SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

XENON TYPE

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011732454

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precautions For Xenon Headlamp Service

INFOID:0000000011731931

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

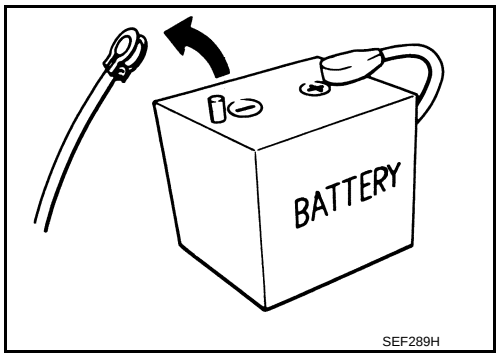
CAUTION:

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

- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

Precautions for Removing Battery Terminal

INFOID:0000000011731932



- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

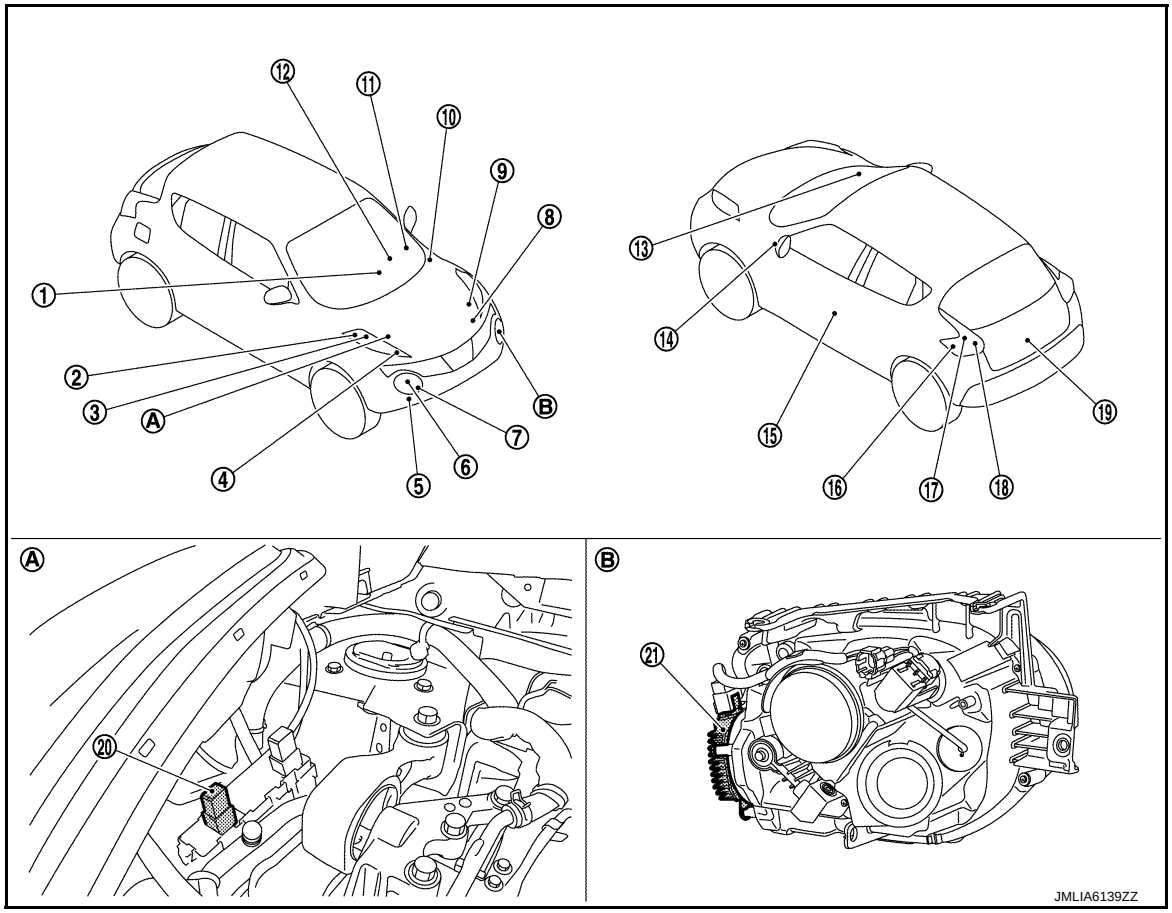
SYSTEM DESCRIPTION

COMPONENT PARTS

EXTERIOR LIGHTING SYSTEM

EXTERIOR LIGHTING SYSTEM : Component Parts Location

INFOID:0000000011731933



1.	Hazard switch	2.	Front turn signal lamp	3.	Front side marker lamp
4.	Parking lamp	5.	Front fog lamp*1	6.	Headlamp LO (Xenon headlamp)
7.	Headlamp HI (Halogen headlamp)	8.	ECM*2 Refer to EC-26, "ENGINE CONTROL SYSTEM : Component Parts Location" (NISMO RS models) or EC-588, "ENGINE CONTROL SYSTEM : Component Parts Location" (Except for NISMO RS models).	9.	IPDM E/R Refer to PCS-4, "Component Parts Location".
10.	BCM Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".	11.	Combination switch	12.	Combination meter
13.	Optical sensor*3	14.	Side turn signal lamp	15.	Front door switch (driver side)
16.	Stop lamp / Tail lamp	17.	Rear turn signal lamp	18.	Tail lamp
19.	License plate lamp	20.	Daytime running light relay*4	21.	HID control unit
A.	Engine room (RH)	B.	Headlamp (back)		

*1: With front fog lamp

*2: With daytime running light system
*3: With auto light system
*4: Except for NISMO models with daytime running light system

EXTERIOR LIGHTING SYSTEM : Component Description

INFOID:0000000011731934

Part		Description
BCM		• Detects each switch condition by the combination switch reading function • Judges that the headlamp is turned ON according to the vehicle condition • Requests the headlamp relay (High/Low) ON to IPDM E/R (via CAN communication) • Requests the high beam indicator lamp and position lamp indicator lamp ON to the combination meter (via CAN communication) • Judges the outside brightness from the optical sensor signal. • Judges the ON/OFF status of the exterior lamp from the outside brightness and the vehicle condition.
IPDM E/R		Controls the integrated relay and daytime running light relay, and supplies voltage to the load according to the request from BCM (via CAN communication).
Combination meter		• Turns the high beam indicator lamp and position lamp indicator lamp ON according to the request from BCM (via CAN communication). • 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). • Combination meter transmits parking brake switch signal to BCM via CAN communication.
ECM*1		ECM transmits engine status signal to BCM via CAN communication.
Headlamp assembly	HID control unit	Refer to EXL-10, "HEADLAMP ASSEMBLY : HID control unit".
	Xenon headlamp	Refer to EXL-9, "HEADLAMP ASSEMBLY : Xenon Headlamp".
Optical sensor*2		Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
Door switch		Refer to DLK-10, "Component Description".
Combination switch (Lighting & turn signal switch)		Refer to BCS-7, "COMBINATION SWITCH READING SYSTEM : System Description".
Hazard switch		Inputs the hazard switch ON/OFF signal to BCM.

*1: With daytime running light system
*2: With auto light system

HEADLAMP ASSEMBLY

HEADLAMP ASSEMBLY : Xenon Headlamp

INFOID:0000000011731935

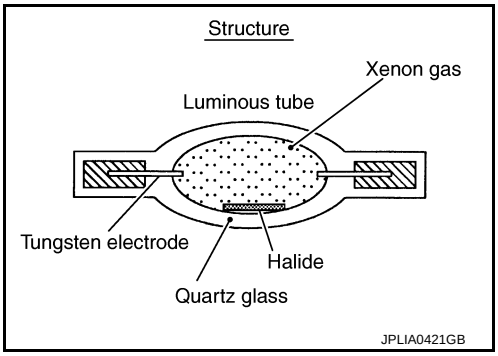
OUTLINE

- The lamp light source is by the arch discharge by applying high voltage into the xenon gas-filled bulb instead of the halogen bulb filament.
- Sight becomes more natural and brighter because the amount of light are gained adequately and the color of light is sunshine-like white.
- The xenon bulb drops the amount of light, repeats blinking, and illuminates in red if the bulb reaches the service life.

ILLUMINATION PRINCIPLE

1. Discharging starts in high voltage pulse between bulb electrodes.
2. Xenon gas is activated by current between electrodes. Pale light is emitted.
3. The luminous tube (bulb) temperature elevates. Evaporated halide is activated by discharge. The color of light changes into white.

NOTE:
- Brightness and the color of light may change slightly immediately after the headlamp turned ON until the xenon bulb becomes stable. This is not malfunction.
- Illumination time lag may occur between right and left. This is not malfunction.



PRECAUTIONS FOR TROUBLE DIAGNOSIS

Representative malfunction examples are; “Light does not turn ON”, “Light blinks”, and “Brightness is inadequate.” The cause often be the xenon bulb. Such malfunctions, however, are occurred occasionally by HID control unit malfunction or lamp case malfunction. Specify the malfunctioning part with diagnosis procedure.

WARNING:
- **Never touch the harness, HID control unit, the inside and metal part of lamp when turning the headlamp ON or operating the lighting switch.**
- **Never work with wet hands.**

CAUTION:
- **Never perform HID control unit circuit diagnosis with a circuit tester or an equivalent.**
- **Temporarily install the headlamps on the vehicle. Connect the battery to the connector (vehicle side) when checking ON/OFF status.**
- **Disconnect the battery negative terminal before disconnecting the lamp socket connector or the harness connector.**
- **Check for fusing of the fusible link(s), open around connector, short, disconnection if the symptom is caused by electric error.**

NOTE:
- Turn the switch OFF once before turning ON, if the ON/OFF is inoperative.
- The xenon bulb drops the amount of light, repeats blinking, and illuminates in red if the bulb reaches the service life.

HEADLAMP ASSEMBLY : HID control unit

INFOID:0000000011731936

Headlamp (LO) circuit is connected to HID control unit integrated in the headlamp. Headlamp (LO) circuit turns xenon headlamp ON.
For the details of HID control unit and the xenon headlamp, refer to EXL-9, "HEADLAMP ASSEMBLY : Xenon Headlamp".

SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Diagram

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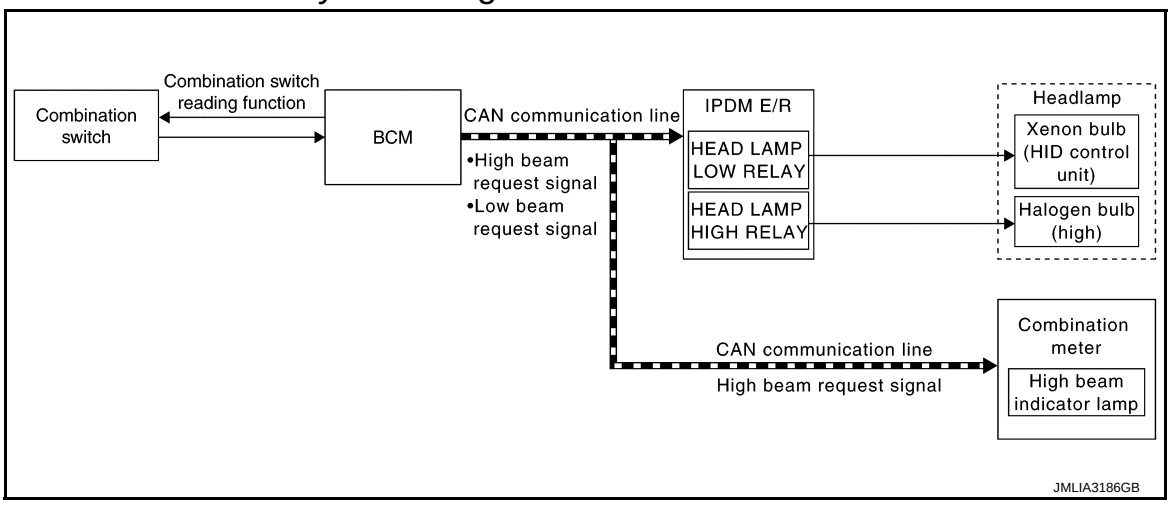


HEADLAMP SYSTEM : System Description

INFOID:0000000011731939

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 via CAN communication according to the headlamp (LO) ON condition.

Headlamp (LO) ON condition
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-12, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

- IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp (LO) ON according to the low beam request signal.

HEADLAMP (HI) OPERATION

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

Headlamp (HI) ON condition
- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-12, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

- 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 (HI) ON according to the high beam request signal.

FOLLOW ME HOME FUNCTION

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

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

Follow me home ON condition
- Ignition switch OFF

- Lighting switch OFF
• IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp (LO) ON according to the low beam request signal.
• When in any of following conditions, follow me home function can be cancelled while follow me home function is operating.

Follow me home OFF condition
- Ignition switch is turned from OFF→ACC or ON
- Lighting switch is turned from OFF→ON

NOTE:
• Flash-to-pass operation illumination time for 1 time can be extended to approximately 30 seconds during operation of follow me home function.
• Flash-to-pass operation can be illuminated continuously for approximately 60 seconds (flash-to-pass operation, 2 times), approximately 90 seconds (flash-to-pass operation, 3 times), and a maximum of approximately 120 seconds (flash-to-pass operation, 4 times).
• Follow me home function activating time can be set by CONSULT. Refer to EXL-20, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (XENON TYPE)".

HEADLAMP SYSTEM : Fail-Safe

INFOID:0000000011731940

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.

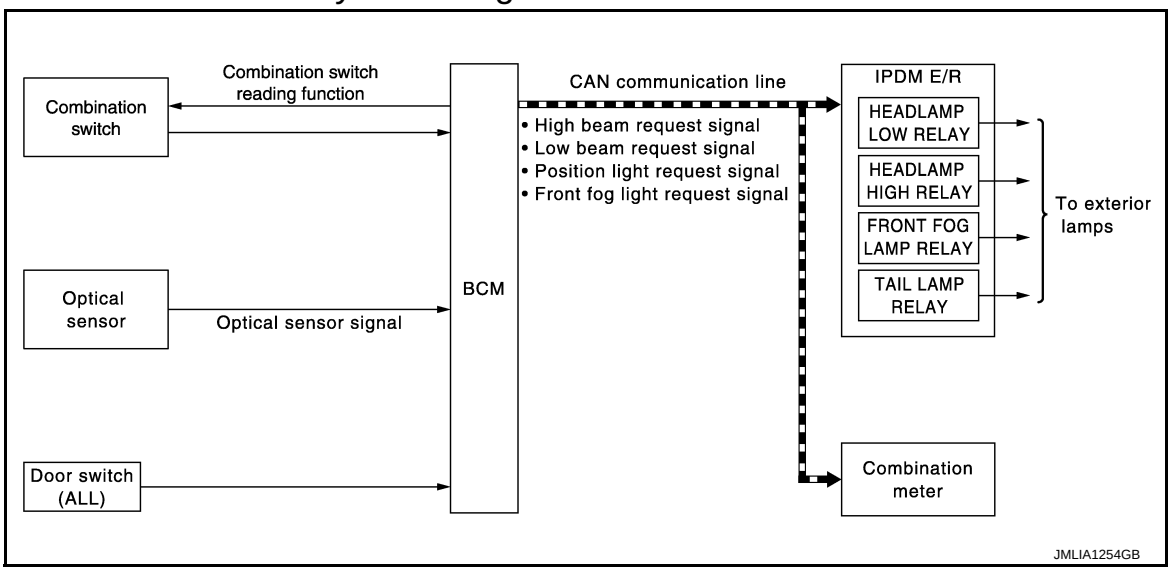
If No CAN Communication Is Available With BCM

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

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Diagram

INFOID:0000000011731941



AUTO LIGHT SYSTEM : System Description

INFOID:0000000011731942

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

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

*: Headlamp (LO/HI), front fog lamp, parking lamp, license plate lamp, tail 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 EXL-20, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (XENON TYPE)".

AUTO LIGHT FUNCTION

Description
- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to the optical sensor when the ignition switch is turned ON.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- When ignition switch is turned ON, BCM detects outside brightness from the optical sensor signal and judges ON/OFF condition of each exterior lamp, depending on the outside brightness condition.
- 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 EXL-20, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (XENON TYPE)".

DELAY TIMER FUNCTION

- BCM turns the headlamp (LO) OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.
- Turns the headlamp (LO) OFF 5 minutes after the ignition switch is turned OFF.
- Turns the headlamp (LO) OFF 5 minutes after detecting that any door opens. (Door switch ON).
- Turns the headlamp (LO) OFF a certain period of time* after closing all doors. (Door switch ON → OFF).
- Delay timer function turns OFF, when the ignition switch is other than OFF or the lighting switch is other than AUTO.

*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to EXL-20, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (XENON TYPE)".

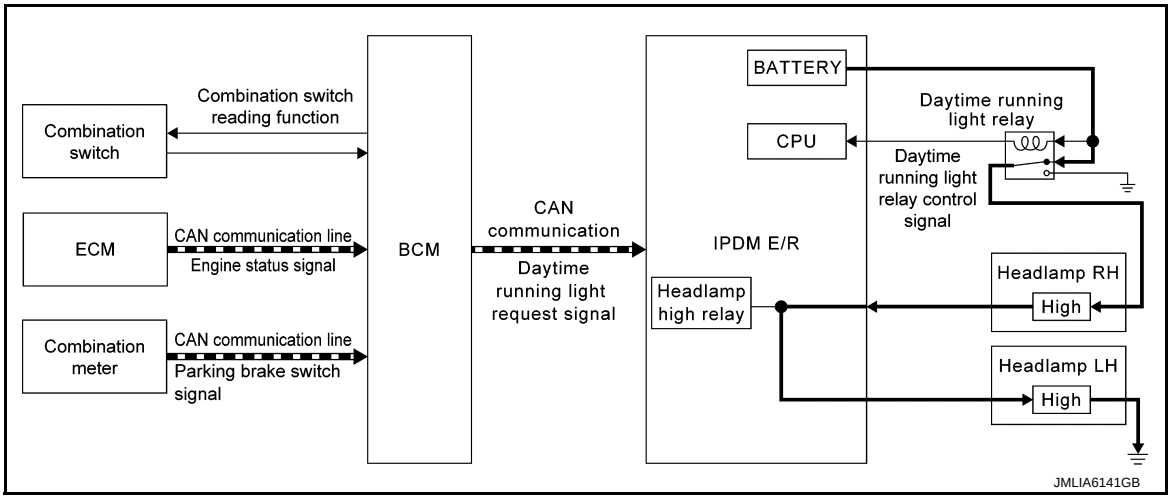
NOTE:
When any position other than the lighting switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

DAYTIME RUNNING LIGHT SYSTEM

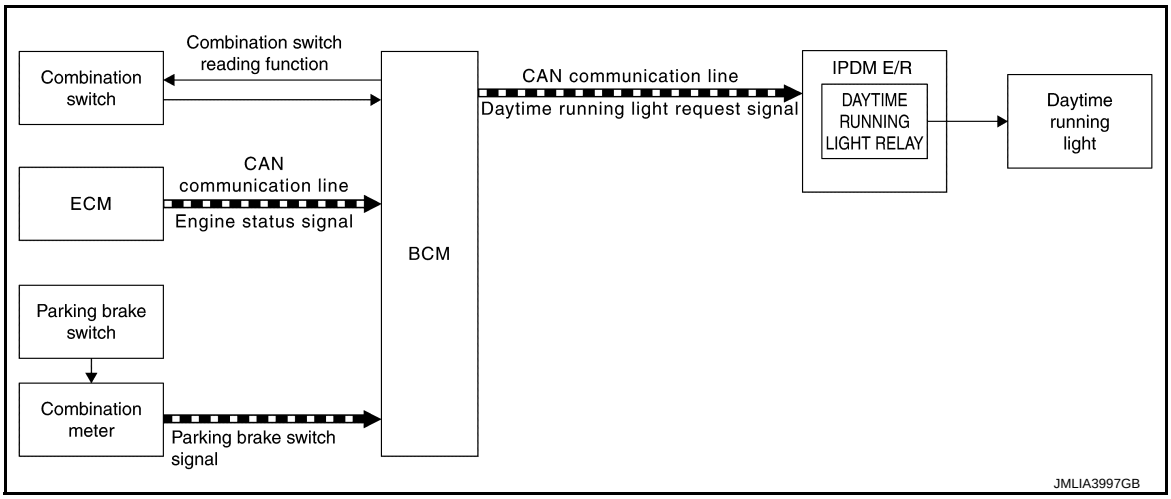
DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:0000000011740263

EXCEPT FOR NISMO MODELS



NISMO MODELS



DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000011740264

OUTLINE

Except for NISMO Models

- Turns the headlamp (HI) ON [Headlamp (HI) 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.

