector	Terminal	Connector	Terminal	Continuity
RH	E14	38	B58	1	Yes
LH		30	B57	, , , , , , , , , , , , , , , , , , ,	163

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK LICENSE PLATE LAMP GROUND OPEN CIRCUIT

Check continuity between license plate lamp harness connector and ground.

License plate lamp				Continuity	
	Connector	Terminal	Ground	Continuity	
RH	B58	2	Ground	Yes	
LH	B57	2		165	

Is the inspection result normal?

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

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FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

INFOID:0000000010121463

FRONT FOG LAMP CIRCUIT

Component Function Check

ENT FUNCTION CHECK INFOID:000000010121462

$1.\mathsf{CHECK}$ FRONT FOG LAMP OPERATION

®CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the front fog lamp is turned ON.

Fog : Front fog lamp ON
Off : Front fog lamp OFF

Is the measurement normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-242, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information. Refer to EXL-54, "Wiring Diagram".

1. CHECK FRONT FOG LAMP FUSE

- Turn power switch OFF.
- Check that the following fuse is not blown:

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	50	15 A

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK FRONT FOG LAMP SHORT CIRCUIT

- 1. Disconnect front fog connector and IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and ground.

IPDM E/R				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E12	19	Giouna	No	
LH		20			

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if the fuse is blown again.)

NO >> Replace the blown fuse after repairing the affected circuit.

3.CHECK FRONT FOG LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace bulb.

4. CHECK FRONT FOG LAMP OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

- 1. Disconnect front fog lamp connector.
- Turn power switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

4. While operating the test items, check the voltage between IPDM E/R harness connector and ground.

	(+) IPDM E/R		(-)	Test item		Voltage (Approx.)		
Conr	nector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
RH		19			Fog	Battery voltage		
KII	E12	19	19	19	Ground	EXTERNAL	Off	0 V
LH	20	20	Ground	LAMPS	Fog	Battery voltage		
LΠ					Off	0 V		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

5. CHECK FRONT FOG LAMP OPEN CIRCUIT

- 1. Turn power switch OFF.
- 2. Disconnect IPDM E/R connector.
- 3. Check continuity between IPDM E/R harness connector and front fog lamp harness connector.

IPDM E/R		Front f	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E12	19	E48	1	Yes
LH	E12	20	E30	- 	165

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK FRONT FOG LAMP GROUND CIRCUIT OPEN CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp				Continuity	
Connector		Terminal	Ground	Continuity	
RH	E48	2	Ground	Yes	
LH	E30	2		ies	

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Repair or replace harness.

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INFOID:0000000010121464

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TURN SIGNAL LAMP CIRCUIT

Component Function Check

1. CHECK TURN SIGNAL LAMP

®CONSULT ACTIVE TEST

- Select "FLASHER" in "Active Test" of "BCM (FLASHER)".
- 2. While operating the test items, check that the turn signal lamps is turned ON.

LH : Turn signal lamps (LH) ONRH : Turn signal lamps (RH) ONOff : Turn signal lamps OFF

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-244, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information. Refer to EXL-59, "Wiring Diagram".

1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

- 1. Turn power switch OFF.
- 2. Disconnect front combination lamp connector and rear combination lamp connector.
- 3. Turn power switch ON.
- 4. While operating the turn signal switch, check voltage between BCM harness connector and ground.

(+) BCM		(-)	Condition		Voltage (Approx.)	
	Connector	Terminal				
LH		60			LH	(V) 15 10 5 0 PKID0926E
	M25		Ground	Turn signal	OFF	0 V
RH	WZS	61	Glodina	switch	RH	(V) 15 10 5 0 1 s
					OFF	0 V

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

3.check turn signal lamp open circuit

- 1. Turn power switch OFF.
- 2. Disconnect BCM connector.
- 3. Check continuity between BCM harness connector and front combination lamp, side turn signal lamp or rear combination lamp harness connector.

Front turn signal lamp

BCM		Front comb	Continuity		
C	Connector	Terminal	Connector	Terminal	Continuity
RH	M25	61	E45	F	Yes
LH	IVIZO	60	E26	3	165

Rear turn signal lamp

ВСМ		Rear comb	Continuity		
C	Connector Terminal		Connector	Connector Terminal	
RH	M25	61	B59	4	Yes
LH	IVIZO	60	B80	4	res

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between BCM harness connector and ground.

BCM				Continuity	
Conr	Connector		Ground	Continuity	
RH	M25	61	Giouria	No	
LH	IVIZO	60		INO	

Is the inspection result normal?

YES >> Check each bulb socket for internal short circuit, and if check result is normal, replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

Check continuity between BCM harness connector and front combination lamp or rear combination lamp and ground.

Front turn signal lamp

	Front combinatio	n lamp		Continuity	
Connector		Terminal	Ground	Continuity	
RH	E45	2	Ground	Yes	
LH	E26	3		165	

Rear turn signal lamp

Rear combination lamp				Continuity
Connector		Terminal	Ground	Continuity
RH	B59	5	Glound	Yes
LH	B80	3		163

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

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OPTICAL SENSOR

Component Function Check

INFOID:0000000010121466

1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

®CONSULT DATA MONITOR

- Turn power switch ON.
- Select "OPTISEN (DTCT)" 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.)
OPTISEN (DTCT)	Optical sensor	When illuminating	3.1 V or more *
	Optical serisor	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-246, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121467

Regarding Wiring Diagram information. Refer to EXL-41, "Wiring Diagram".

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(+) Optical sensor		(-)	Voltage (Approx.)	
Connector	Terminal		((((((((((((((((((((
M16	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.