NISMO Models

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

Except for NISMO Models

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the following signals.
- Engine status signal (received from ECM via CAN communication)
- Parking brake switch signal (received from combination meter via CAN communication)
- BCM transmits the daytime running light request signal to IPDM E/R via CAN communication according to the daytime running light ON condition.

Daytime running light ON condition

- Engine running with the parking brake released, and any following conditions are satisfied.

- Lighting switch OFF
- Lighting switch 1ST
- 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.

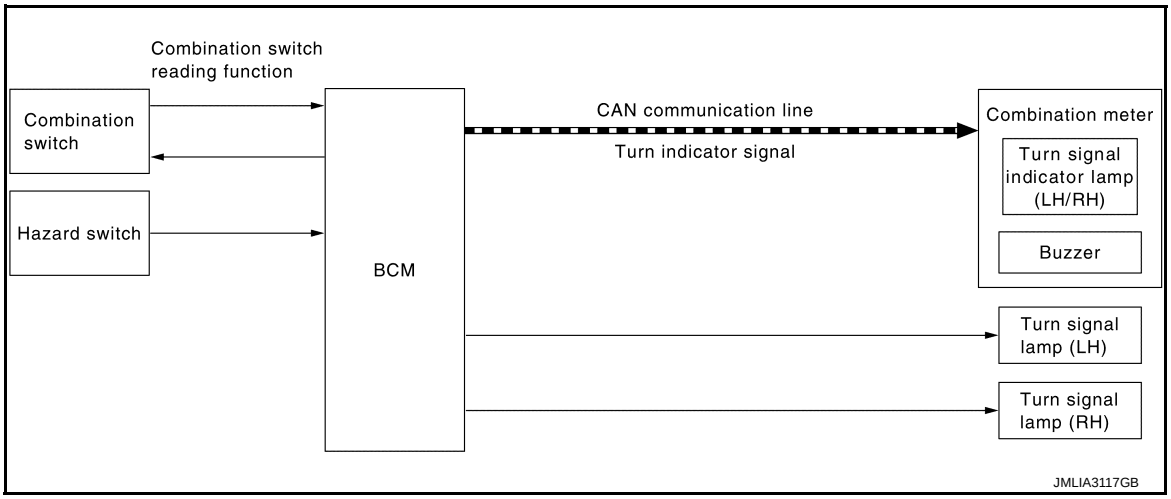
NISMO Models
- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the following signals.
- Engine status signal (received from ECM via CAN communication)
- Parking brake switch signal (received from combination meter via CAN communication)
- BCM transmits the daytime running light request signal to IPDM E/R via CAN communication according to the daytime running light ON condition.

Daytime running light ON condition
- Engine running with the parking brake released, and any following conditions are satisfied.
- Lighting switch OFF
- Lighting switch 1ST
- IPDM E/R turns the integrated daytime running light relay ON, and turns the daytime running light ON according to the daytime running light request signal.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram

INFOID:0000000011731946



TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000011731947

OUTLINE

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

TURN SIGNAL LAMP OPERATION

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

HAZARD WARNING LAMP OPERATION

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

TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION

- BCM transmits the turn indicator signal to the combination meter using CAN communication while the turn signal lamp and the hazard warning lamp are operating.

- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn indicator signal.

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.

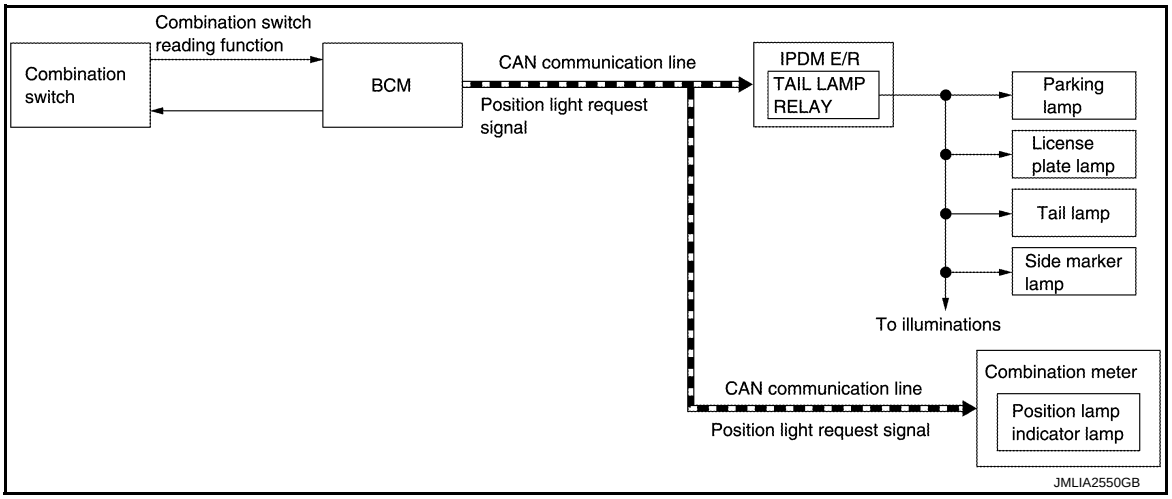
NOTE:

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 Diagram

INFOID:0000000011731948



PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description

INFOID:0000000011731949

OUTLINE

Parking, license plate, side marker and tail lamps are controlled by combination switch reading function and parking, license plate, side marker and tail lamps 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 parking, license plate, side marker and tail lamps ON condition.

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

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-12, "AUTO LIGHT SYSTEM : System Description".)

- IPDM E/R turns the integrated tail lamp relay ON and turns the parking, license plate 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:0000000011731950

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.

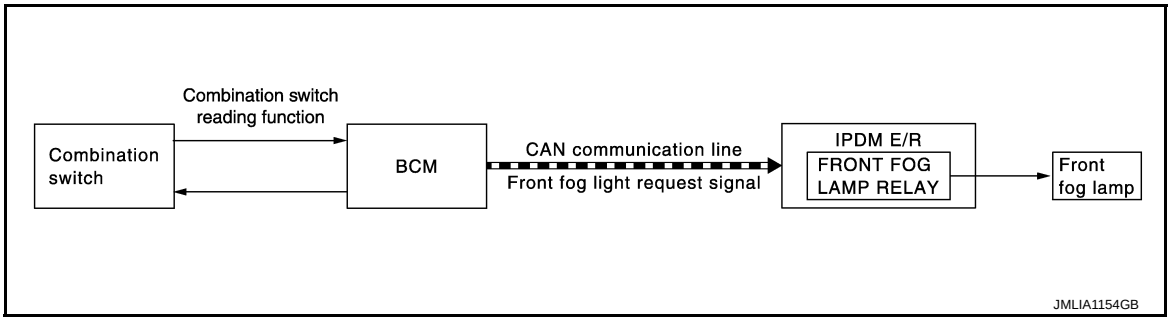
If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
• Parking lamp • License plate lamp • Tail lamp	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Diagram

INFOID:0000000011731951



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000011731952

OUTLINE

Front fog lamp is controlled by combination switch reading function and 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 light request signal to IPDM E/R via CAN communication according to the front fog lamp ON condition.

Front fog lamp ON condition

- Front fog lamp switch ON, and any of the following conditions are satisfied. [Except headlamp (HI) ON condition]
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-12, "AUTO LIGHT SYSTEM : System Description".)
- IPDM E/R turns the integrated front fog lamp relay ON, and turns the front fog lamp ON according to the front fog light request signal.

FRONT FOG LAMP SYSTEM : Fail-Safe

INFOID:0000000011731953

CAN COMMUNICATION CONTROL

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

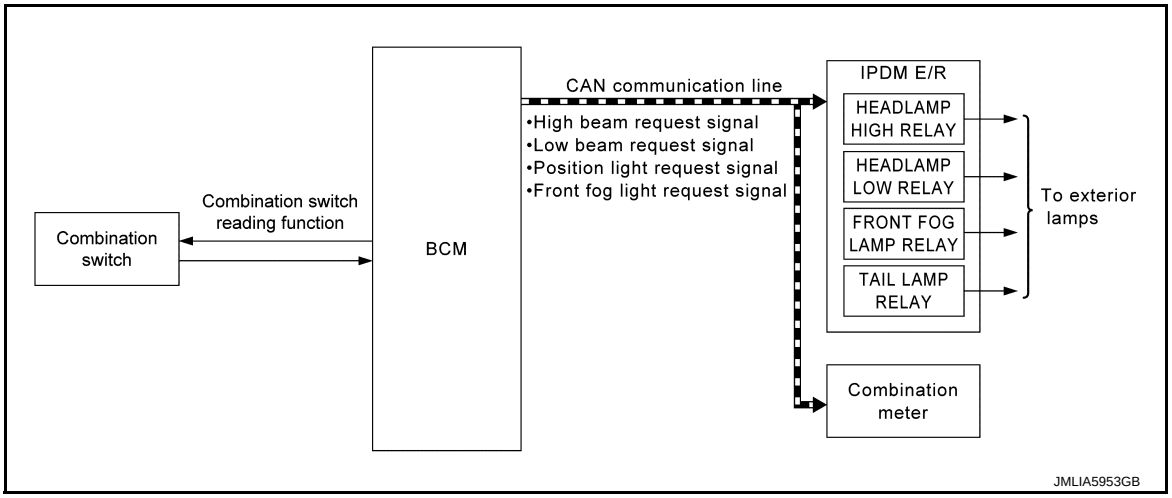
If No CAN Communication Is Available With BCM

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

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM : System Diagram

INFOID:0000000011731954



EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000011731955

OUTLINE

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

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

EXTERIOR LAMP BATTERY SAVER ACTIVATION

- BCM activates the timer and turns the exterior lamp OFF 45 seconds after the ignition switch is turned from ON → OFF with the exterior lamps ON.
- When in any of following conditions (after the exterior lamp battery saver is activated), exterior lamps can be turned ON.

- Ignition switch is turned from OFF → ON
- Lighting switch is changed
- Front fog lamp switch is changed

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011739586

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning system	AIR CONDITONER		×	×*
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

NOTE:
*: For models with automatic A/C, this diagnosis mode is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power position is “LOCK”*.)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is “OFF”.)
	LOCK>ACC		While turning power position from “LOCK”* *to “ACC”
	ACC>ON		While turning power position from “ACC” to “IGN”
	RUN>ACC		While turning power position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power position from “ACC” to “OFF”
	OFF>LOCK		While turning power position from “OFF” to “LOCK”*
	OFF>ACC		While turning power position from “OFF” to “ACC”
	ON>CRANK		While turning power position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is “LOCK”*.) to low power consumption mode
	LOCK		Power position is “LOCK”*
	OFF		Power position is “OFF” (Ignition switch OFF)
	ACC		Power position is “ACC” (Ignition switch ACC)
	ON		Power position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:

*: Power position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), and any of the following conditions are met.

- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (XENON TYPE)

INFOID:0000000011731957

WORK SUPPORT

Service item	Setting item	Setting	
CUSTOM A/LIGHT SETTING*1	MODE1*2	Normal	
	MODE2	More sensitive setting than normal setting (Turns ON earlier than normal operation)	
	MODE3	More sensitive setting than MODE2 (Turns ON earlier than MODE2)	
	MODE4	Less sensitive setting than normal setting (Turns ON later than normal operation)	
BATTERY SAVER SET	On*2	With the exterior lamp battery saver function	
	Off	Without the exterior lamp battery saver function	
ILL DELAY SET*1	MODE1*2	45 sec.	Sets delay timer function timer operation time. (All doors closed)
	MODE2	Without the function	
	MODE3	30 sec.	
	MODE4	60 sec.	
	MODE5	90 sec.	
	MODE6	120 sec.	
	MODE7	150 sec.	
	MODE8	180 sec.	
HEAD LIGHT TIMER	MODE1	10 sec.	Sets follow me home function activating time
	MODE2*2	30 sec.	
AUTO LIGHT LOGIC SET	MODE1	**NOTE:** This item is displayed, but cannot be used	
	MODE2		
	MODE3		
	MODE4		
	MODE5		
	MODE6		

*1: For models without auto light system, this item cannot be used.

*2: Factory setting

DATA MONITOR

NOTE:

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

Monitor item [Unit]	Description
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates [STOP/STALL/CRANK/RUN] condition of engine states
VEH SPEED 1 [km/h]	Display the vehicle speed signal received from combination meter by numerical value [km/h]

Monitor item [Unit]	Description
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	
HEAD LAMP SW 2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW*1 [On/Off]	
FR FOG SW*2 [On/Off]	
DOOR SW-DR [On/Off]	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS [On/Off]	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR [On/Off]	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL [On/Off]	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK [On/Off]	Indicated [On/Off] condition of back door switch
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM
OPTICAL SENSOR [On/Off/NG]	**NOTE:** This item is displayed, but cannot be monitored

*1: For models without auto light system, this item cannot be monitored.

*2: For models without front fog lamp, this item cannot be monitored.

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	• Transmits the position light request signal to IPDM E/R via CAN communication to turn the parking, license plate and tail lamps ON • Transmits the position light request signal to combination meter via CAN communication to turn the position lamp indicator lamp ON
	Off	Stops the position light request signal transmission
HEAD LAMP	HI	• Transmits the high beam request signal to IPDM E/R via CAN communication to turn the headlamp (HI) ON • Transmits the high beam request signal to combination meter via CAN communication to turn the high beam indicator lamp ON
	Low	Transmits the low beam request signal to IPDM E/R via CAN communication to turn the headlamp (LO) ON
	Off	Stops the high beam request signal and low beam request signal transmission

Test item	Operation	Description
FR FOG LAMP*1	On	• Transmits the front fog light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON (With front fog lamp) • Transmits the daytime running light request signal to IPDM E/R via CAN communication to turn the daytime running light ON (NISMO models with daytime running light system)
	Off	• Stops the front fog light request signal transmission (With front fog lamp) • Stops the front fog light request signal transmission (NISMO models with daytime running light system)
DAYTIME RUNNING LIGHT*2	On	Transmits the daytime running light request signal to IPDM E/R via CAN communication to turn the headlamp (HI) ON [Headlamp (HI) at approximately half illumination]
	Off	Stops the daytime running light request signal transmission
ILL DIM SIGNAL	On	**NOTE:** This item is displayed, but cannot be tested
	Off	

*1: For models without front fog lamp and except for NISMO models with daytime running light system, this item cannot be tested.
*2: For models without daytime running light system and NISMO models with daytime running light system, this item cannot be tested.

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER) (XENON TYPE)

INFOID:0000000011731958

WORK SUPPORT

Service item	Setting item	Setting	
HAZARD ANSWER BACK	Lock Only	With locking only	Sets the hazard warning lamp answer back function when the door is lock/unlock with the door request switch and Intelligent Key
	Unlock Only	With unlocking only	
	Lock/ Unlock*	With locking/unlocking	
	Off	Without the function	

*: Factory setting

DATA MONITOR

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

Monitor item [Unit]	Description
REQ SW -DR [On/Off]	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS [On/Off]	Indicates [On/Off] condition of door request switch (passenger side)
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
TURN SIGNAL R [On/Off]	Each switch status that BCM detects from the combination switch reading function
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch

Monitor item [Unit]	Description
RKE-LOCK [On/Off]	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK [On/Off]	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-PANIC* [On/Off]	Indicates [On/Off] condition of PANIC button of Intelligent Key

*: For models without panic alarm function, this item cannot be used.

ACTIVE TEST

Test item	Operation	Description
FLASHER	RH	• Outputs voltage to turn the right side turn signal lamps ON • Transmits the turn indicator signal to combination meter via CAN communication to turn the turn signal indicator lamp (RH) ON
	LH	• Outputs voltage to turn the left side turn signal lamps ON • Transmits the turn indicator signal to combination meter via CAN communication to turn the turn signal indicator lamp (LH) ON
	Off	• Stops the voltage to turn the turn signal lamps OFF • Stops the turn indicator signal transmission

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000011739587

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
- Side marker lamp
- Front fog lamp
- Headlamp (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan

Operation Procedure

CAUTION:

Wiper arm interferes with hood when wiper is operated while wiper arm is in the raised position. Always perform auto active test without setting wiper arm in the raised position. Always pour water on front windshield glass in advance to auto active test so that damage on front windshield glass surface is prevented.

1. Turn the ignition switch OFF.
2. Turn the ignition switch ON, and within 20 seconds, press the driver door switch 10 times. Then turn the ignition switch OFF.
   CAUTION:
   Close passenger door.
3. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
   CAUTION:
   Engine starts when ignition switch is turned ON while brake pedal is depressed.
4. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

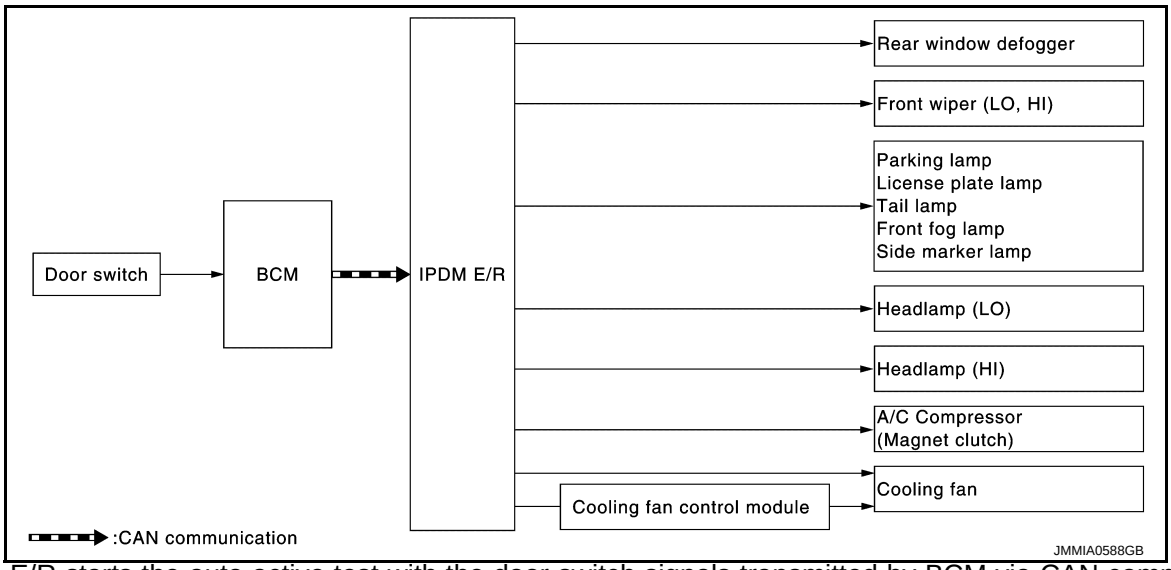
- When auto active test mode has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-78, "Component Function Check".

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 • Side marker lamp • Front fog lamp	10 seconds
4	Headlamp	LO for 10 seconds →HI ON ⇔ OFF 5 times
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
6	Cooling fan	50% duty for 5 seconds → 100% duty for 5 seconds

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
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	YES	BCM signal input circuit
		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 operate • Parking lamp • License plate lamp • Tail lamp • Side marker lamp • Front fog lamp • Headlamp (HI, LO) • Front wiper motor	Perform auto active test. Does the applicable system operate?	YES	BCM signal input circuit
		NO	• Lamp or motor • Lamp or motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES	• A/C amp. signal input circuit • CAN communication signal between A/C amp. and ECM • CAN communication signal between ECM and IPDM E/R
		NO	• Magnet clutch • Harness or connector between IPDM E/R and magnet clutch • IPDM E/R

Symptom	Inspection contents		Possible cause
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	• Harness or connector between IPDM E/R and cooling fan relay • Harness or connector between IPDM E/R and cooling fan control module. • Harness or connector between cooling fan control module and cooling fan motor • Cooling fan motor • Cooling fan relay • Cooling fan control module • IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000011739588

APPLICATION ITEM

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

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

SELF DIAGNOSTIC RESULT

Refer to PCS-23, "DTC Index".

DATA MONITOR

NOTE:

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

Monitor Item [Unit]	MAIN SIGNALS	Description
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.

Monitor Item [Unit]	MAIN SIGNALS	Description
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the ignition power supply (M/T models) or shift position (CVT models) judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the CVT shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		**NOTE:** This item is indicated, but not monitored.
S/L STATE [LOCK/UNLK/UNKWN]		**NOTE:** This item is indicated, but not monitored.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication. **NOTE:** This item is monitored only for the except for NISMO models.
OIL P SW [Open/Close]		**NOTE:** This item is indicated, but not monitored.
HOOD SW [Off/On]		**NOTE:** This item is indicated, but not monitored.
HL WASHER REQ [Off/On]		**NOTE:** This item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder request signal received from BCM via CAN communication.

ACTIVE TEST

Test item

Test item	Operation	Description
HORN	On	Operates horn relay for 20 ms.
REAR DEFOGGER	Off	OFF
	On	Operates the rear window defogger relay.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	Transmits 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Transmits 75% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Transmits 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	**NOTE:** This item is indicated, but cannot be tested.

Test item	Operation	Description
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000011731967

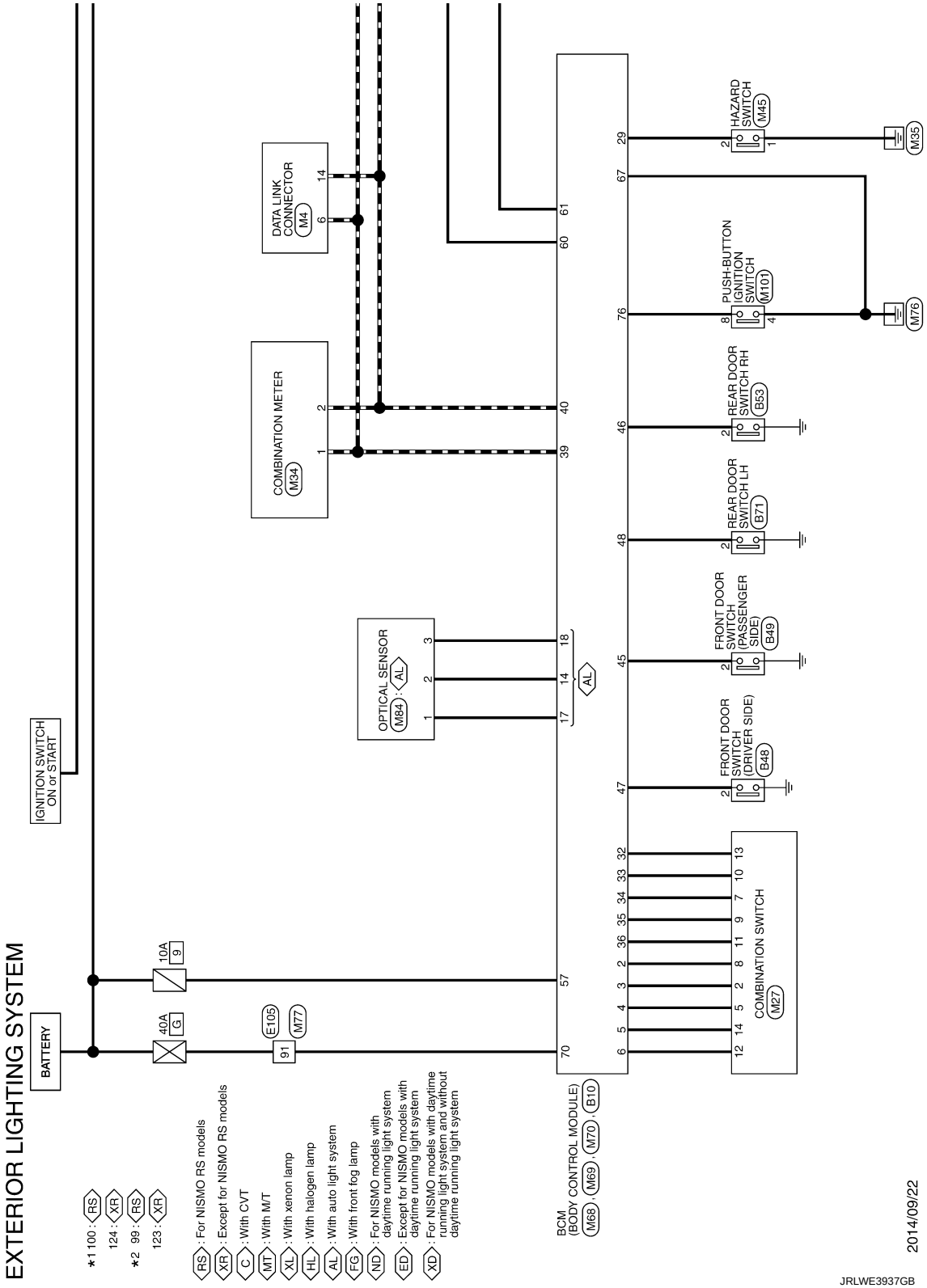
ECU	Reference
BCM	BCS-38, "Reference Value"
	BCS-60, "Fail-safe"
	BCS-61, "DTC Inspection Priority Chart"
	BCS-62, "DTC Index"
IPDM E/R	PCS-16, "Reference Value"
	PCS-22, "Fail-safe"
	PCS-23, "DTC Index"

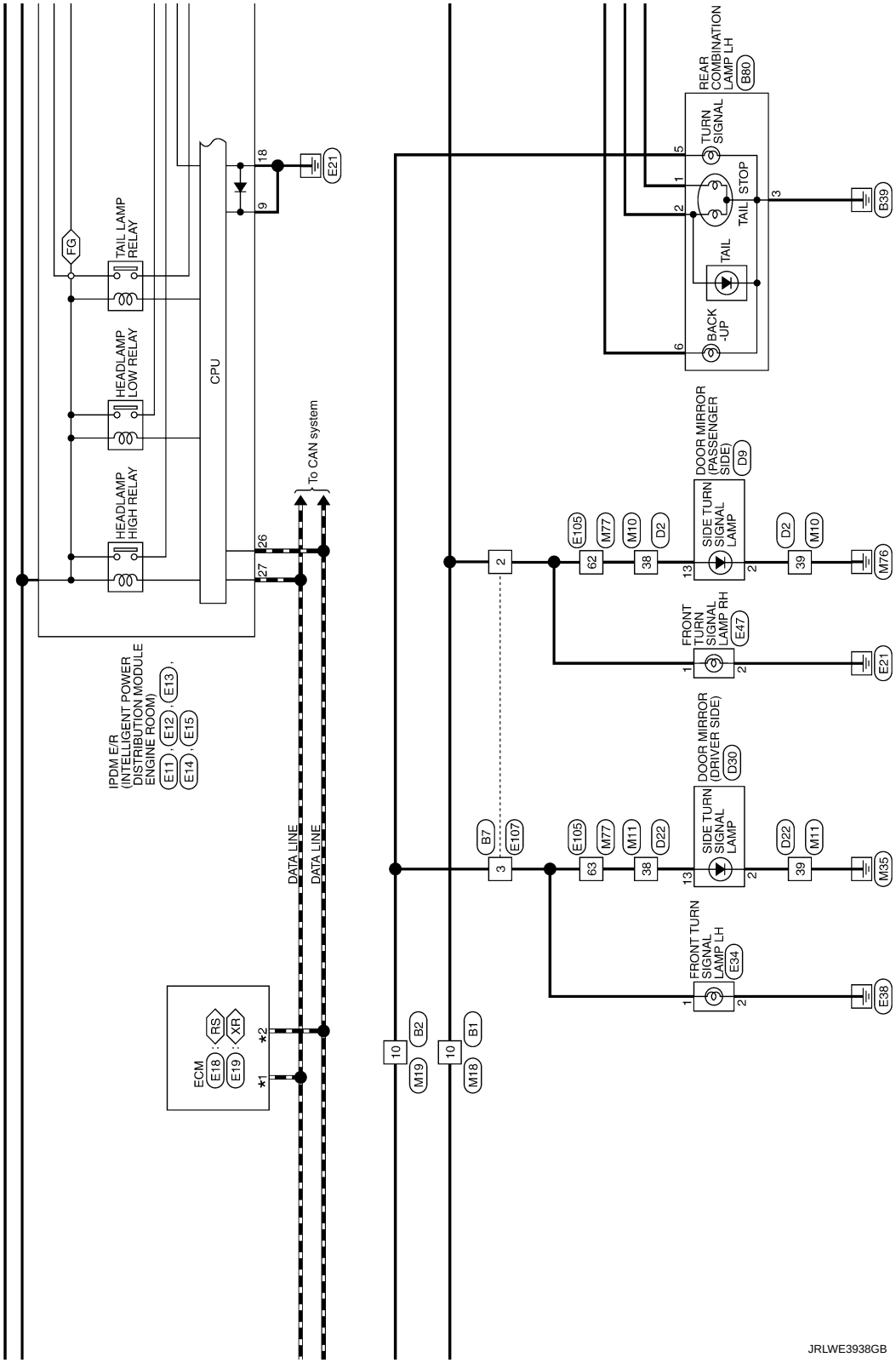
WIRING DIAGRAM

EXTERIOR LIGHTING SYSTEM

Wiring Diagram

INFOID:0000000011731972




REAR COMBINATION LAMP LH
B80
TURN SIGNAL
STOP
TAIL
BACK -UP
B39
DOOR MIRROR (PASSENGER SIDE)
D9
SIDE TURN SIGNAL LAMP
FRONT TURN SIGNAL LAMP RH
E47
DOOR MIRROR (DRIVER SIDE)
D30
FRONT TURN SIGNAL LAMP LH
E34
E21
E38
M76
M35
E105
M77
M10
D2
M11
D22
B7
E107
B2
M19
B1
M18
TAIL LAMP RELAY
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
FG
CPU
To CAN system
DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E11, E12, E13, E14, E15
ECM
E18, E19
RS, XR
*1, *2
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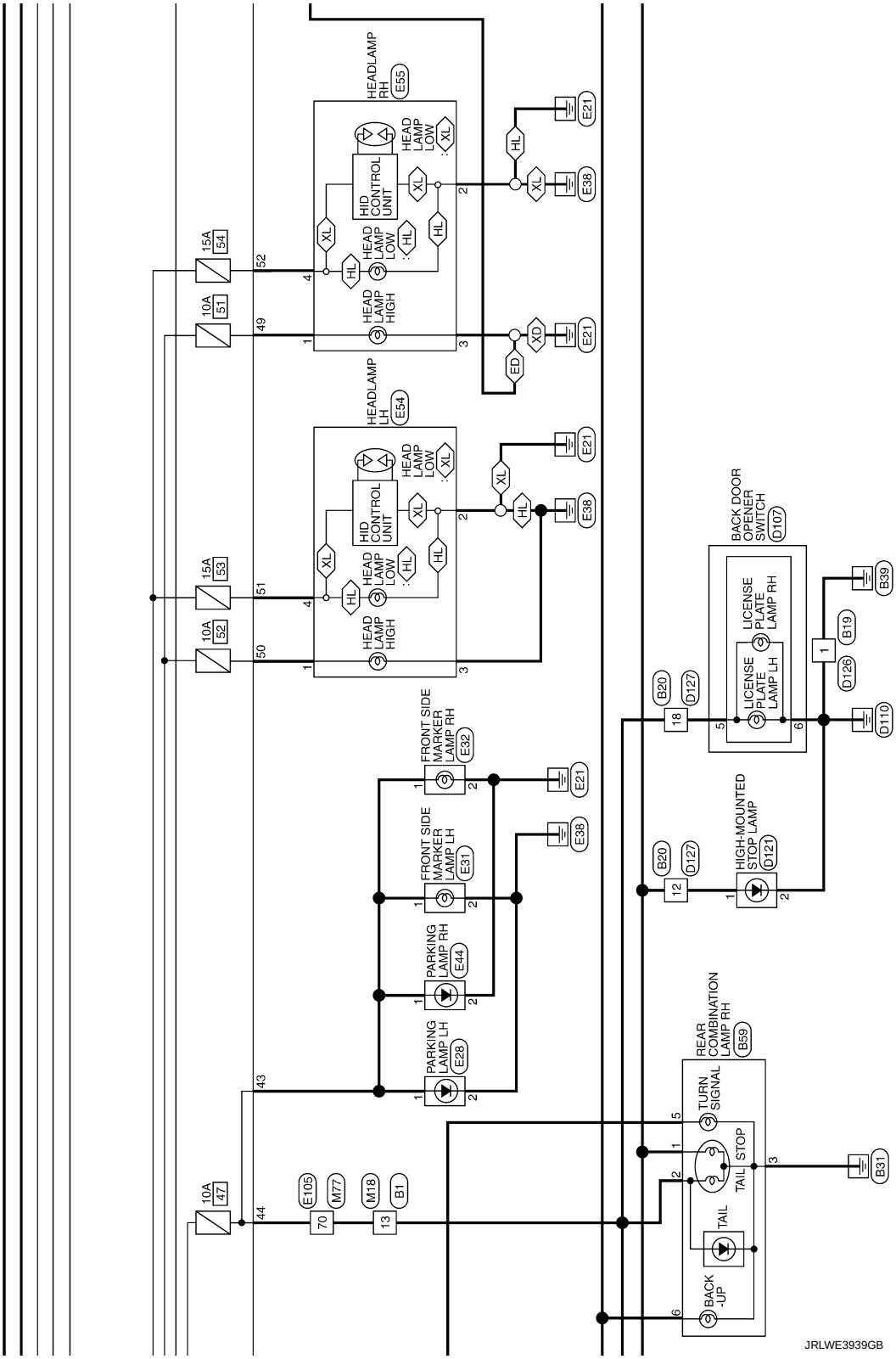
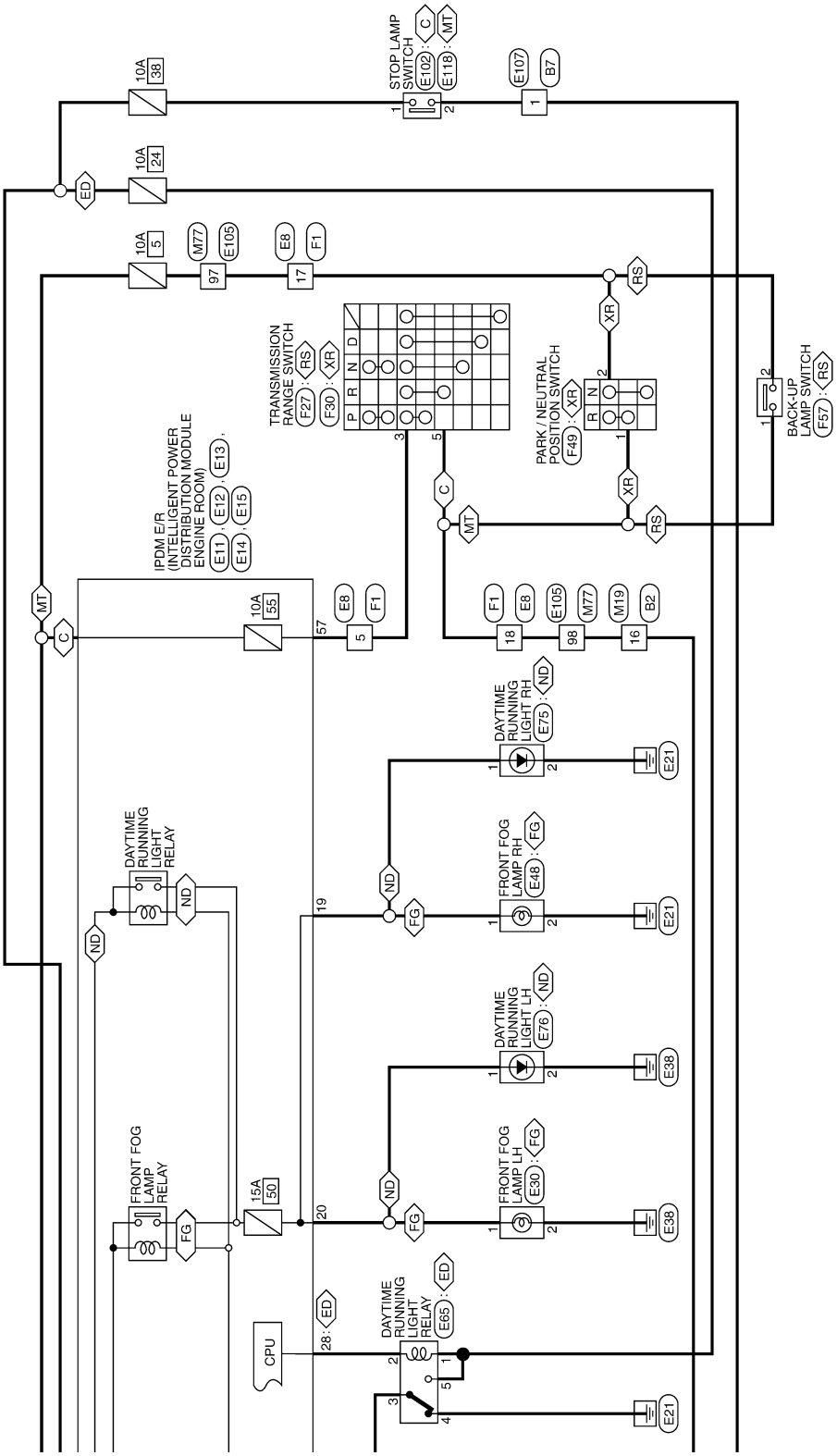