(+) Optical sensor			Voltago	
		(–)	Voltage (Approx.)	
Connector	Terminal		,	
M16	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.

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(+) Optical sensor		(-)		Condition	Voltage (Approx.)	
Connector	Terminal				(FF - /	
M16	2	Ground	Optical sensor	When illuminating	3.1 V or more *	
WITO	2	Ground	Optical serisor	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. Refer to EXL-272, "Removal and Installation".

4. CHECK OPTICAL SENSOR OPEN CIRCUIT

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

Optica	l sensor	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M16	1	M24	17	Yes

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

${f 5}.$ CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M16	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-72</u>, "Removal and Installation".

NO >> Repair or replace harness.

$\mathsf{6}.$ CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optical sensor		ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M16	3	M24	18	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

/.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

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OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Optical sensor		всм		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M16	2	M24	14	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			Continuity
Connector	Terminal	Ground	Continuity
M16	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-72</u>, "Removal and Installation".

NO >> Repair or replace harness.

HAZARD SWITCH

Component Function Check

INFOID:0000000010121468

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1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

(E)CONSULT DATA MONITOR

- Turn power switch ON.
- Select "HAZARD SW" in "Data Monitor" of "BCM (FLASHER)".
- 3. While operating the hazard switch, check the monitor status.

Monitor item	Con	Monitor status	
HAZARD SW	D SW Hazard switch	ON	On
HAZAKO SW	Tiazaiù Switcii	OFF	Off

Is the inspection result normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-249, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010121469

Regarding Wiring Diagram information. Refer to EXL-59, "Wiring Diagram".

1. CHECK HAZARD SWITCH SIGNAL INPUT

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

(+) Hazard switch		(-)	Voltage (Approx.)
Connector	Terminal		
M45	2	Ground	Battery voltage

<u>Is the inspection result normal?</u>

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

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

Hazaro	d switch	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M45	2	M24	29	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			Continuity
Connector	Terminal	Ground	Continuity
M45	2		No

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HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-72, "Removal and Installation".

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M45	1		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-273, "Removal and Installation".

NO >> Repair or replace harness.

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Symptom Table

INFOID:0000000010121470

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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	Fuse Halogen bulb (HI) Harness between IPDM E/R and front combination lamp Harness between front combination lamp and ground IPDM E/R	Headlamp (HI) circuit Refer to EXL-224, "WITHOUT DAY- TIME RUNNING LIGHT SYSTEM: Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to EXL-256, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure".	
High beam indicator lamp is not turned ON. [Headlamp (HI) is turned ON.]		Combination meter	Combination meter Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp (LO) is not turned ON. [Headlamp warning lamp is not turned ON.]	One side	Fuse Harness between IPDM E/R and front combination lamp IPDM E/R	Headlamp (LO) circuit Refer to EXL-229, "Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-258, "Diagnosis Procedure".	
Each lamp is not turned ON/OFF using lighting switch AUTO.		Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-71, "Symptom Table".
		Optical sensor Harness between optical sensor and BCM BCM	Optical sensor Refer to EXL-246, "Component Function Check".
Parking lamp is not turned ON.		Parking lamp bulb Parking lamp bulb socket Harness between IPDM E/R and front combination lamp Harness between front combination lamp and ground IPDM E/R	Parking lamp circuit Refer to EXL-234, "Component Function Check".
Front side marker lamp is not turned ON.		Fuse Front side marker lamp bulb Front side marker lamp bulb socket Harness between IPDM E/R and front side marker lamp Harness between front side marker lamp and ground	Front side marker lamp circuit Refer to EXL-236, "Component Function Check".

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[HALOGEN HEADLAMP]

INFOID:0000000010121471

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom		Possible cause	Inspection item
Tail lamp and rear side marker lamp are not turned ON.		Fuse Harness between IPDM E/R and rear combination lamp Harness between rear combination lamp and ground Rear combination lamp	Tail lamp circuit Refer to EXL-238, "Component Function Check".
License plate lamp is not turned ON.		License plate lamp bulb License plate lamp bulb socket Harness between IPDM E/R and license plate lamp Harness between license plate lamp and ground	License plate lamp circuit Refer to EXL-240, "Component Function Check".
Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned OFF.		Symptom diagnosis "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-259. "Diagnosis Procedure".	
Tail lamp indicator lamp is not turned ON. (Parking lamp, side marker lamp, tail lamp and license plate lamp are turned ON.)		Combination meter	Combination meter Data monitor "LIGHT IND" BCM (HEAD LAMP) Active test "TAIL LAMP"
Turn signal lamp does not blink.	Indicator lamp is nor- mal. (Applicable side per- forms high flasher acti- vation.)	Turn signal lamp bulb Turn signal lamp bulb socket Harness between BCM and each turn signal lamp	Turn signal lamp circuit Refer to EXL-244, "Component Function Check".
	Indicator lamp is included.	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-71, "Symptom Table"
Turn signal indicator lamp does not blink. (Turn signal lamp is nor- mal.)	One side	Combination meter	_
	Both sides (Always)	 Turn signal indicator lamp signal BCM Combination meter 	Combination meter Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
	Both sides (Only when activating hazard warning lamp with power switch OFF)	Combination meter power supply and ground circuit Combination meter	Combination meter Power supply and ground circuit Refer to MWI-85, "COMBINATION METER: Diagnosis Procedure".
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.) 		Hazard switch Harness between hazard switch and BCM BCM	Hazard switch Refer to EXL-249, "Component Function Check".
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and front fog lamp IPDM E/R	Front fog lamp circuit Refer to EXL-242, "Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-260, "Diagnosis Procedure".	
Front fog lamp indicator is not turned ON. (Front fog lamp is turned ON.)		Combination meter	 Combination meter Data monitor "FR FOG IND" BCM (HEAD LAMP) Active test "FR FOG LAMP"