HEADLAMP RH E55
HEADLAMP LH E54
HID CONTROL UNIT
HEAD LAMP LOW
HEAD LAMP HIGH
15A 54
10A 51
15A 53
10A 52
10A 47
FRONT SIDE MARKER LAMP RH E32
FRONT SIDE MARKER LAMP LH E31
PARKING LAMP RH E44
PARKING LAMP LH E28
BACK DOOR OPENER SWITCH D107
LICENSE PLATE LAMP RH
LICENSE PLATE LAMP LH
HIGH-MOUNTED STOP LAMP D121
REAR COMBINATION LAMP RH B59
TURN SIGNAL
TAIL
STOP
BACK -UP
E21
E38
B39
B19
D126
D110
B20
D127
B31
E105
M77
M18
B1
JRLWE3939GB



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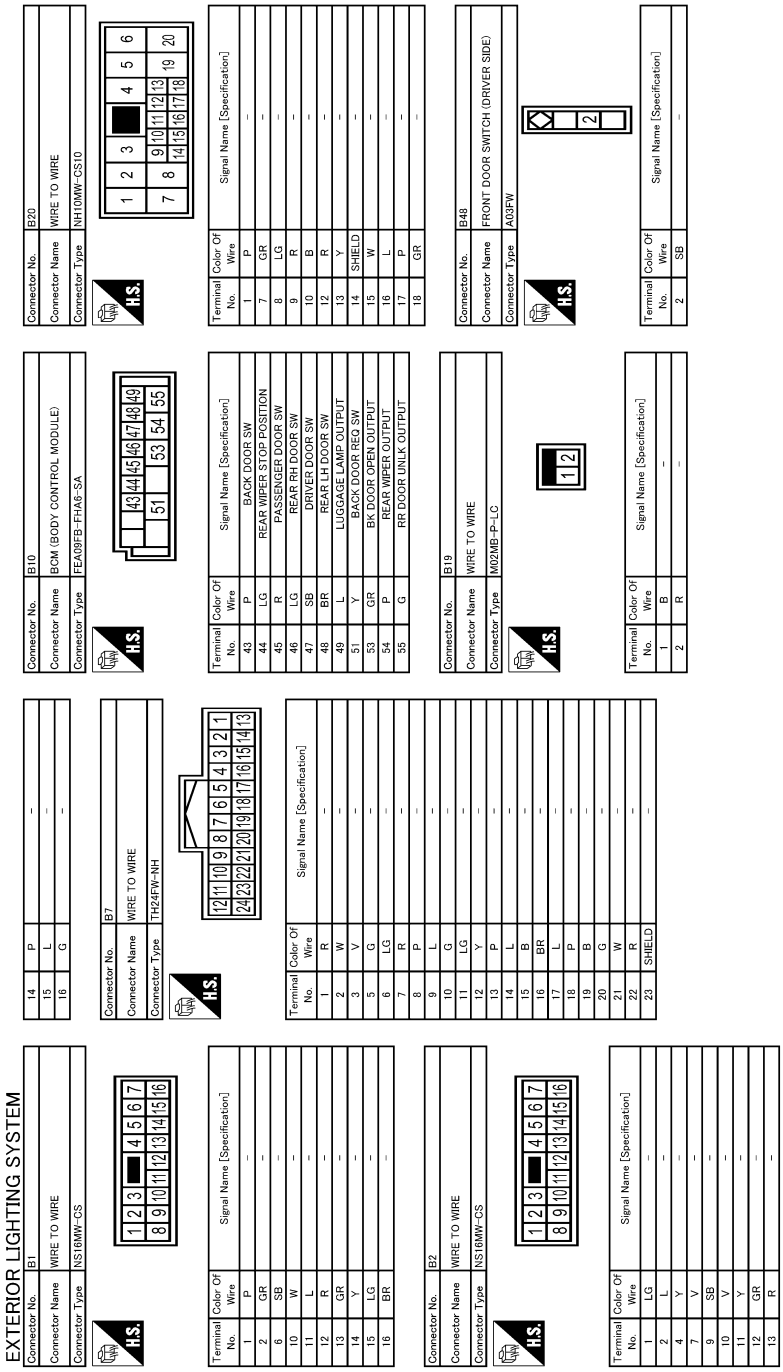

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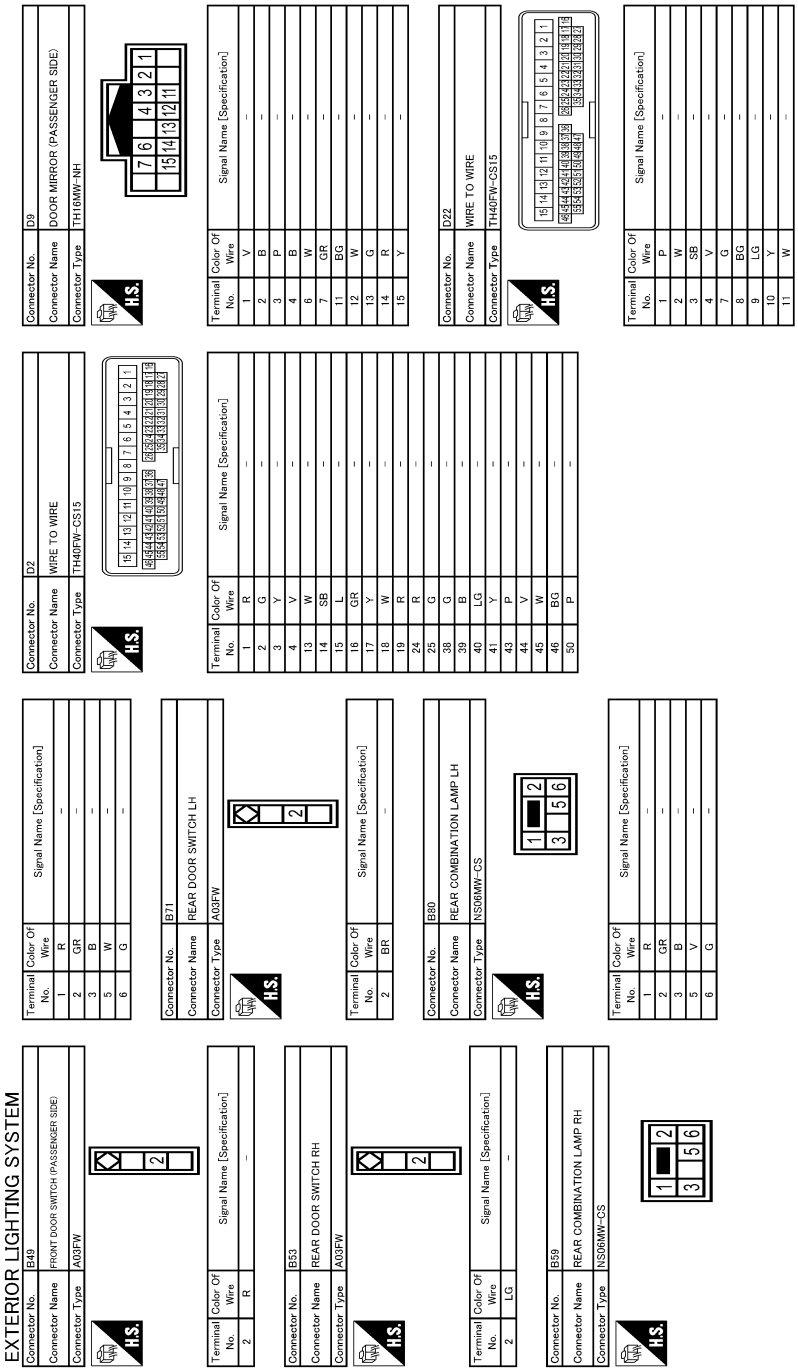

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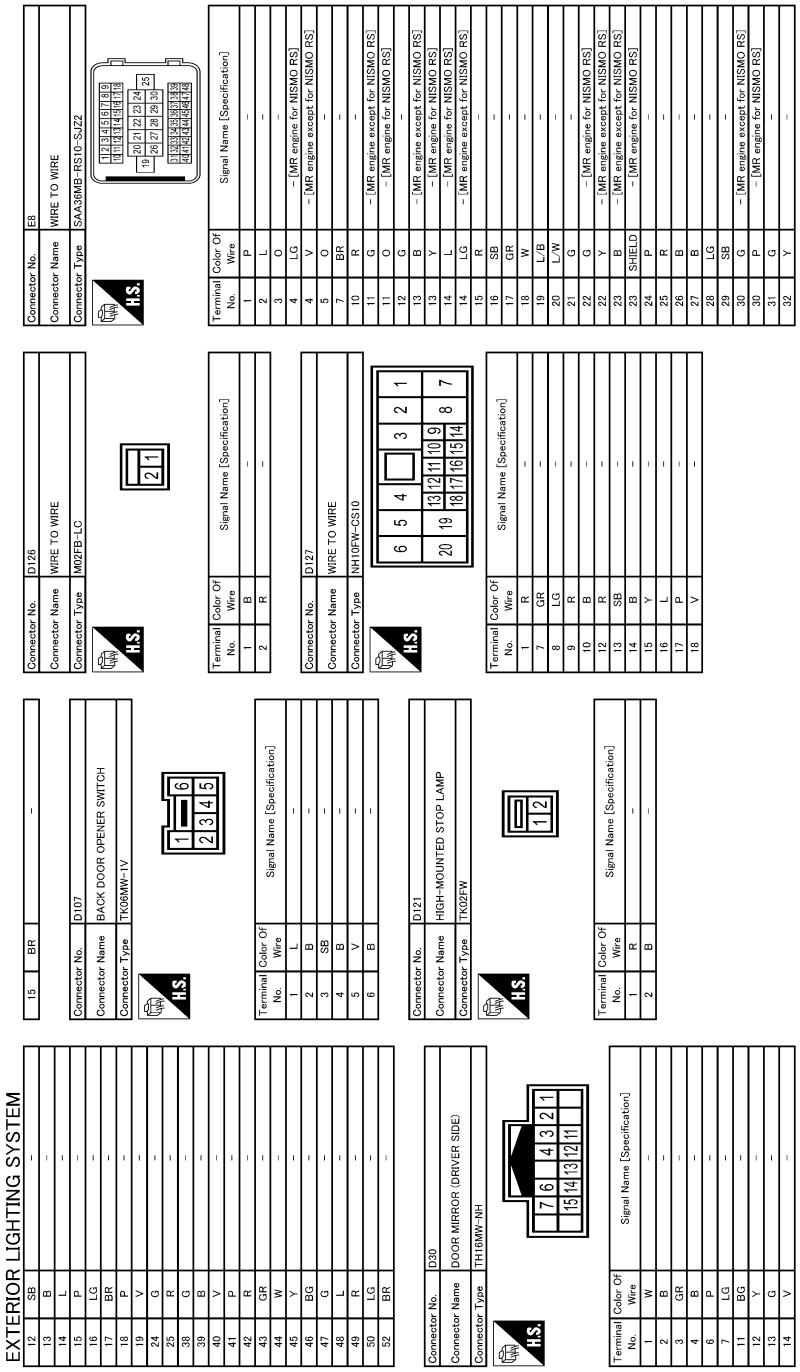

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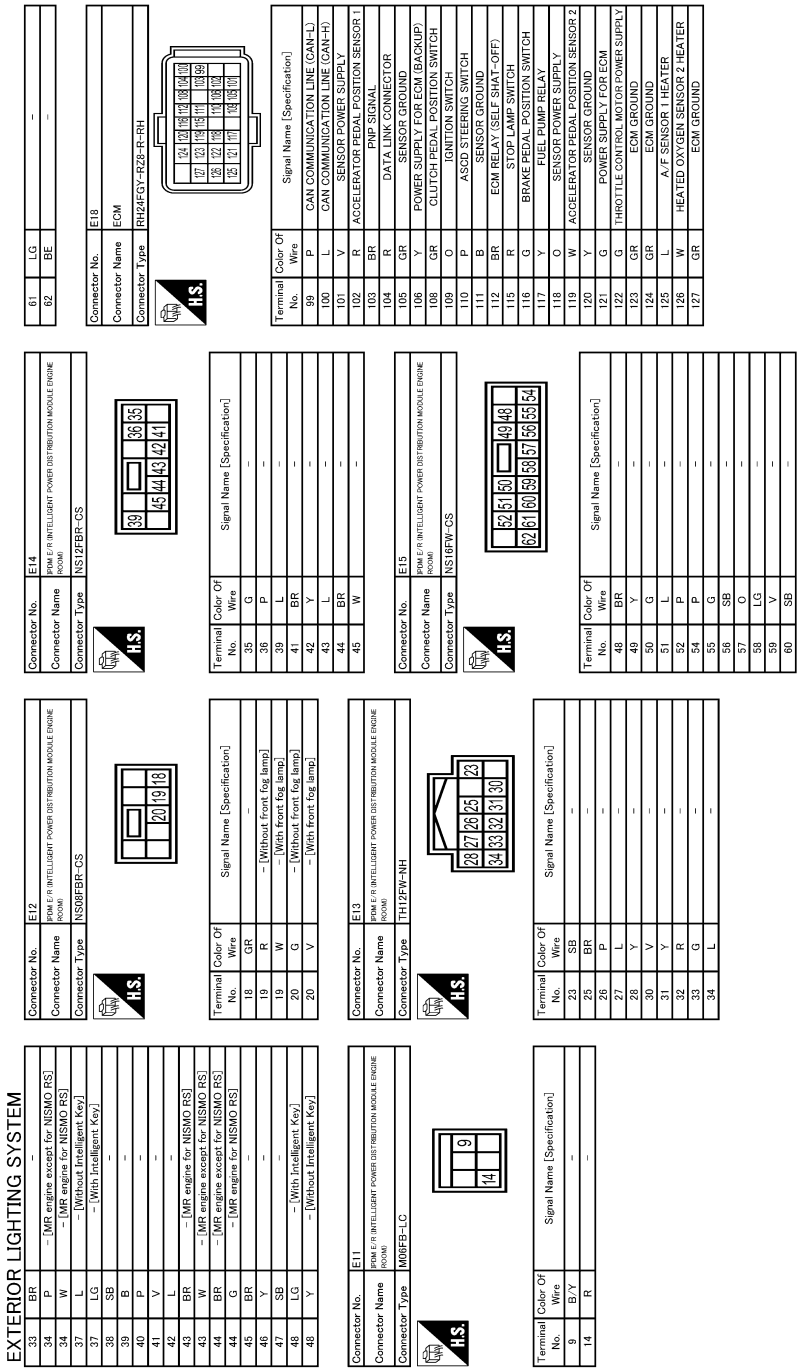

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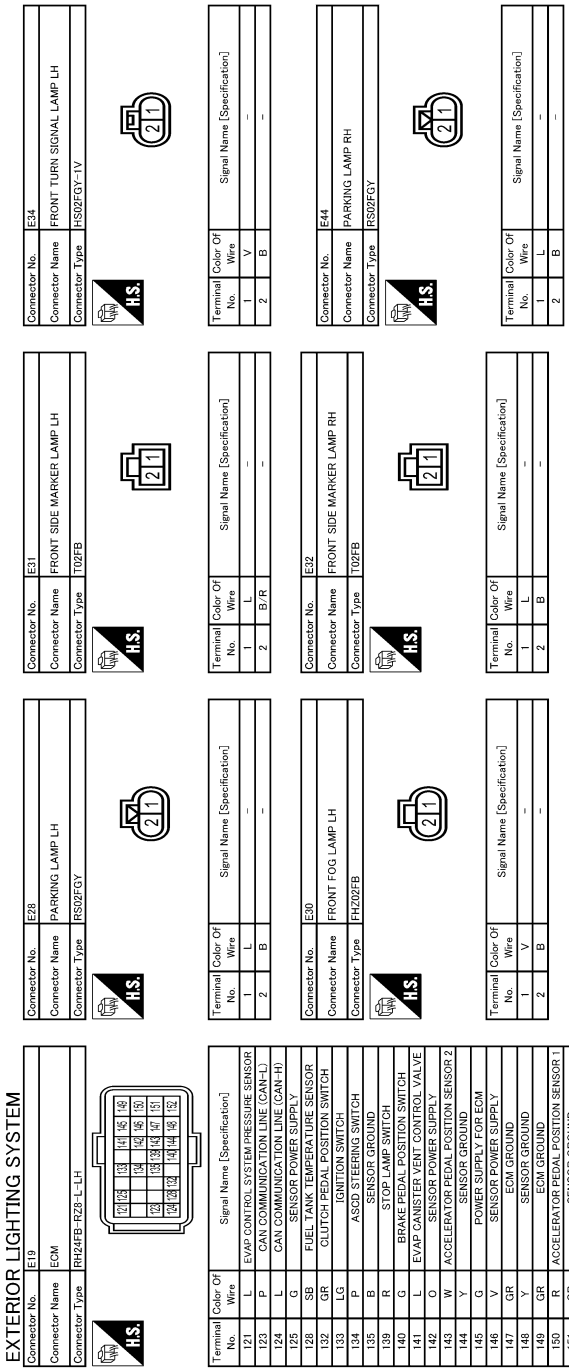


JRLWE3945GB

EXTERIOR LIGHTING SYSTEM

Connector No.	E47
Connector Name	FRONT TURN SIGNAL LAMP RH
Connector Type	HS02FGY-1V

H.S.

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

Connector No.	E48
Connector Name	FRONT FOG LAMP RH
Connector Type	FH202FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	–
2	B	–

Connector No.	E54
Connector Name	HEADLAMP LH
Connector Type	RS04FGY-PR

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	B	– [With halogen lamp]
2	GR	– [With xenon lamp]
3	B	–
4	L	–

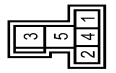
Connector No.	E55
Connector Name	HEADLAMP RH
Connector Type	RS04FGY-PR

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	–
2	B	– [With halogen lamp]
2	GR	– [With xenon lamp]
3	B	– [Without daytime running light system]
3	W	– [With daytime running light system]
4	P	–

Connector No.	E65
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Type	MS03FB-M2-LC

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	–
2	Y	–
3	W	–
4	B	–
5	LG	–

Connector No.	E75
Connector Name	DAYTIME RUNNING LIGHT RH
Connector Type	RS02FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	B	–

Connector No.	E76
Connector Name	DAYTIME RUNNING LIGHT LH
Connector Type	RS02FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	B/R	–

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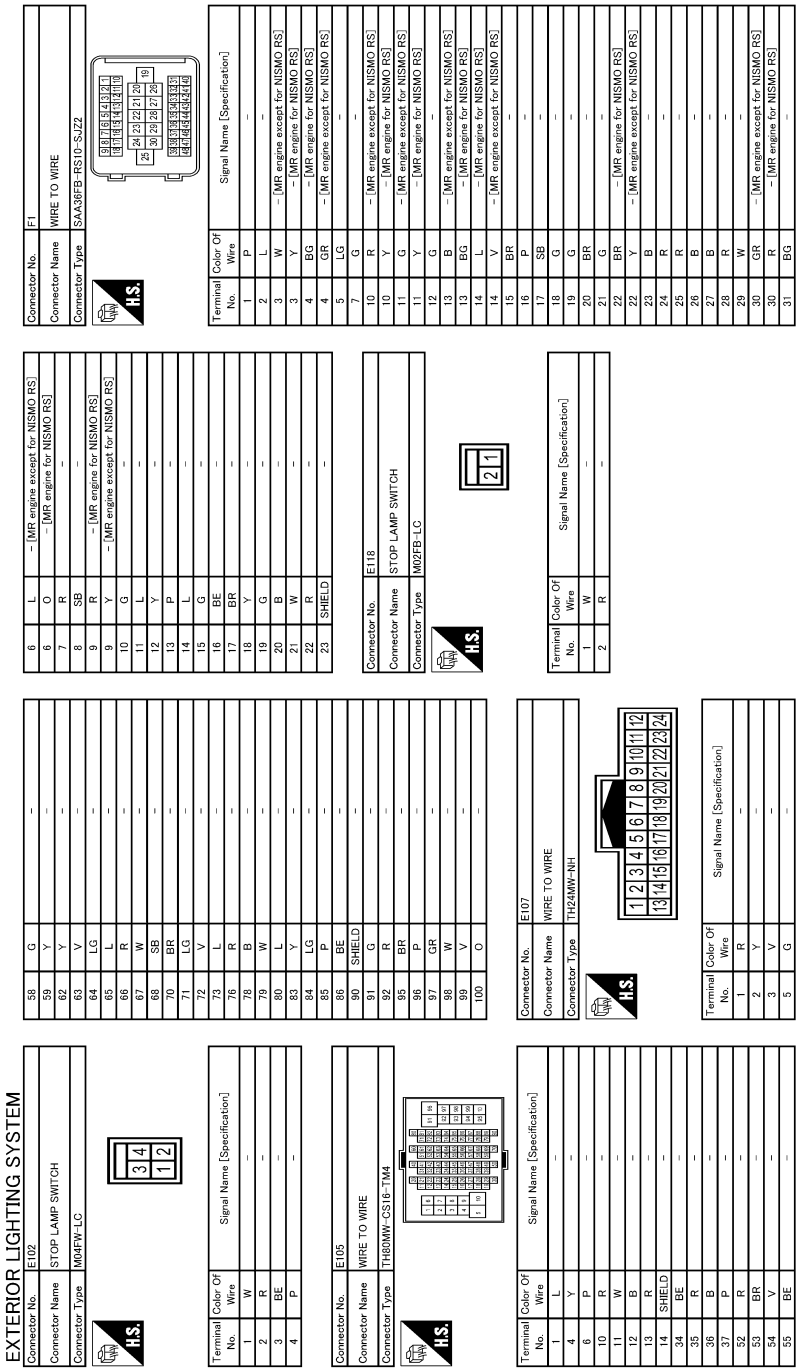

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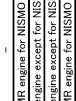
EXTERIOR LIGHTING SYSTEM

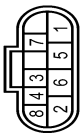
32	LG	–
33	BR	–
34	G	– [MR engine for NISMO RS]
34	P	– [MR engine except for NISMO RS]
37	G	– [Without Intelligent Key]
37	GR	– [With Intelligent Key]
38	R	–
39	GR	–
40	P	– [MR engine for NISMO RS]
41	BR	– [MR engine except for NISMO RS]
42	V	– [MR engine for NISMO RS]
42	L	– [MR engine except for NISMO RS]
43	W	– [MR engine for NISMO RS]
43	L	– [MR engine except for NISMO RS]
44	W	– [MR engine for NISMO RS]
44	BR	– [MR engine except for NISMO RS]
45	G	– [MR engine for NISMO RS]
45	BR	–
46	R	–
47	Y	– [With Intelligent Key]
48	GR	– [Without Intelligent Key]
48	Y	–

Connector No.	F27
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	RK08FG



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

Connector No.	F30
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	YDX08FB-HS4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	–
2	BR	–
3	LG	–
4	SB	–
5	G	–
6	LG	–
7	W	–
8	BR	–

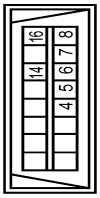
Connector No.	F49
Connector Name	PARK / NEUTRAL POSITION SWITCH
Connector Type	FEA03FG-LC

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	SB	–
3	BR	–

Connector No.	F57
Connector Name	BACK-UP LAMP SWITCH
Connector Type	RK02FB

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	SB	–

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



Terminal No.	Color Of Wire	Signal Name [Specification]
4	B	–
5	B	–
6	L	–
7	W	–
8	LG	–
14	P	–
16	Y	–

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	G	–
3	SB	–
4	V	–
13	GR	–
14	GR	–
15	L	–
16	SHIELD	–
17	Y	–
18	G	–
19	L	–
24	R	–
25	G	–
38	Y	–
39	B	–
40	BR	–
41	G	–
43	V	–
44	V	–
45	LG	–
46	BR	–
50	P	–

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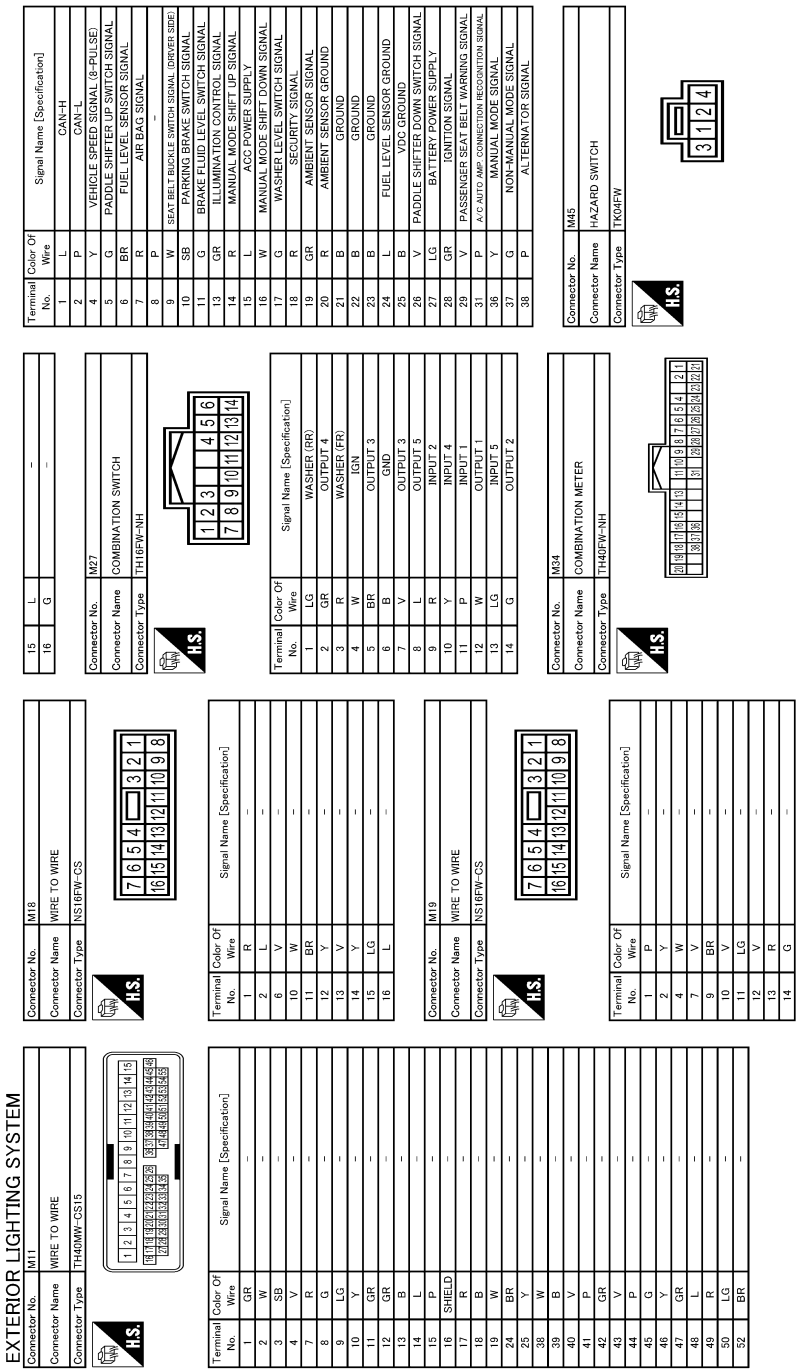

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EXTERIOR LIGHTING SYSTEM

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	–
2	SB	–
3	V	–
4	GR	–
35	R	COMBI SW OUTPUT 2
36	P	COMBI SW OUTPUT 1
37	G	DETENT SW
38	SB	RECEIVER COMM
39	L	CAN-H
40	P	CAN-L

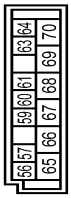
Connector No. M68
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FB-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	BR	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	W	COMBI SW INPUT 1
7	L	KEY CYL UNLOCK SW
8	R	KEY CYL LOCK SW
9	R	STOP LAMP SW 1
10	W	–
12	GR	DOOR LK & UNLK SW LOCK
13	BR	DOOR LK & UNLK SW UNLOCK
14	SB	OPTICAL SENS
15	W	REAR WINDOW DEF SW
17	Y	OPTICAL SENS PWR SPLY
18	V	RECEIVER GND
21	P	NATS ANT AMP.
23	R	SECURITY IND LAMP CONT
24	SB	DONGLE LINK
25	LG	NATS ANT AMP.
26	BR	THERMO AMP.
27	Y	A/C SW
28	LG	BLOWER FAN SW
29	SB	HAZARD SW
30	L	BK DOOR OPENER SW
31	GR	DR DOOR UNLK SENS
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	V	COMBI SW OUTPUT 3

Connector No. M69
Connector Name BCM (BODY CONTROL MODULE)
Connector Type FEA09FW-FHA6-SA

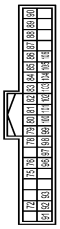
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
56	P	INT ROOM LAMP PWR SPLY
57	P	BATT (FUSE)
59	SB	PASS DOOR UNLK OUTPUT
60	V	TURN SIG LH OUTPUT
61	W	TURN SIG RH OUTPUT
63	BR	INT ROOM LAMP CONT
64	R	REVERSE SW
65	V	ALL DOOR LOCK OUTPUT
66	SB	DOOR UNLOCK DR
67	B	GND
68	L	PW PWR SPLY (IGN)
69	P	PW PWR SPLY (BAT)
70	Y	BAT (F/L)

Connector No. M70
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FW-NH

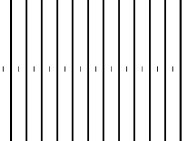
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
72	SB	A/C IND OUTPUT
75	LG	DR DOOR REQ SW
76	LG	PASS DOOR REQ SW
78	P	DRIVER DOOR ANT+
79	V	DRIVER DOOR ANT–
80	BR	PASS DOOR ANT+
81	G	PASS DOOR ANT–
82	W	REAR BMPR ANT+
83	B	REAR BMPR ANT–
84	BR	ROOM ANT 1+
85	GR	ROOM ANT 1–
86	G	ROOM ANT 2+
87	R	ROOM ANT 2–
88	V	LUGGAGE ROOM ANT+
89	LG	LUGGAGE ROOM ANT–
90	W	PUSH–BTN IGN SW ILL PWR
91	V	ACC / ON IND
92	R	PUSH–BTN IGN SW ILL GND
93	GR	I–KEY WARN BUZZER
96	BR	ACC RELAY CONT
97	SB	STARTER RELAY CONT
98	P	IGN RELAY (IPDM E/R) CONT
99	R	IGN RELAY (F/B) CONT
100	P	PUSH SW
101	Y	CLUTCH INTERLOCK SW
102	L	NEUTRAL SW
103	G	FR DEFROST SW
104	SB	CVT SHIFT SELECT PWR SPLY
105	V	STOP LAMP SW 2
106	Y	BLWR RELAY CONT

Connector No. M77
Connector Name WIRE TO WIRE
Connector Type TH80FW-CS16-TM4

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
4	V	–
6	P	–
10	R	–
11	R	–
12	LG	–
13	V	–
14	SHIELD	–
34	LG	–
35	SB	–
36	B	–
37	P	–
52	R	–
53	L	–
54	SB	–
55	P	–
58	LG	–
59	G	–
62	Y	–
63	W	–
64	G	–
65	GR	–
66	Y	–
67	V	–
68	R	–
70	V	–
71	R	–
72	GR	–
73	G	–
76	W	–
78	LG	–
79	V	–
80	LG	–
83	P	–
84	G	–
85	BR	–

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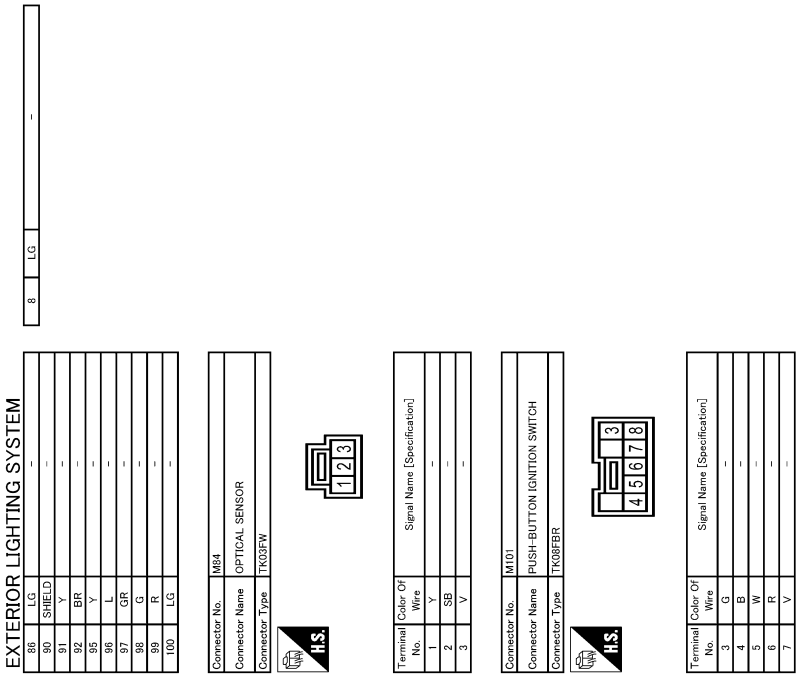

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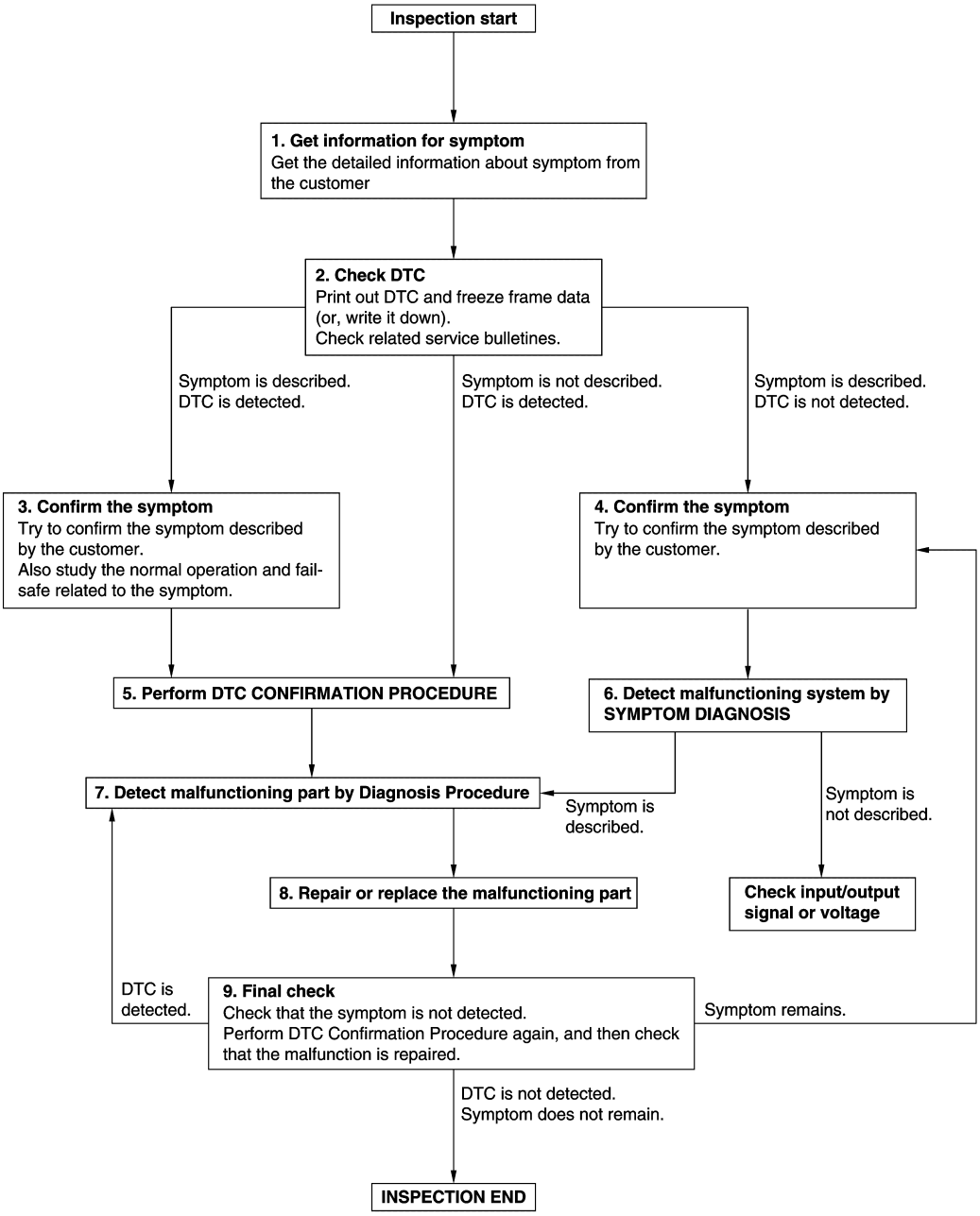
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000011731974

OVERALL SEQUENCE



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DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is detected.