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Symptom Table

CAUTION:

< SYMPTOM DIAGNOSIS >

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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

Sym	otom	Possible cause	Inspection item	
	One side	Fuse Halogen bulb (HI) Harness between IPDM E/R and headlamp (HI) Harness between headlamp (HI) and ground IPDM E/R	Headlamp (HI) circuit Refer to EXL-224, "WITHOUT DAY- TIME RUNNING LIGHT SYSTEM: Component Function Check".	
Headlamp (HI) is not turned ON.		Harness between IPDM E/R and daytime running light relay Daytime running light relay IPDM E/R	Daytime running light relay circuit Refer to EXL-225, "WITH DAYTIME RUNNING LIGHT SYSTEM: Component Function Check".	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) A Refer to EXL-256, "WITH DAYTIM nosis Procedure".	RE NOT TURNED ON" E RUNNING LIGHT SYSTEM : Diag-	
High beam indicator lamp [Headlamp (HI) is turned 0		Combination meter	Combination meter Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"	
Headlamp (LO) is not turned ON.	One side	Fuse halogen bulb (LO) Harness between IPDM E/R and headlamp lamp (LO) Harness between headlamp (LO) and ground IPDM E/R	Headlamp (LO) circuit Refer to EXL-229, "Component Function Check".	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-258, "Diagnosis Procedure".		
	N/OFF with lighting switch	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-71, "Symptom Table".	
AUTO.		Optical sensor Harness between optical sensor and BCM BCM	Optical sensor Refer to EXL-246, "Component Function Check".	
Daytime running light is not turned ON. [Headlamp (HI) is turned ON.]		Fuse Harness between IPDM E/R and daytime running light relay Daytime running light relay IPDM E/R BCM ECM Combination meter	Daytime running light relay circuit Refer to EXL-225, "WITH DAY-TIME RUNNING LIGHT SYS-TEM: Component Function Check". BCM (HEADLAMP) Data monitor "ENGINE STATE" Combination meter Data monitor "PKB SW" BCM (HEADLAMP) Active test "DAYTIME RUNNING LIGHT"	
Parking lamp is not turned ON.		Fuse Parking lamp bulb Harness between IPDM E/R and front combination lamp IPDM E/R	Parking lamp circuit Refer to EXL-234, "Component Function Check".	

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Symp	tom	Possible cause	Inspection item
Front side marker lamp is not turned ON.		Front side marker lamp bulb Harness between IPDM E/R and front side marker lamp Harness between front side marker lamp and ground IPDM E/R	Front side marker lamp circuit Refer to EXL-236, "Component Function Check".
Tail lamp (Rear side marker lamp) is not turned ON.		Tail lamp bulb Harness between IPDM E/R and rear combination lamp Harness between and rear combination lamp and ground	Tail lamp circuit Refer to EXL-238, "Component Function Check".
License plate lamp is not to	urned ON.	License plate lamp bulb Harness between IPDM E/R and license plate lamp Harness between license plate lamp and ground	License plate lamp circuit Refer to EXL-240, "Component Function Check".
Parking lamp, side marker cense plate lamp are not to		Symptom diagnosis "PARKING, SIDE MARKER, LICEN NOT TURNED ON" Refer to EXL-259, "Diagnosis Proc	ISE PLATE AND TAIL LAMPS ARE
Tail lamp indicator is not tu (Exterior lamps are turned		Combination meter	 Combination meter Data monitor "LIGHT IND" BCM (HEADLAMP) Active test "TAIL LAMP"
Turn signal lamp does not blink.	Indicator lamp is nor- mal. (Applicable side per- forms high flasher acti- vation.)	 Turn signal lamp bulb Door mirror Harness between BCM and each turn signal lamp Harness between each turn signal lamp and ground 	Turn signal lamp circuit Refer to EXL-244, "Component Function Check".
	Indicator lamp is included.	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-71, "Symptom Table
	One side	Combination meter	_
Turn signal indicator lamp does not blink. (Turn signal lamp is nor-	Both sides (Always)	 Turn signal indicator lamp signal BCM Combination meter 	Combination meter Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
mal.)	Both sides (Only when activating hazard warning lamp with power switch OFF)	Combination meter power supply and ground circuit Combination meter	Combination meter Power supply and ground circuit Refer to MWI-85, "COMBINATION METER: Diagnosis Procedure".
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.) 		Hazard switch Harness between hazard switch and BCM Harness between hazard switch and ground BCM BCM	Hazard switch circuit Refer to EXL-249, "Component Function Check".
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and front fog lamp Harness between front fog lamp and ground IPDM E/R	Front fog lamp circuit Refer to EXL-242, "Component Function Check".
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS Refer to EXL-260, "Diagnosis Prod	

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

NORMAL OPERATING CONDITION

Description INFOID:000000010121472

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 >

[HALOGEN HEADLAMP]

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Description

INFOID:0000000010121473

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

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000010121474

1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

PCONSULT DATA MONITOR

- 1. Select "HL HI REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-72, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check headlamp (HI) circuit. Refer to <u>EXL-224</u>, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Repair or replace the malfunctioning part.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Description

INFOID:0000000010121475

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

WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000010121476

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

(R)CONSULT DATA MONITOR

- Select "HL HI REQ" in "Data monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL HI REQ	Lighting switch	HI or PASS	On
TIETH NEQ	(2ND)	LO	Off

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-72, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check headlamp (HI) circuit. Refer to <u>EXL-225</u>, "WITH DAYTIME RUNNING LIGHT SYSTEM: Component <u>Function Check"</u>.

Is the inspection result normal?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Repair or replace the malfunctioning part.

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:000000010121477

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

Diagnosis Procedure

INFOID:0000000010121478

1. CHECK COMBINATION SWITCH

Check combination switch. Refer to BCS-71, "Symptom Table".

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 "HL LO REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2ND On	On
TIE EO NEQ	Lighting switch	OFF	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to <u>BCS-72</u>, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check headlamp (LO) circuit. Refer to EXL-229, "Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-53, "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:0000000010121479

The parking, license plate, side marker, tail lamps and each illumination are not turned ON in any condition.

Diagnosis Procedure

1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

PCONSULT DATA MONITOR

- 1. Select "TAIL & CLR REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1ST	On
	Lighting switch	OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-72</u>, "Removal and Installation".

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BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000010121481

The front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000010121482

Regarding Wiring Diagram information. Refer to EXL-30, "Wiring Diagram".

1. CHECK FUSE

Check that the following fuse is not blown:

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	#50	15 A

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-71, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning part.

3.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

PCONSULT DATA MONITOR

- 1. Select "FR FOG REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch	ON	On
TINTOGINEQ	(With lighting switch 2ND)	OFF	Off

Is the item status normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation".

NO >> Replace BCM. Refer to BCS-72, "Removal and Installation".

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description INFOID:0000000010121483 В

PREPARATION BEFORE ADJUSTING

NOTE:

- · For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with coolant and each oil.
- · Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the trunk room.)

NOTE:

Do not remove the on-vehicle tool.

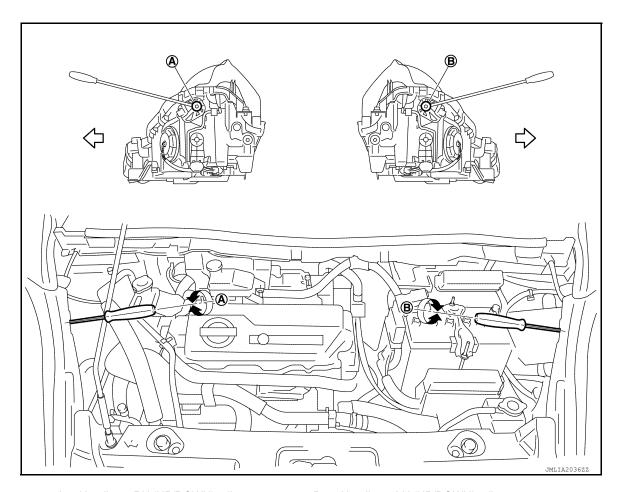
Wipe out dirt on the headlamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW



Headlamp RH (UP/DOWN) adjustment screw B. Headlamp LH (UP/DOWN) adjustment screw

<□ : Vehicle center

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	Adjustment screw	Rotation	Facing direction
A	Headlamp RH (UP/DOWN)	Clockwise	DOWN
A	Headianip KH (OF/DOWN)	Counterclockwise	UP
В	Headlems I H (I ID/DOM/N)	Clockwise	DOWN
В	Headlamp LH (UP/DOWN)	Counterclockwise	UP

Aiming Adjustment Procedure

INFOID:0000000010121484

1. Place the screen.

NOTE:

- · Stop the vehicle facing the wall.
- Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the headlamp center and the screen.
- 3. Start the engine. Turn the headlamp (LO) ON.

NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.

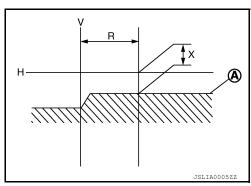
CAUTION:

Never cover the lens surface with a tape etc. The lens is made of resin.

4. Measure the distance (X) between the horizontal center line of headlamp (H) and the cutoff line (A) within the light axis measurement range (R) from the vertical center line ahead of headlamp (V).

Light axis measurement range (R) : 350 ± 175 mm (13.78 ± 6.89 in)

Low beam distribution on the screen

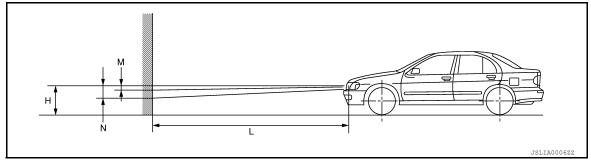


5. Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

unit: mm (in)

Horizontal center line of headlamp (H)	Highest cutoff line height (M)	Lowest cutoff line height (N)
700 (27.56) or less	4 (0.16)	30 (1.18)
701(27.60) – 800 (31.50)	4 (0.16)	30 (1.18)
801 (31.54) or more	17 (0.67)	44 (1.73)

Side view



Distance between the headlamp center and the screen (L) : 10 m (32.8 ft)

FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

FRONT FOG LAMP AIMING ADJUSTMENT

Description INFOID:0000000010121485

PREPARATION BEFORE ADJUSTING

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the fog lamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the trunk room.)

NOTE:

Do not remove the temporary tire, jack and on-vehicle tool.

Wipe out dirt on the fog lamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW

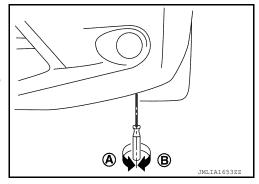
· Turn the aiming adjusting screw for adjustment.

A: DOWN B: UP

 For the position and direction of the adjusting screw, refer to the figure.

NOTE:

A screwdriver or hexagonal wrench [6 mm (0.24 in)] can be used for adjustment.