- Record DTC and freeze frame data (Print them out using CONSULT.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.

3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.
Symptom is described, DTC is not detected>>GO TO 4.
Symptom is not described, DTC is detected>>GO TO 5.

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.
Also study the normal operation and fail-safe related to the symptom.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

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

NOTE:

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

Is DTC detected?

YES >> GO TO 7.
NO >> Check according to GI-44, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.
NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check according to GI-44, "Intermittent Incident".

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during 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.

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

INFOID:0000000011732004

1.CHECK HEADLAMP (HI) OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the headlamp (HI) blinks.

Hi : Headlamp (HI) blinks (ON/OFF is repeated 1 second each.)
Off : Headlamp (HI) OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the headlamp (HI) blinks.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-49, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732005

1.CHECK HEADLAMP (HI) FUSE

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK HEADLAMP (HI) POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E15	49	Ground	EXTERNAL LAMPS	Hi	9 – 16 V (Repeated 1 second)
					Off	0 – 1 V
LH		50			Hi	9 – 16 V (Repeated 1 second)
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

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

IPDM E/R			Headlamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E15	49	E55	1	Existed
LH		50	E54		

Is the inspection result normal?

YES-1 >> Without daytime running light system: GO TO 4.
YES-2 >> NISMO models with daytime running light system: GO TO 4.
YES-3 >> Except for NISMO models with daytime running light system: GO TO 6.
NO >> Repair or replace harness.

4.CHECK HEADLAMP (HI) GROUND CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp			—	Continuity
Connector		Terminal		
RH	E55	3	Ground	Existed
LH	E54			

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5.CHECK HEADLAMP (HI) BULB

Check the applicable headlamp (HI) bulb.

Is the inspection result normal?

YES >> Check the corresponding headlamp (HI) harness. Repair or replace if necessary.
NO >> Replace the corresponding headlamp (HI) bulb. Refer to EXL-95, "Replacement".

6.CHECK ILLUMINATION STATUS OF HEADLAMPS

Check illumination status of headlamps.

Which headlamp does not turn ON?

RH >> GO TO 7.
LH >> GO TO 11.

7.CHECK HEADLAMP (HI) RH GROUND CIRCUIT-1

1. Remove daytime running light relay.
2. Check continuity between headlamp harness connector and daytime running light relay harness connector.

Headlamp		Daytime running light relay		Continuity
Connector	Terminal	Connector	Terminal	
E55	3	E65	3	Existed

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace harness.

8.CHECK HEADLAMP (HI) RH GROUND CIRCUIT-2

Check continuity between daytime running light relay harness connector and ground.

Daytime running light relay		—	Continuity
Connector	Terminal		
E65	4	Ground	Existed

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace harness.

9.CHECK DAYTIME RUNNING LIGHT RELAY

Check daytime running light relay. Refer to EXL-51, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace daytime running light relay.

10.CHECK HEADLAMP (HI) RH BULB

Check the headlamp (HI) RH bulb.

Is the inspection result normal?

YES >> Check the headlamp (HI) RH harness. Repair or replace if necessary.
NO >> Replace headlamp (HI) RH bulb. Refer to EXL-95, "Replacement".

11.CHECK HEADLAMP (HI) LH GROUND CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp		—	Continuity
Connector	Terminal		
E54	3	Ground	Existed

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace harness.

12.CHECK HEADLAMP (HI) LH BULB

Check the headlamp (HI) LH bulb.

Is the inspection result normal?

YES >> Check the headlamp (HI) LH harness. Repair or replace if necessary.
NO >> Replace headlamp (HI) LH bulb. Refer to EXL-95, "Replacement".

Component Inspection

INFOID:0000000011740265

1.CHECK DAYTIME RUNNING LIGHT RELAY

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

Daytime running light relay		Condition		Continuity
Terminal				
3	4	Battery voltage	Apply	Not existed
			Not apply	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace daytime running light relay.

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000011732006

1.CHECK HEADLAMP (LO) OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the headlamp (LO) is turned ON.

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

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the headlamp (LO) is turned ON.

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.
NO >> Refer to EXL-52, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732007

1.CHECK HEADLAMP (LO) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	#54	15 A
Headlamp LO (LH)		#53	

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK HEADLAMP (LO) POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E15	52	Ground	EXTERNAL LAMPS	LO	9 – 16 V
					Off	0 – 1 V
LH		51			LO	9 – 16 V
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK HEADLAMP (LO) POWER SUPPLY CIRCUIT

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

IPDM E/R			Headlamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E15	52	E55	4	Existed
LH		51	E54		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK HEADLAMP (LO) GROUND CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp			—	Continuity
Connector		Terminal		
RH	E55	2	Ground	Existed
LH	E54			

Is the inspection result normal?

YES >> Perform the xenon headlamp diagnosis. Refer to EXL-54, "Diagnosis Procedure".
NO >> Repair or replace harness.

XENON HEADLAMP

Diagnosis Procedure

INFOID:0000000011732008

1.CHECK XENON BULB

Install the normal bulb to the applicable headlamp. Check that the headlamp (LO) is turned ON.

Is the headlamp (LO) turned ON?

YES >> Replace the corresponding xenon bulb. Refer to EXL-95, "Replacement".
NO >> GO TO 2.

2.CHECK XENON HEADLAMP

Install the normal headlamp assembly to the applicable headlamp. Check that the headlamp (LO) is turned ON.

Is the headlamp (LO) turned ON?

YES >> Replace the corresponding headlamp assembly. Refer to EXL-95, "Removal and Installation".
NO >> Xenon headlamp is normal.

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000011732013

1.CHECK TAIL LAMP OPERATION

Check that the tail lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check tail lamp circuit. Refer to EXL-59, "Component Function Check".

2.CHECK PARKING LAMP OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON
Off : Parking lamp OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> Parking lamp circuit is normal.
NO >> Refer to EXL-55, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732014

1.CHECK PARKING LAMP POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+		-	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E14	43	Ground	EXTERNAL LAMPS	TAIL	9 – 16 V
				Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

2.CHECK PARKING LAMP POWER SUPPLY CIRCUIT

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

IPDM E/R			Parking lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E14	43	E44	1	Existed
LH			E28		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK PARKING LAMP GROUND CIRCUIT

Check continuity between parking lamp harness connector and ground.

Parking lamp			—	Continuity
Connector		Terminal		
RH	E44	2	Ground	Existed
LH	E28			

Is the inspection result normal?

YES >> Replace the corresponding front combination lamp. Refer to EXL-99, "Removal and Installation".
NO >> Repair or replace harness.

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000011740272

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-55, "Component Function Check".

2.CHECK FRONT SIDE MARKER LAMP OPERATION

With CONSULT

1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With 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

Without CONSULT

1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. 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-57, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011740273

1.CHECK FRONT SIDE MARKER LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. 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 marker lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E14	43	E32	1	Existed
LH			E31		

Is the inspection result normal?

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

2.CHECK FRONT SIDE MARKER LAMP GROUND CIRCUIT

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

Front side marker lamp			—	Continuity
Connector		Terminal		
RH	E32	2	Ground	Existed
LH	E31			

Is the inspection result normal?

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

3.CHECK FRONT SIDE MARKER LAMP BULB

Check the applicable front side marker lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding front side marker lamp bulb socket. Repair or replace if necessary.
NO >> Replace the corresponding front side marker lamp bulb. Refer to EXL-99, "Replacement".

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000011732017

1.CHECK TAIL LAMP OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the tail lamp is turned ON.

TAIL : Tail lamp ON
Off : Tail lamp OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the tail lamp is turned ON.

Is the inspection result normal?

YES >> Tail lamp circuit is normal.
NO >> Refer to EXL-59, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732018

1.CHECK FUSE

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

Unit	Location	Fuse No.	Capacity
• Parking lamp RH • Parking lamp LH • Front side marker lamp RH • Front side marker lamp LH • Tail lamp RH • Tail lamp LH • License plate lamp RH • License plate lamp LH	IPDM E/R	#47	10 A

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK TAIL LAMP POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+		-	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E14	44	Ground	EXTERNAL LAMPS	TAIL	9 – 16 V
				Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK TAIL LAMP POWER SUPPLY CIRCUIT

1. Turn ignition 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
Connector		Terminal	Connector	Terminal	
RH	E14	44	B59	2	Existed
LH			B80		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			—	Continuity
Connector		Terminal		
RH	B59	3	Ground	Existed
LH	B80			

Is the inspection result normal?

YES-1 >> Stop lamp / tail lamp (Bulb side): GO TO 5.
YES-2 >> Tail lamp (LED side): Check the corresponding tail lamp harness, and if check result is normal, replace the corresponding rear combination lamp. Refer to EXL-108, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK STOP LAMP / TAIL LAMP BULB

Check the applicable stop lamp / tail lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding stop lamp / tail lamp bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace the corresponding stop lamp / tail lamp bulb. Refer to EXL-108, "Replacement".

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000011732019

1.CHECK TAIL LAMP OPERATION

Check that the tail lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check tail lamp circuit. Refer to EXL-59, "Component Function Check".

2.CHECK LICENSE PLATE LAMP OPERATION

With CONSULT

1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the license plate lamp is turned ON.

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

Without CONSULT

1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the license plate lamp is turned ON.

Is the inspection result normal?

YES >> License plate lamp circuit is normal.
NO >> Refer to EXL-61, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732020

1.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and back door opener switch connector.
3. Check continuity between IPDM E/R harness connector and back door opener switch harness connector.

IPDM E/R		Back door opener switch		Continuity
Connector	Terminal	Connector	Terminal	
E14	44	D107	5	Existed

Is the inspection result normal?

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

2.CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between back door opener switch harness connector and ground.

Back door opener switch		—	Continuity
Connector	Terminal		
D107	6	Ground	Existed

Is the inspection result normal?

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

3.CHECK LICENSE PLATE LAMP BULB

Check the applicable license plate lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding license plate lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding license plate lamp bulb. Refer to EXL-112, "Replacement".

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:0000000011740281

1.CHECK DAYTIME RUNNING LIGHT OPERATION

With CONSULT
1. Select “HEAD LAMP” of “BCM” using CONSULT.
2. Select “DAYTIME RUNNING LIGHT” in “Active Test” mode.
3. With operating the test items, check that the daytime running light is turned ON [Headlamp (HI) at approximately half illumination].

On : Daytime running light ON [Headlamp (HI) at approximately half illumination]
Off : Daytime running light OFF

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal.
NO >> Refer to EXL-63, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011740282

1.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

Unit	Fuse No.	Capacity
Daytime running light relay	#24	10 A

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK DAYTIME RUNNING LIGHT RELAY POWER SUPPLY

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

+		-	Voltage (Approx.)
Daytime running light relay			
Connector	Terminal		
E65	1	Ground	Battery voltage
	5		

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-64, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace daytime running light relay.

4.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL

With CONSULT
1. Install daytime running light relay.
2. Turn ignition switch ON.
3. Select “HEAD LAMP” of “BCM” using CONSULT.
4. Select “DAYTIME RUNNING LIGHT” in “Active Test” mode.

5. With operating the test item, check voltage between IPDM E/R harness connector and ground.

+		-	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E13	28	Ground	DAYTIME RUNNING LIGHT	On	0 – 1 V
				Off	9 – 16 V

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal.
NO-1 >> Fixed at 0 – 1 V: GO TO 6.
NO-2 >> Fixed at 9 – 16 V: GO TO 5.

5. CHECK DAYTIME RUNNING LIGHT REQUEST SIGNAL

With CONSULT
1. Select “DTRL REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
2. With operating the daytime running light ON condition, check the monitor status.

Monitor item	Condition		Monitor status
DTRL REQ	Daytime running light	ON condition	On
		OFF condition	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

6. CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL CIRCUIT

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

IPDM E/R		Daytime running light relay		Continuity
Connector	Terminal	Connector	Terminal	
E13	28	E65	2	Existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Repair or replace harness.

Component Inspection

INFOID:0000000011740283

1. CHECK DAYTIME RUNNING LIGHT RELAY

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

Daytime running light relay		Condition		Continuity
Terminal				
5	3	Battery voltage	Apply	Existed
			Not apply	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace daytime running light relay.

DAYTIME RUNNING LIGHT CIRCUIT

Component Function Check

INFOID:0000000011740268

1.CHECK DAYTIME RUNNING LIGHT OPERATION

With CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
2. With operating the test items, check that the daytime running light is turned ON.

Fog : Daytime running light ON
Off : Daytime running light OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the daytime running light is turned ON.

Is the measurement normal?

YES >> Daytime running light circuit is normal.
NO >> Refer to EXL-66, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011740269

1.CHECK DAYTIME RUNNING LIGHT FUSE

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

Unit	Location	Fuse No.	Capacity
Daytime running light	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 if a fuse is blown.

2.CHECK DAYTIME RUNNING LIGHT POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check the voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E12	19	Ground	EXTERNAL LAMPS	Fog	9 – 16 V
					Off	0 – 1 V
LH		20			Fog	9 – 16 V
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK DAYTIME RUNNING LIGHT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and daytime running light connector.
3. Check continuity between IPDM E/R harness connector and daytime running light harness connector.

IPDM E/R			Daytime running light		Continuity
Connector		Terminal	Connector	Terminal	
RH	E12	19	E75	1	Existed
LH		20	E76		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK DAYTIME RUNNING LIGHT GROUND CIRCUIT

Check continuity between daytime running light harness connector and ground.

Daytime running light			—	Continuity
Connector		Terminal		
RH	E75	2	Ground	Existed
LH	E76			

Is the inspection result normal?

YES >> Replace the corresponding daytime running light. Refer to EXL-100, "Removal and Installation".
NO >> Repair or replace harness.

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000011732021

1.CHECK FRONT FOG LAMP OPERATION

With CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
2. With operating the test items, check that the front fog lamp is turned ON.

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

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the front fog lamp is turned ON.

Is the measurement normal?

YES >> Front fog lamp circuit is normal.
NO >> Refer to EXL-68, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732022

1.CHECK FRONT FOG LAMP FUSE

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

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 if a fuse is blown.

2.CHECK FRONT FOG LAMP POWER SUPPLY

With CONSULT
1. Disconnect front fog lamp connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
4. With operating the test items, check the voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E12	19	Ground	EXTERNAL LAMPS	Fog	9 – 16 V
					Off	0 – 1 V
LH		20			Fog	9 – 16 V
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT

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

IPDM E/R			Front fog lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E12	19	E48	1	Existed
LH		20	E30		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp			—	Continuity
Connector		Terminal		
RH	E48	2	Ground	Existed
LH	E30			

Is the inspection result normal?

YES >> Replace the corresponding front fog lamp bulb. Refer to EXL-102, "Replacement".
NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000011732023

1.CHECK TURN SIGNAL LAMP OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “FLASHER” of “BCM” using CONSULT.
3. Select “FLASHER” in “Active Test” mode.
4. With operating the test items, check that the turn signal lamps is turned ON.

RH : Turn signal lamps (RH) ON
LH : Turn signal lamps (LH) ON
Off : Turn signal lamps OFF

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-70, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732024

1.CHECK TURN SIGNAL LAMP POWER SUPPLY

With CONSULT
1. Turn ignition switch OFF.
2. Disconnect the following connectors.
- Front turn signal lamp
- Door mirror
- Rear combination lamp
3. Turn ignition switch ON.
4. Select “FLASHER” of “BCM” using CONSULT.
5. Select “FLASHER” in “Active Test” mode.
6. With operating the test items, check voltage between BCM harness connector and ground.

+			-	Test item		Voltage
BCM						
Connector		Terminal				
RH	M69	61	Ground	FLASHER	RH	9 – 16 V
					Off	0 V
LH		60			LH	9 – 16 V
					Off	0 V

Is the inspection result normal?

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

2.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (SHORT)

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

BCM			—	Continuity
Connector		Terminal		
RH	M69	61	Ground	Not existed
LH		60		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and each turn signal lamp harness connector.

Front turn signal lamp

BCM			Front turn signal lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	M69	61	E47	1	Existed
LH		60	E34		

Side turn signal lamp

BCM			Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
RH	M69	61	D9	13	Existed
LH		60	D30		

Rear turn signal lamp

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	M69	61	B59	5	Existed
LH		60	B80		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

Check continuity between each turn signal lamp harness connector and ground.

Front turn signal lamp

Front turn signal lamp			—	Continuity
Connector		Terminal		
RH	E47	2	Ground	Existed
LH	E34			

Side turn signal lamp

Door mirror			—	Continuity
Connector		Terminal		
RH	D9	2	Ground	Existed
LH	D30			

Rear turn signal lamp

Rear combination lamp			—	Continuity
Connector		Terminal		
RH	B59	3	Ground	Existed
LH	B80			

Is the inspection result normal?

YES-1 >> Front turn signal lamp or rear turn signal lamp: GO TO 5.
YES-2 >> Side turn signal lamp: Replace the corresponding side turn signal lamp. Refer to EXL-103, "Removal and Installation".
NO >> Repair or replace harness.

5.CHECK TURN SIGNAL LAMP BULB

Check the applicable turn signal lamp bulb.

Is the inspection result normal?

YES-1 >> Front turn signal lamp: Check the corresponding front turn signal lamp bulb socket. Repair or replace if necessary.