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Aiming Adjustment Procedure

1. Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- · Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.
- Start the motor. Turn the front fog lamp ON.

NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen. **CAUTION:**

Never cover the lens surface with a tape etc. The lens is made of resin.

Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 150 mm (5.906 in).

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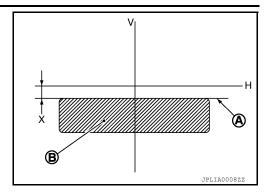
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FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

Front fog lamp light distribution on the screen



A : Cutoff line

B : High illuminance area

H : Horizontal center line of front fog lampV : Vertical center line of front fog lamp

X : Cutoff line height

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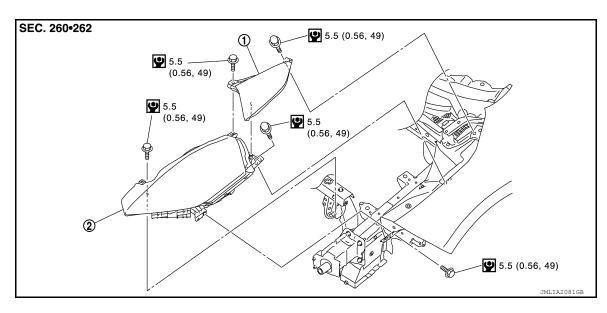
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REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View INFOID:0000000010121487 В

REMOVAL



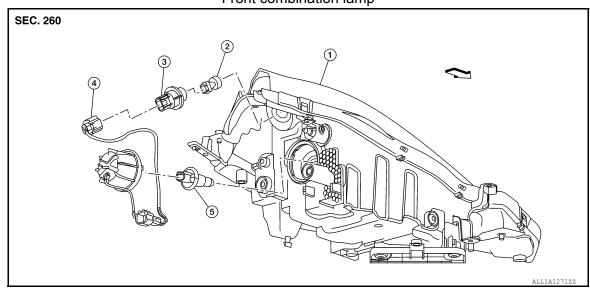
Front side marker lamp

Front combination lamp

∴ N·m (kg-m, in-lb)

DISASSEMBLY

Front combination lamp



Housing assembly

Harness

<□ : Vehicle front

- 2. Front turn signal lamp bulb
- Halogen bulb

Front turn signal lamp bulb socket

Removal and Installation

CAUTION:

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INFOID:0000000010121488

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

Disconnect the 12V battery negative terminal or remove the fuse to electric leakage. Refer to EXL-8, "Precaution for Removing 12V Battery".

REMOVAL

- 1. Remove front bumper fascia. Refer to EXT-13, "Removal and Installation".
- 2. Remove front side marker lamp mounting bolts.
- Pull up front side marker lamp, disconnect the front side marker lamp harness connector and remove the front side marker lamp.
- 4. Remove front combination lamp mounting bolts.
- 5. Pull out front combination lamp forward the vehicle, and then disconnect the connector before removing front combination lamp.

INSTALLATION

Note the following item, and then install in the reverse order of removal.

NOTE:

After installation, perform aiming adjustment. Refer to EXL-261, "Description".

Bulb Replacement

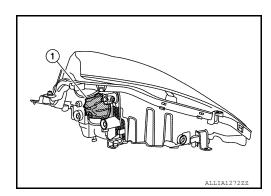
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CAUTION:

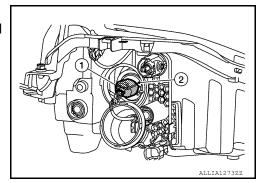
- Disconnect the 12V battery negative terminal or remove the fuse to electric leakage. Refer to EXL-151, "Precaution for Removing 12V Battery".
- · After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

HEADLAMP BULB

Rotate resin cap (1) counterclockwise and unlock it.



- 2. Rotate headlamp bulb (2) counterclockwise and unlock it.
- 3. Disconnect headlamp bulb from the harness connector (1) and remove.



FRONT TURN SIGNAL LAMP BULB

- Rotate bulb socket counterclockwise and unlock it.
- 2. Remove bulb from the bulb socket.

Disassembly and Assembly

DISASSEMBLY

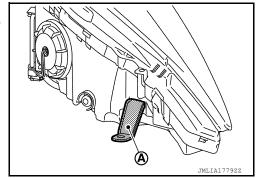
- 1. Rotate resin cap counterclockwise and unlock it.
- Rotate headlamp bulb counterclockwise and unlock it.
- 3. Disconnect headlamp bulb harness connector.
- 4. Rotate front turn signal lamp bulb socket counterclockwise and unlock it.
- 5. Remove front turn signal lamp bulb from bulb socket.
- Remove combination lamp harness connector.

ASSEMBLY

Assembly is in the reverse order of disassembly.

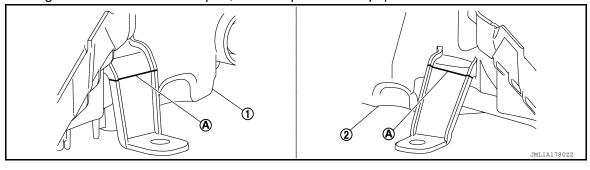
Installing service bracket

If only installation part (A) as shown in the figure is damaged, and front combination lamp housing itself is not damaged, repair can be completed easily by installing service brackets.



Removal

- Remove front combination lamp. Refer to EXL-265, "Removal and Installation".
- Cut damaged section of installation part, then shape with sandpaper.

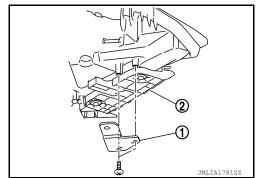


- Front combination lamp RH
- Cut line (R end)

Front combination lamp LH

Installation

Install service bracket (1) to headlamp housing (2) with screws.



2. Install front combination lamp to the vehicle.

EXL-267 Revision: May 2014 **2014 LEAF**

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

NOTE:

After installation, perform aiming adjustment. Refer to EXL-261, "Description".

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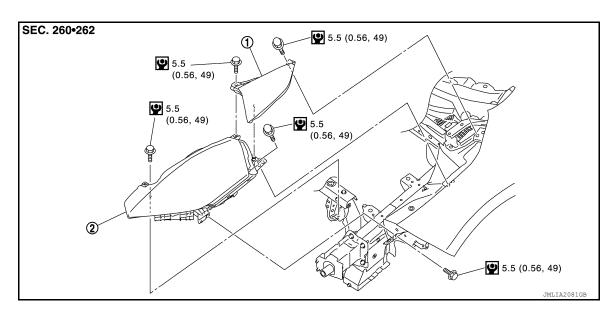
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FRONT SIDE MARKER LAMP

Exploded View

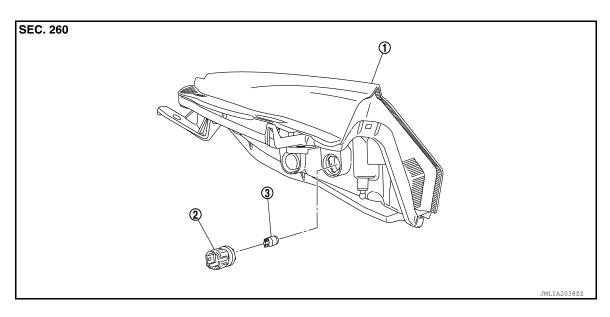
REMOVAL



1. Front side marker lamp

2. Front combination lamp

DISASSEMBLY



1. Front side marker lamp housing

. Front side marker lamp bulb socket 3. Front side marker lamp bulb

REMOVAL

- 1. Remove front side marker lamp mounting bolts.
- 2. Pull up front side marker lamp and disconnect the harness connector.
- 3. Remove front side marker lamp.

Removal and Installation

Bulb Replacement

CAUTION:

Revision: May 2014 EXL-269 2014 LEAF

FRONT SIDE MARKER LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- · After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

FRONT SIDE MARKER LAMP BULB

- 1. Rotate bulb socket counterclockwise and unlock it.
- 2. Remove bulb from the bulb socket.

LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

LIGHTING & TURN SIGNAL SWITCH

Exploded View

The lighting & turn signal switch is integrated in the combination switch. Refer to <u>BCS-73</u>, "Removal and <u>Installation"</u>.

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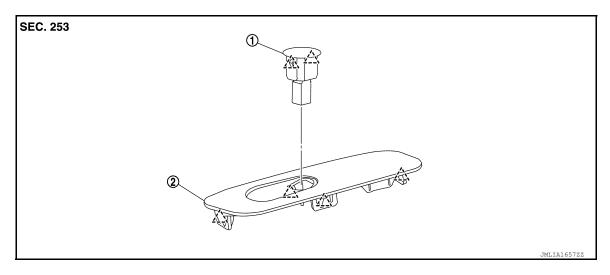
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OPTICAL SENSOR

Exploded View



Optical sensor
 Pawl

2. Switch panel

Removal and Installation

INFOID:0000000010121500

REMOVAL

- 1. Insert suitable tool between the switch panel and the instrument upper panel. Pull out the optical sensor upward.
- 2. Disconnect the optical sensor connector.
- 3. Remove optical sensor from switch panel.

INSTALLATION

Install in the reverse order of removal.

[HALOGEN HEADLAMP]

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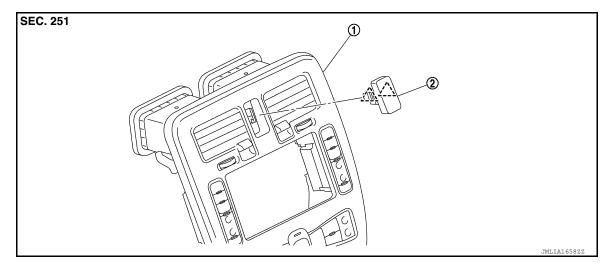
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INFOID:0000000010121502

HAZARD SWITCH

Exploded View



1. Cluster lid C

2. Hazard switch

______: Pawl

Removal and Installation

REMOVAL

- 1. Remove cluster lid C. Refer to IP-17, "Removal and Installation".
- 2. Disengage hazard switch fixing pawls, and then remove hazard switch.

INSTALLATION

Install in the reverse order of removal.

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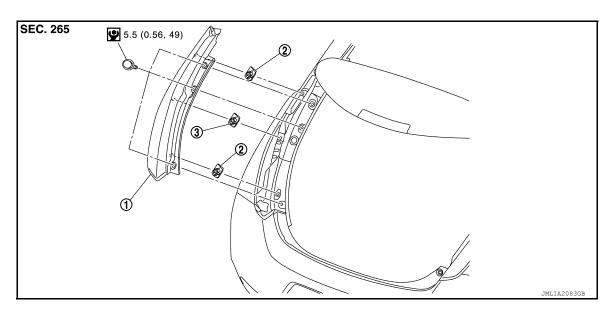
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REAR COMBINATION LAMP