YES-2 >> Rear turn signal lamp: Check the corresponding rear turn signal lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding turn signal lamp bulb. Refer to EXL-99, "Replacement" (front turn signal lamp) or EXL-108, "Replacement" (rear turn signal lamp).

OPTICAL SENSOR

Component Function Check

INFOID:0000000011732025

1.CHECK OPTICAL SENSOR SIGNAL

With CONSULT
1. Turn ignition switch ON.
2. Select “HEAD LAMP” of “BCM” using CONSULT.
3. Select “OPTI SEN (DTCT)” in “Data Monitor” mode.
4. Turn lighting switch AUTO.
5. With the optical sensor illuminating, check the monitor status.

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

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

Is the inspection result normal?

YES >> Optical sensor is normal.
NO >> Refer to EXL-73, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732026

1.CHECK OPTICAL SENSOR POWER SUPPLY

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

+		-	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M84	1	Ground	5 V

Is the inspection result normal?

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

2.CHECK OPTICAL SENSOR GROUND

Check voltage between optical sensor harness connector and ground.

+		-	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M84	3	Ground	0 V

Is the inspection result normal?

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

3.CHECK OPTICAL SENSOR SIGNAL

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

+		-	Condition		Voltage (Approx.)
Optical sensor					
Connector	Terminal				
M84	2	Ground	Optical sensor	When illuminating	3.1 V or more*
				When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace optical sensor. Refer to EXL-104, "Removal and Installation".

4. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT (OPEN)

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M84	1	M68	17	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

Optical sensor		—	Continuity
Connector	Terminal		
M84	1	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK OPTICAL SENSOR GROUND CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M84	3	M68	18	Existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

7. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (OPEN)

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M84	2	M68	14	Existed

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace harness.

8. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

Optical sensor		—	Continuity
Connector	Terminal		
M84	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

HAZARD SWITCH

Component Function Check

INFOID:0000000011732027

1.CHECK HAZARD SWITCH SIGNAL

With CONSULT
1. Turn ignition switch ON.
2. Select “FLASHER” of “BCM” using CONSULT.
3. Select “HAZARD SW” in “Data Monitor” mode.
4. With operating the hazard switch, check the monitor status.

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

Is the inspection result normal?

YES >> Hazard switch circuit is normal.
NO >> Refer to EXL-76, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011732028

1.CHECK HAZARD SWITCH SIGNAL

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

+		-	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M45	2	Ground	12 V

Is the inspection result normal?

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

2.CHECK HAZARD SWITCH SIGNAL CIRCUIT (OPEN)

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

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M45	2	M68	29	Existed

Is the inspection result normal?

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

3.CHECK HAZARD SWITCH SIGNAL CIRCUIT (SHORT)

Check continuity between hazard switch harness connector and ground.

Hazard switch		—	Continuity
Connector	Terminal		
M45	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		—	Continuity
Connector	Terminal		
M45	1	Ground	Existed

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-106, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000011732030

EXCEPT FOR NISMO MODELS

Without Daytime Running Light System

NOTE:

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply/ ground circuit • Headlamp (HI) bulb • Headlamp assembly - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-49, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-86, "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 “HEAD LAMP”
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply/ ground circuit • Headlamp (LO) bulb (Xenon bulb) • Headlamp assembly - HID control unit - Xenon bulb socket - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-52, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-87, "Diagnosis Procedure".	
Each lamp is not turned ON/OFF with lighting switch AUTO		• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".
		• Optical sensor power supply/ ground/signal circuit • Optical sensor • BCM	Optical sensor Refer to EXL-73, "Component Function Check".
Parking lamp is not turned ON		• Parking lamp power supply/ ground circuit • Front combination lamp - LED (Parking lamp) - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-55, "Component Function Check".
Front side marker lamp is not turned ON		• Front side marker lamp power supply/ground circuit • Front side marker lamp bulb • Front side marker lamp bulb socket	Front side marker lamp circuit Refer to EXL-57, "Component Function Check".

Symptom		Possible cause	Inspection item
Tail lamp is not turned ON	Stop lamp / Tail lamp (Bulb side)	• Fuse • Tail lamp power supply/ground circuit • Stop lamp / Tail lamp bulb • Stop lamp / Tail lamp bulb socket/ harness • IPDM E/R	Tail lamp circuit Refer to EXL-59, "Component Function Check".
	Tail lamp (LED side)	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (Tail lamp) • Tail lamp harness • IPDM E/R	
License plate lamp is not turned ON		• License plate lamp power supply/ ground circuit • License plate lamp bulb • License plate lamp bulb socket/ harness	License plate lamp circuit Refer to EXL-61, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON		**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-88, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEAD LAMP) Active test “TAIL LAMP”
Front fog lamp is not turned ON	One side	• Front fog lamp power supply/ ground circuit • Front fog lamp bulb • IPDM E/R	Front fog lamp circuit Refer to EXL-68, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON” Refer to EXL-89, "Diagnosis Procedure".	
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp bulb - Front turn signal lamp bulb socket - BCM • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp - BCM • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Rear turn signal lamp bulb - Rear turn signal lamp bulb socket/ harness - BCM	Turn signal lamp circuit Refer to EXL-70, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".

Symptom		Possible cause	Inspection item
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-49, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Hazard switch • BCM	Hazard switch Refer to EXL-76, "Component Function Check".

With Daytime Running Light System

NOTE:

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply/ground circuit • Daytime running light relay • Headlamp (HI) bulb • Headlamp assembly - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-49, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-86, "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 “HEAD LAMP”
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply/ground circuit • Headlamp (LO) bulb (Xenon bulb) • Headlamp assembly - HID control unit - Xenon bulb socket - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-52, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-87, "Diagnosis Procedure".	
Parking lamp is not turned ON		• Parking lamp power supply/ground circuit • Front combination lamp - LED (Parking lamp) - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-55, "Component Function Check".
Front side marker lamp is not turned ON		• Front side marker lamp power supply/ground circuit • Front side marker lamp bulb • Front side marker lamp bulb socket	Front side marker lamp circuit Refer to EXL-57, "Component Function Check".

Symptom		Possible cause	Inspection item
Tail lamp is not turned ON	Stop lamp / Tail lamp (Bulb side)	• Fuse • Tail lamp power supply/ground circuit • Stop lamp / Tail lamp bulb • Stop lamp / Tail lamp bulb socket/ harness • IPDM E/R	Tail lamp circuit Refer to EXL-59, "Component Function Check".
	Tail lamp (LED side)	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (Tail lamp) • Tail lamp harness • IPDM E/R	
License plate lamp is not turned ON		• License plate lamp power supply/ ground circuit • License plate lamp bulb • License plate lamp bulb socket/ harness	License plate lamp circuit Refer to EXL-61, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON		**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-88, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEAD LAMP) Active test “TAIL LAMP”
Daytime running light is not turned ON [Headlamp (HI) at approximately half illumination] [Headlamp (HI) is turned ON]		• Fuse • Daytime running light relay power supply/control signal circuit • Daytime running light relay • IPDM E/R • BCM • ECM • Combination meter	• Daytime running light relay circuit Refer to EXL-63, "Component Function Check". • BCM (HEAD LAMP) Data monitor “ENGINE STATE” • Combination meter Data monitor “PKB SW”
Front fog lamp is not turned ON	One side	• Front fog lamp power supply/ ground circuit • Front fog lamp bulb • IPDM E/R	Front fog lamp circuit Refer to EXL-68, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON” Refer to EXL-89, "Diagnosis Procedure".	

Symptom		Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp bulb - Front turn signal lamp bulb socket - BCM • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp - BCM • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Rear turn signal lamp bulb - Rear turn signal lamp bulb socket/harness - BCM	Turn signal lamp circuit Refer to EXL-70, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-49, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Hazard switch • BCM	Hazard switch Refer to EXL-76, "Component Function Check".

NISMO MODELS

NOTE:

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply/ground circuit • Headlamp (HI) bulb • Headlamp assembly - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-49, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-86, "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 “HEAD LAMP”

Symptom		Possible cause	Inspection item
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply/ ground circuit • Headlamp (LO) bulb (Xenon bulb) • Headlamp assembly - HID control unit - Xenon bulb socket - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-52, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-87, "Diagnosis Procedure".	
Parking lamp is not turned ON		• Parking lamp power supply/ ground circuit • Front combination lamp - LED (Parking lamp) - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-55, "Component Function Check".
Front side marker lamp is not turned ON		• Front side marker lamp power supply/ground circuit • Front side marker lamp bulb • Front side marker lamp bulb socket	Front side marker lamp circuit Refer to EXL-57, "Component Function Check".
Tail lamp is not turned ON	Stop lamp / Tail lamp (Bulb side)	• Fuse • Tail lamp power supply/ground circuit • Stop lamp / Tail lamp bulb • Stop lamp / Tail lamp bulb socket/ harness • IPDM E/R	Tail lamp circuit Refer to EXL-59, "Component Function Check".
	Tail lamp (LED side)	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (Tail lamp) • Tail lamp harness • IPDM E/R	
License plate lamp is not turned ON		• License plate lamp power supply/ ground circuit • License plate lamp bulb • License plate lamp bulb socket/ harness	License plate lamp circuit Refer to EXL-61, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON		**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-88, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEAD LAMP) Active test “TAIL LAMP”
Daytime running light is not turned ON		• Fuse • Daytime running light power supply/ground circuit • Daytime running light • IPDM E/R • BCM • ECM • Combination meter	• Daytime running light circuit Refer to EXL-66, "Component Function Check". • BCM (HEAD LAMP) Data monitor “ENGINE STATE” • Combination meter Data monitor “PKB SW”

Symptom		Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp bulb - Front turn signal lamp bulb socket - BCM • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp - BCM • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Rear turn signal lamp bulb - Rear turn signal lamp bulb socket/harness - BCM	Turn signal lamp circuit Refer to EXL-70, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-49, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Hazard switch • BCM	Hazard switch Refer to EXL-76, "Component Function Check".

NORMAL OPERATING CONDITION

Description

INFOID:0000000011732031

XENON HEADLAMP

- Brightness and the color of light may change slightly immediately after turning the headlamp ON until the xenon bulb becomes stable. This is normal.
- Illumination time lag may occur between right and left. This is normal.

AUTO LIGHT SYSTEM

The 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 for the control difference. This is normal.

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

Description

INFOID:0000000011732032

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

Diagnosis Procedure

INFOID:0000000011732033

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK HIGH BEAM REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “HL HI REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000011732034

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

Diagnosis Procedure

INFOID:0000000011732035

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK LOW BEAM REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “HL LO REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000011732036

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

Diagnosis Procedure

INFOID:0000000011732037

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK POSITION LIGHT REQUEST SIGNAL

With CONSULT
1. Turn ignition switch ON.
2. Select “TAIL & CLR REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> Perform the tail lamp diagnosis. Refer to EXL-59, "Component Function Check".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000011732038

Both side front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000011732039

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK FRONT FOG LIGHT REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “FR FOG REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With 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 1ST)	ON	On
		OFF	Off

Is the inspection result normal?

YES >> Perform the front fog lamp diagnosis. Refer to EXL-68, "Component Function Check".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description

INFOID:0000000011732723

PREPARATION BEFORE ADJUSTING

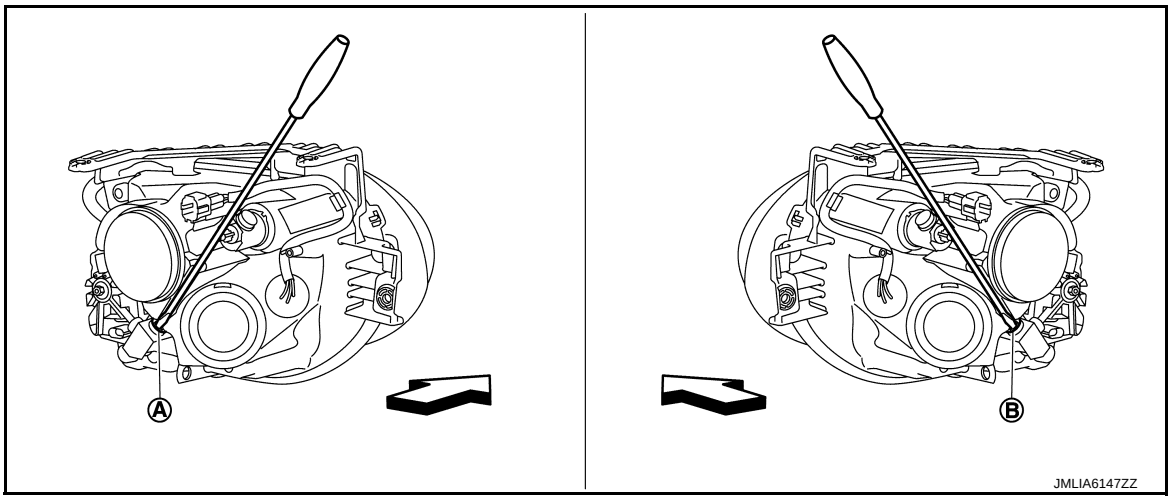
NOTE:

- 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 fuel, engine 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 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 front

Adjustment screw		Screw driver rotation	Facing direction
A	Headlamp LH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP
B	Headlamp RH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP

Aiming Adjustment Procedure

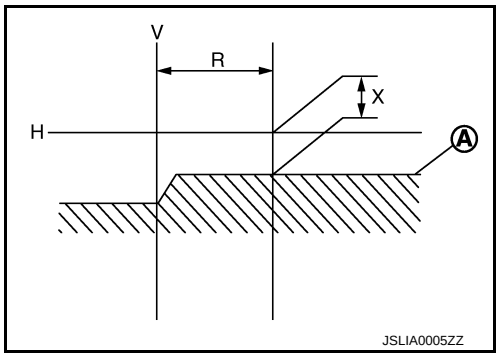
INFOID:0000000011732724

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.
   CAUTION:
   Never cover the lens surface with a tape etc. The lens is made of resin.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
4. 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

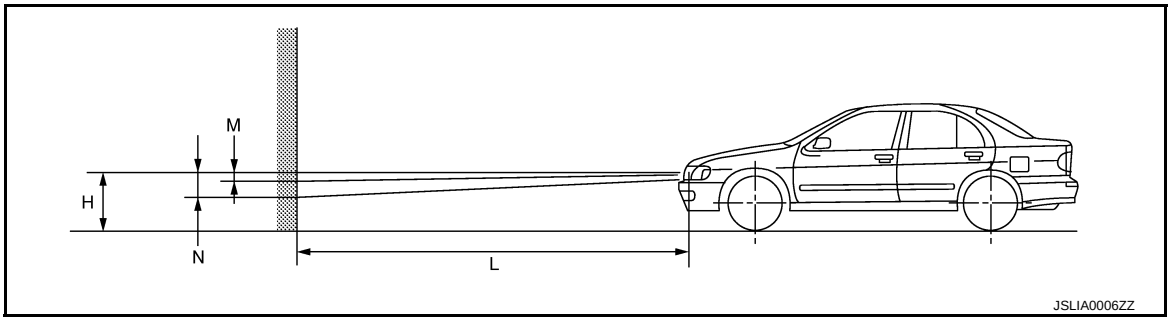


5. Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

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

Description

INFOID:0000000011732725

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 fuel, engine 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 headlamp.
  CAUTION:
  Never use organic solvent (thinner, gasoline etc.).
- Ride alone on the driver seat.

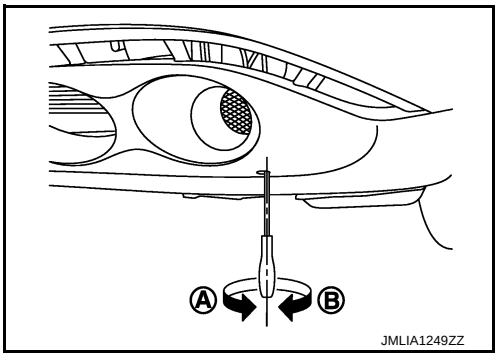
AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment.

  A: UP

  B: DOWN

- 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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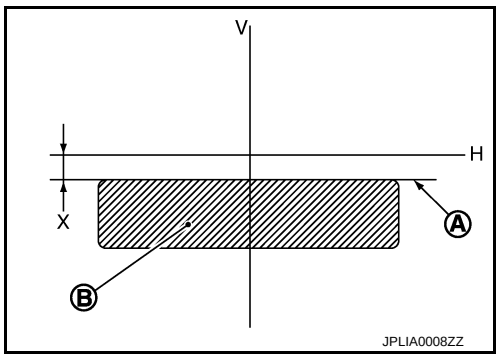
Aiming Adjustment Procedure

INFOID:0000000011732726

1. Place the screen.
   NOTE:
   - Stop the vehicle facing the wall.
   - Place the board on a plain road vertically.
2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.
3. Start the engine. Turn the front fog lamp ON.
   CAUTION:
   Never cover the lens surface with a tape etc. The lens is made of resin.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
4. Adjust the cutoff line height (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 (5.91 in).