Exploded View

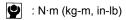
REMOVAL



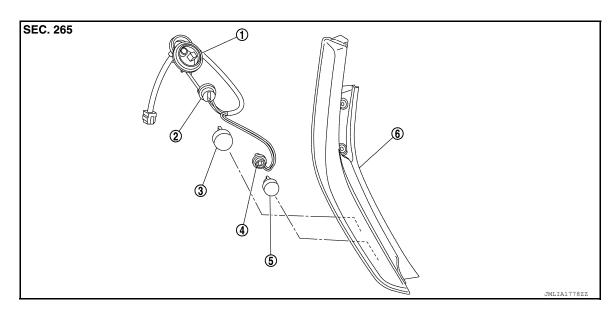
1. Rear combination lamp

2. Grommet A

3. Grommet B



DISASSEMBLY



- 1. Rear combination lamp harness
- 1. Buck-up lamp bulb socket
- Rear turn signal bulb socket
- 5. Buck-up lamp bulb
- Rear turn signal bulb
- Rear combination lamp housing assembly

Removal and Installation

INFOID:0000000010121504

CAUTION:

 Fogging of rear combination lamp inside is not a malfunction. Never replace parts. Fogging is a symptom in which inner surface of lens becomes whitely clouded, without there being visible water drops or water spots, as if lens is made of frosted-glass.

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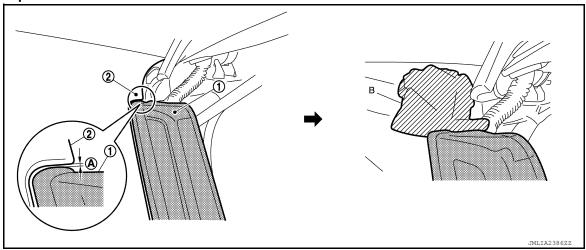
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REMOVAL

- 1. Remove luggage side lower finisher. Refer to INT-43, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect rear combination lamp connector.
- 3. Remove rear combination lamp mounting bolts.
- 4. Insert a shop cloth (B) into clearance (A) between rear combination lamp (1) and rear fender panel (2), or apply protective tape.

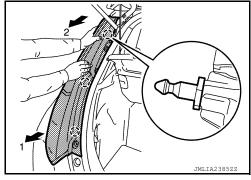
CAUTION:

- To prevent rear fender panel paint surface from being damaged, always apply protection using a shop cloth or protective tape.
- When using protective tape, apply protective tape to both rear fender panel and rear combination lamp.



5. Pull rear combination lamp toward vehicle rear side, as shown by the arrow in the figure.

() : Clip



6. Remove rear combination lamp.

INSTALLATION

Note the following item, and then install in the reverse order of removal.

CAUTION:

EXL

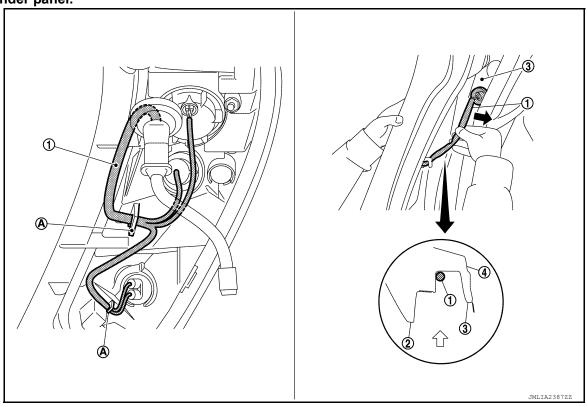
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When installing rear combination lamp, fix harness using harness fixing hook (A) on backside of rear combination lamp housing and place harness toward vehicle inside so that harness is not pinched by rear fender panel.



1. Harness

- Rear fender panel
- 3. Rear fender extension

INFOID:0000000010121505

Rear inner panel

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☐ : Vehicle front

Replacement

CAUTION:

- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
 Never touch bulb by hand while it is lit or right after being turned off.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

STOP/TAIL LAMP BULB

LED is used for stop/tail lamp bulb. Always replace rear combination lamp assembly as a unit, when bulb is to be replaced because of malfunction.

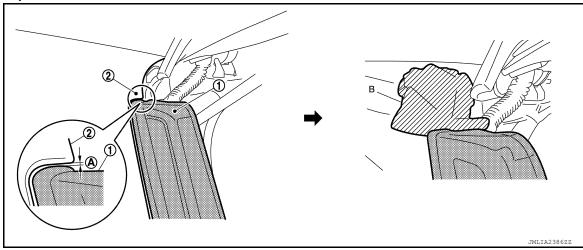
REAR TURN SIGNAL LAMP BULB

- 1. Remove rear combination lamp mounting bolts.
- 2. Insert a shop cloth (B) into clearance (A) between rear combination lamp (1) and rear fender panel (2), or apply protective tape.

CAUTION:

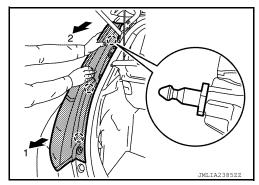
• To prevent rear fender panel paint surface from being damaged, always apply protection using a shop cloth or protective tape.

· When using protective tape, apply protective tape to both rear fender panel and rear combination lamp.



3. Pull rear combination lamp toward vehicle rear side, as shown by the arrow in the figure.





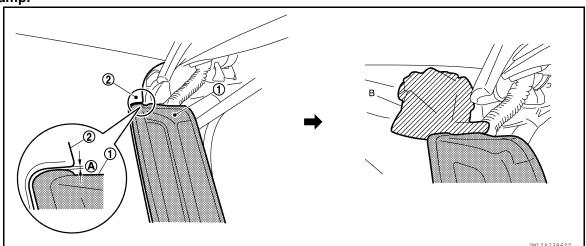
- Rotate bulb socket counterclockwise and unlock it.
- Remove bulb from the socket.

BACK-UP LAMP BULB

- 1. Remove rear combination lamp mounting bolts.
- 2. Insert a shop cloth (B) into clearance (A) between rear combination lamp (1) and rear fender panel (2), or apply protective tape.

CAUTION:

- To prevent rear fender panel paint surface from being damaged, always apply protection using a shop cloth or protective tape.
- When using protective tape, apply protective tape to both rear fender panel and rear combination lamp.



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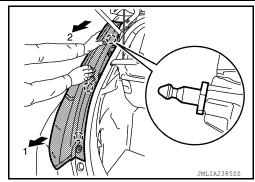
REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

3. Pull rear combination lamp toward vehicle rear side, as shown by the arrow in the figure.





- 4. Rotate bulb socket counterclockwise and unlock it.
- 5. Remove bulb from the socket.

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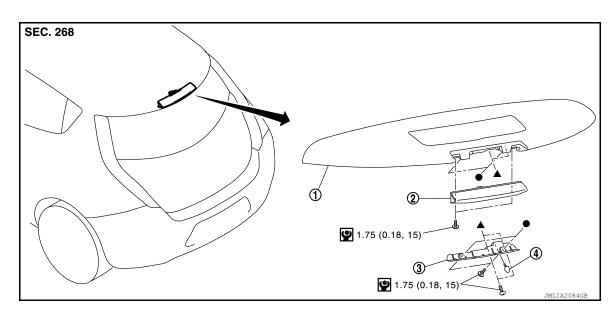
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HIGH-MOUNTED STOP LAMP

Exploded View



Rear spoiler

- 2. High-mounted stop lamp
- 3. High-mounted stop lamp cover

- 4. Rear washer nozzle
- : N·m (kg-m, in-lb)
- ●,▲: Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

INFOID:0000000010121507

REMOVAL

- Remove rear spoiler. Refer to <u>EXT-36, "Removal and Installation"</u>.
- 2. Remove high-mounted stop lamp cover mounting screws, and then remove high-mounted stop lamp cover.
- 3. Remove high-mounted stop lamp mounting screws.
- 4. Disconnect high-mounted stop lamp harness connector.
- 5. Remove high-mounted stop lamp.

INSTALLATION

Install in the reverse order of removal.

EXL

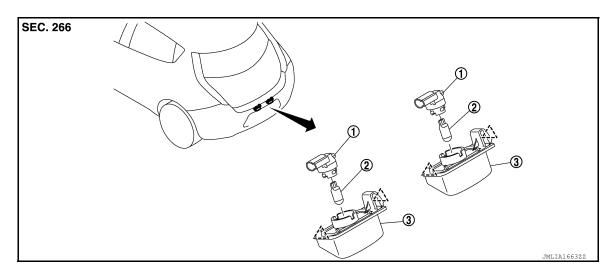
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LICENSE PLATE LAMP

Exploded View



- License plate lamp bulb socket
- 2. License plate lamp bulb
- 3. License plate lamp housing

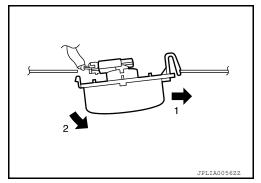


Removal and Installation

INFOID:0000000010121509

REMOVAL

 Remove license plate lamp in numerical order shown in the figure.



2. Disconnect license plate lamp connector, and then remove license plate lamp.

INSTALLATION

Install in the reverse order of removal.

Replacement INFOID:0000000010121510

CAUTION:

- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it to prevent damage to the bulb.
- Never touch bulb by hand while it is lit or right after being turned off to prevent a burns.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

LICENSE PLATE LAMP BULB

- 1. Remove license plate lamp.
- Turn the bulb socket counterclockwise and unlock it.
- Remove the bulb from the socket.

REAR REFLEX REFLECTOR

[HALOGEN HEADLAMP]

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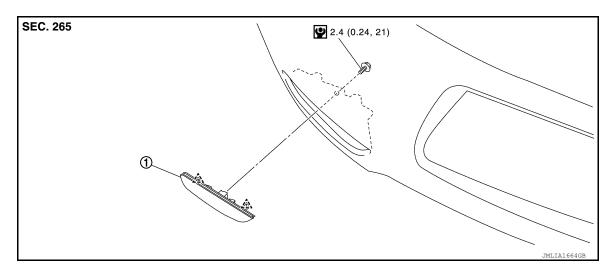
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REAR REFLEX REFLECTOR

Exploded View



1. Reflex refractor

^` : Pawl

: N·m (kg-m, in-lb)

Removal and Installation

INFOID:0000000010121512

REMOVAL

- 1. Remove rear bumper fascia. Refer to EXT-17, "Removal and Installation".
- Remove rear reflex reflector fixing screws and disengage fixing pawls, and then remove rear reflex reflector.

INSTALLATION

Install in the reverse order of removal.

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SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN HEADLAMP]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000010121513

Item		Туре	Wattage (W)*
Front combination laws	Headlamp (HI/LOW)	H13 (Halogen)	60/55
Front combination lamp	Turn signal/Park lamp	3457NAK (Amber)	27/7
Front side maker lamp	Front side maker lamp		5
	Stop lamp/Tail lamp	LED	_
Door combination lamp	Rear turn signal lamp	WY21W (Amber)	21
Rear combination lamp	Back-up lamp	W16W	16
	Rear side maker lamp	LED	_
License plate lamp		W5W	5
High-mounted stop lamp		LED	_

^{*:} Always check with the Parts Department for the latest parts info.