Front fog lamp light distribution on the screen



A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

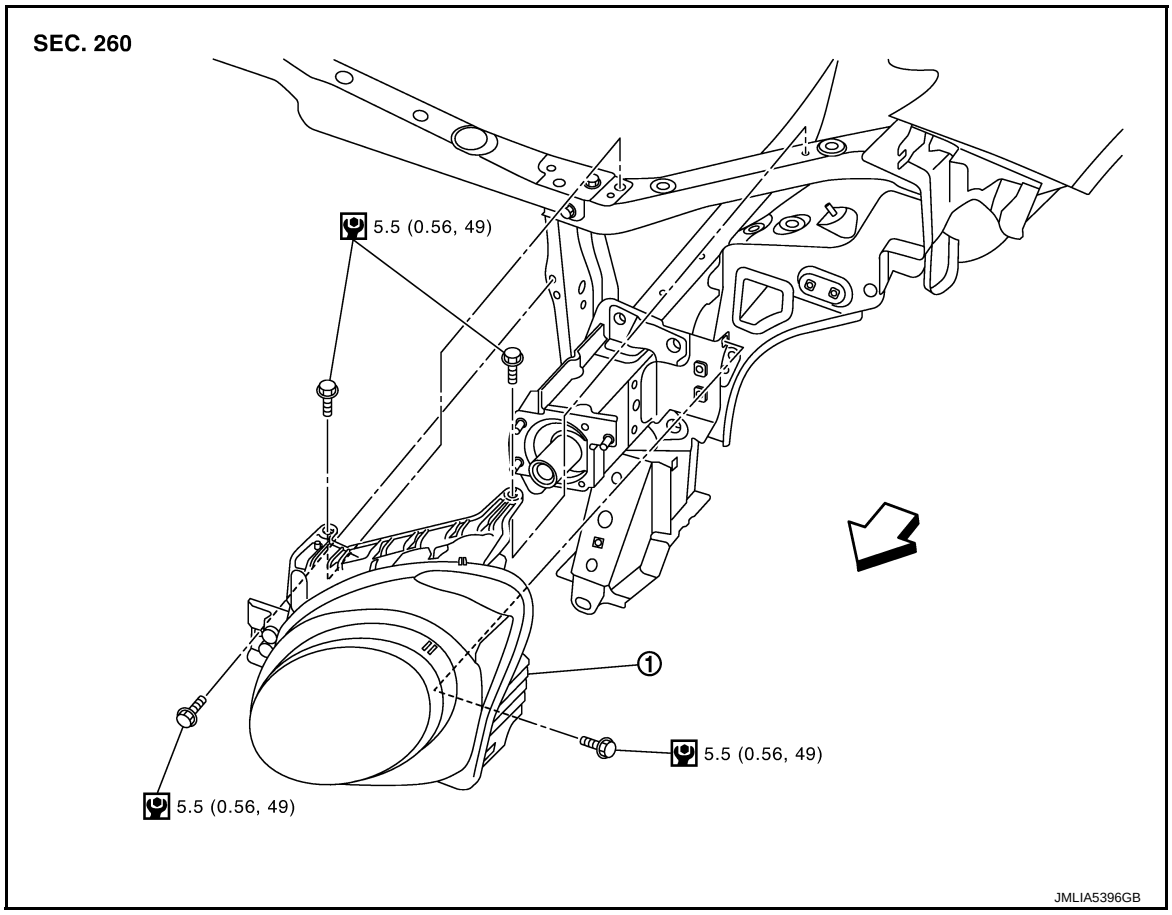
REMOVAL AND INSTALLATION

HEADLAMP

Exploded View

INFOID:0000000011732927

REMOVAL

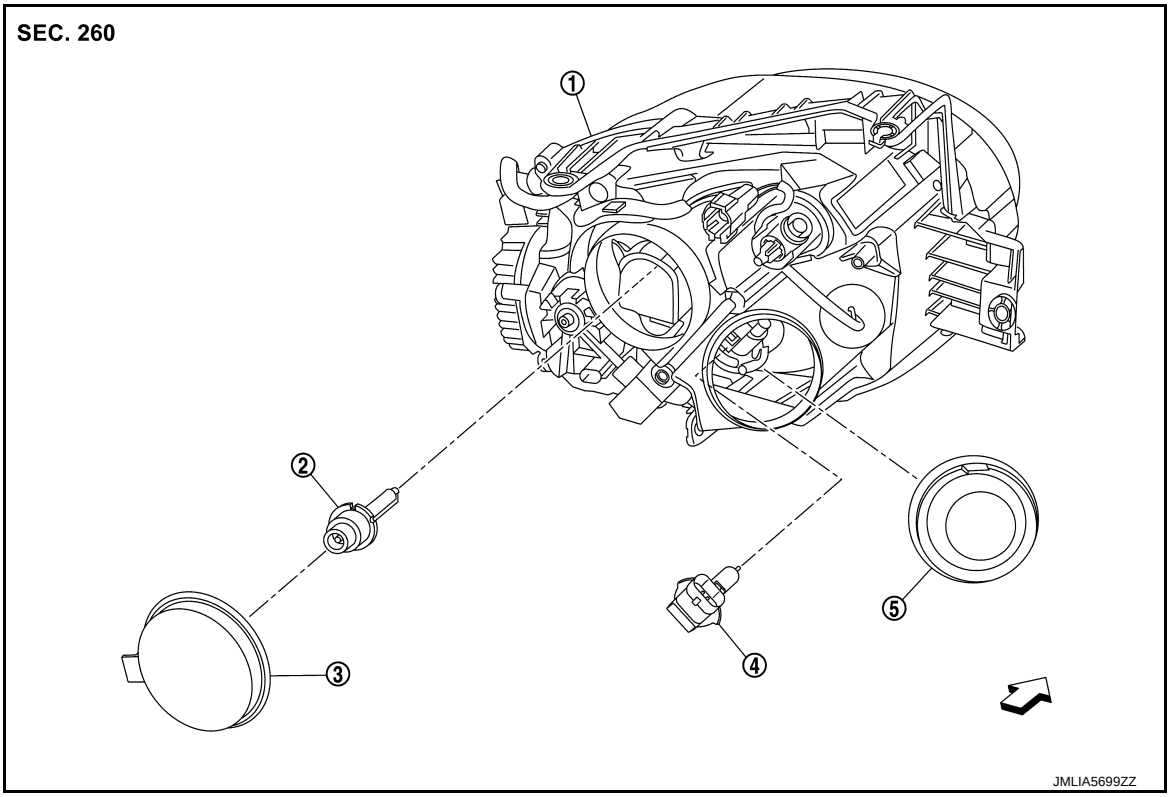


1. Headlamp assembly

⇦ : Vehicle front

: N·m (kg-m, in-lb)

DISASSEMBLY



1. Headlamp assembly
2. Xenon bulb (LO)
3. Back cover A
4. Halogen bulb (HI)
5. Back cover B

⇦ : Vehicle front

Removal and Installation

INFOID:0000000011732928

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Remove headlamp assembly mounting bolts.
3. Pull out headlamp assembly forward the vehicle, and then disconnect the connector before removing the headlamp assembly.

INSTALLATION

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

CAUTION:
After installation, perform aiming adjustment. Refer to EXL-90, "Description".

Replacement

INFOID:0000000011732929

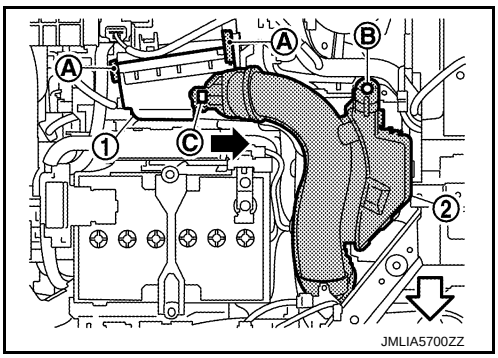
CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".**
- **After installing the bulb, install the back cover and the bulb socket securely for watertightness.**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **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.**

XENON BULB (LO)

Left Side of The Vehicle

1. Remove fixing clips (A) of air cleaner assembly (1).
2. While pulling up on the (B) portion of the air duct inlet (upper) (2), disengage of the portion (C), and then remove air duct inlet (upper) as shown by the arrow in the figure.

⇦ : Vehicle front



3. Remove back cover A.
4. Rotate xenon bulb socket counterclockwise and unlock it.
5. Remove retaining spring lock, and then remove xenon bulb from headlamp assembly.

Right Side of The Vehicle

1. Remove washer tank inlet. Refer to WW-43, "Removal and Installation".
2. Remove back cover A.
3. Rotate xenon bulb socket counterclockwise and unlock it.
4. Remove retaining spring lock, and then remove xenon bulb from headlamp assembly.

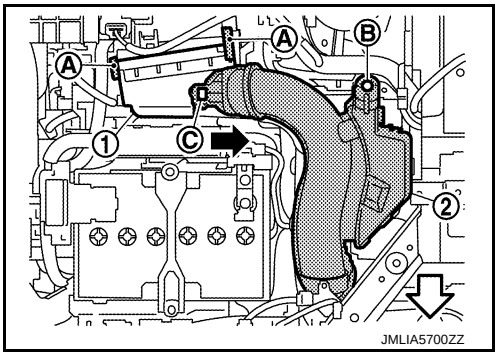
CAUTION:
Never break xenon bulb ceramic tube when replacing bulb.

HALOGEN BULB (HI)

Left Side of The Vehicle

1. Remove fixing clips (A) of air cleaner assembly (1).
2. While pulling up on the (B) portion of the air duct inlet (upper) (2), disengage of the portion (C), and then remove air duct inlet (upper) as shown by the arrow in the figure.

⇦ : Vehicle front



3. Remove back cover B.
4. Disconnect halogen bulb harness connector.
5. Rotate halogen bulb clockwise and unlock it, and then remove halogen bulb from headlamp assembly.

Right Side of The Vehicle

1. Remove washer tank inlet. Refer to WW-43, "Removal and Installation".
2. Remove back cover B.
3. Disconnect halogen bulb harness connector.
4. Rotate halogen bulb counterclockwise and unlock it, and then remove halogen bulb from headlamp assembly.

Disassembly and Assembly

INFOID:0000000011732930

DISASSEMBLY

1. Remove back cover (A and B).
2. Rotate xenon bulb socket counterclockwise and unlock it.
3. Remove retaining spring lock, and then remove xenon bulb from headlamp assembly.

4. Disconnect halogen bulb harness connector.
5. Remove halogen bulb.

Left side of the vehicle
- Rotate halogen bulb clockwise and unlock it, and then remove halogen bulb from headlamp assembly.

Right side of the vehicle
- Rotate halogen bulb counterclockwise and unlock it, and then remove halogen bulb from headlamp assembly.

ASSEMBLY

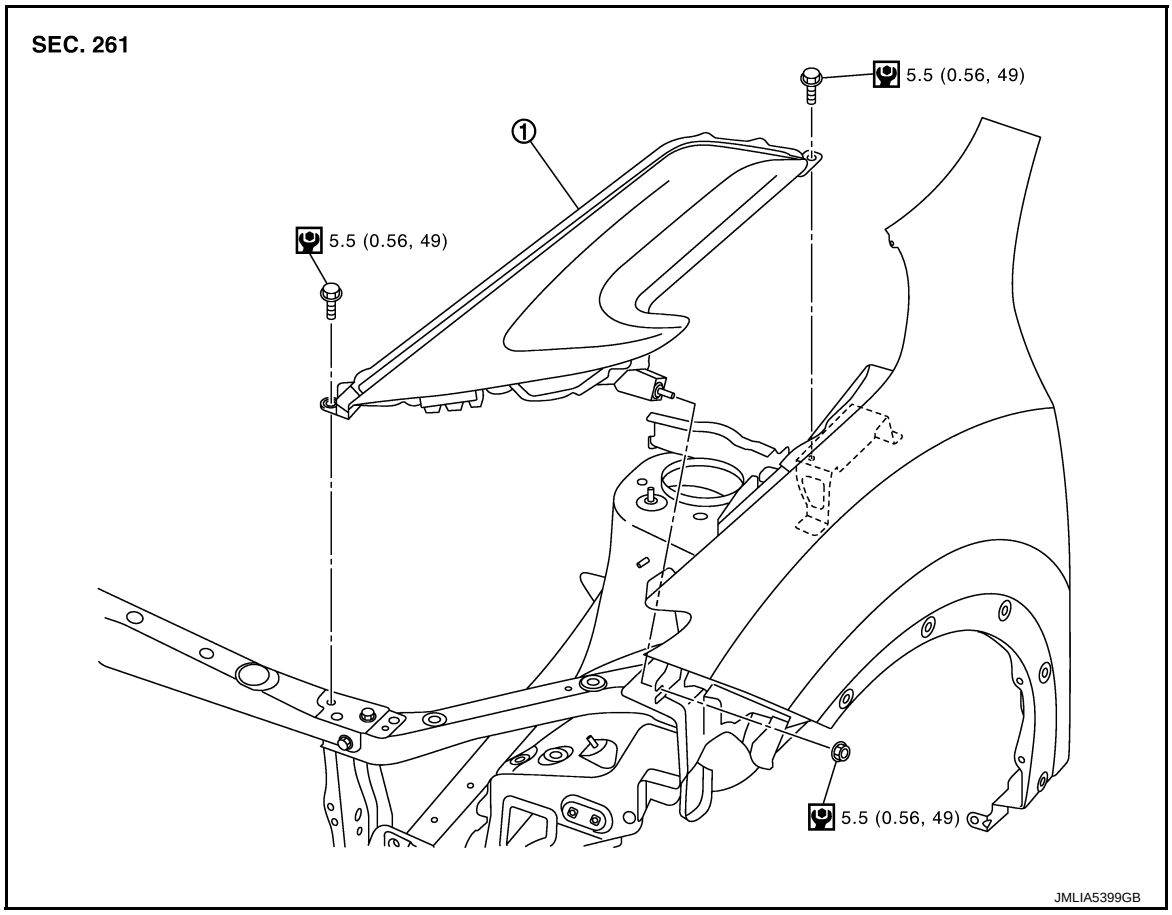
Assemble in the reverse order of disassembly.

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000011732931

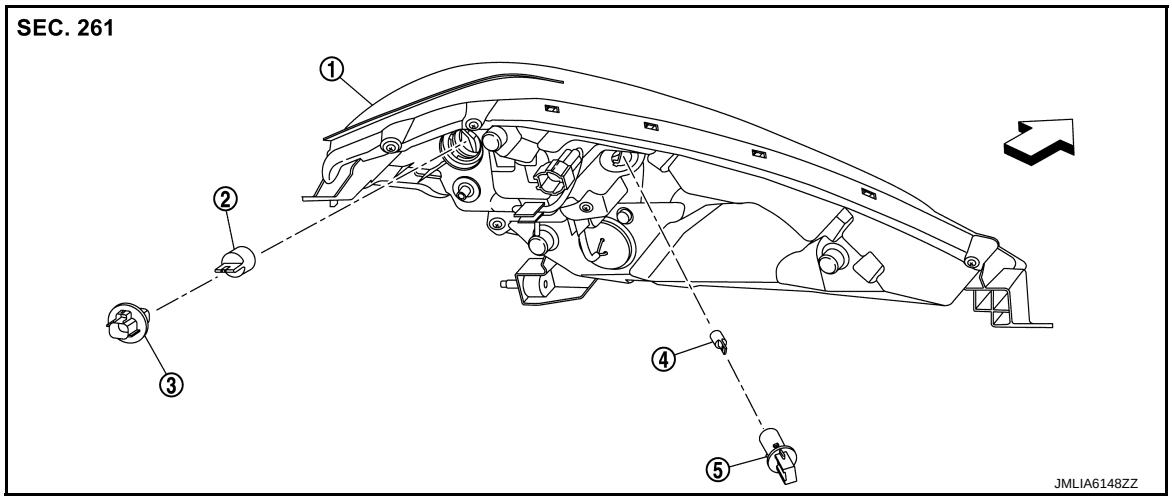
REMOVAL



1. Front combination lamp

: N·m (kg-m, in-lb)

DISASSEMBLY



1. Front combination lamp
2. Front turn signal lamp bulb
3. Front turn signal lamp bulb socket
4. Front side marker lamp bulb
5. Front side marker lamp bulb socket

⇦ : Vehicle front

Removal and Installation

INFOID:0000000011732932

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Remove front combination lamp mounting bolts and nut.
3. Pull out front combination lamp forward the vehicle, and then disconnect connector before removing the front combination lamp.

INSTALLATION

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

CAUTION:
Interference of front combination lamp lens with front fender may cause intrusion of water into front combination lamp or rusting of fender due to damage of painted surface. Be careful to operate without allowing parts to interfere with each other.

Replacement

INFOID:0000000011732933

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".**
- **After installing the bulb, install the bulb socket securely for watertightness.**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

PARKING LAMP BULB

CAUTION:
Replacement of a single part is not possible due to the adoption of LED. For replacement, replace front combination lamp as a set. Refer to EXL-99, "Removal and Installation".

FRONT TURN SIGNAL LAMP BULB

1. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
2. Remove front turn signal lamp bulb from the front turn signal lamp bulb socket.

FRONT SIDE MARKER LAMP BULB

1. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.
2. Remove front side marker lamp bulb from the front side marker lamp bulb socket.

Disassembly and Assembly

INFOID:0000000011732934

DISASSEMBLY

1. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
2. Remove front turn signal lamp bulb from the front turn signal lamp bulb socket.
3. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.
4. Remove front side marker lamp bulb from the front side marker lamp bulb socket.

ASSEMBLY

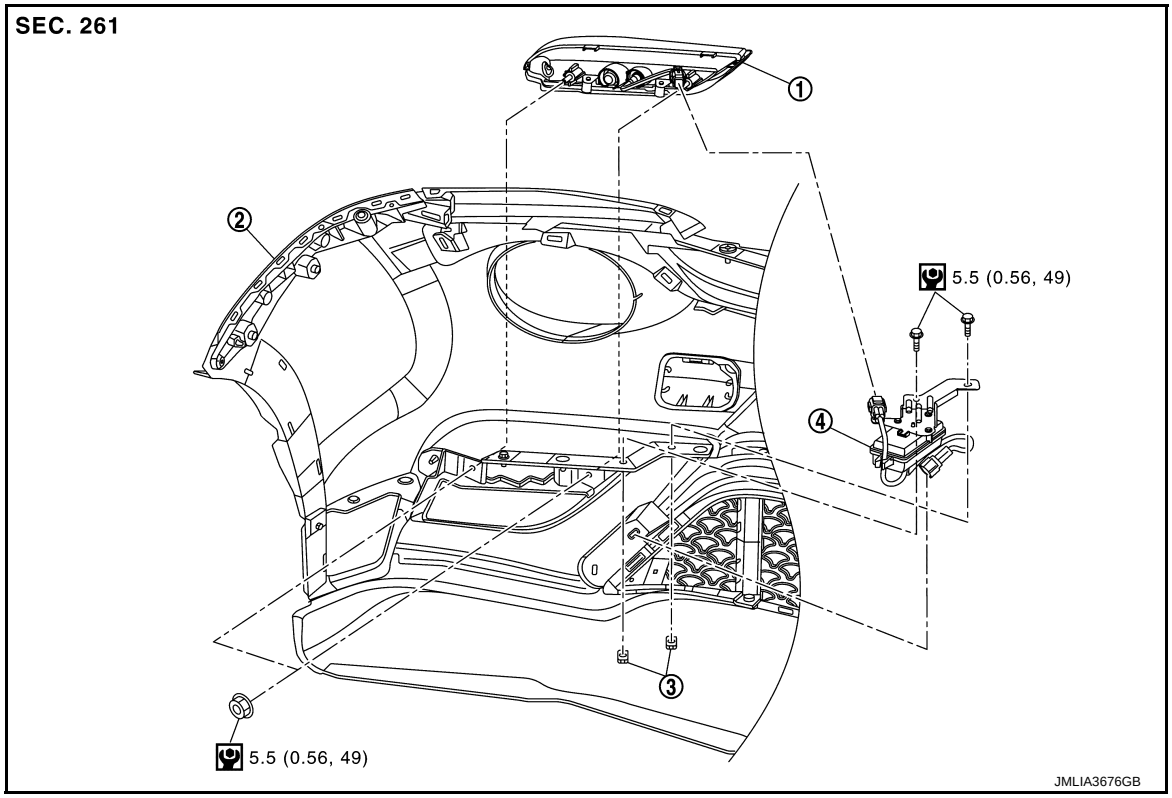
Note the following item, and then assemble in the reverse order of disassembly.

CAUTION:
After installing the bulb, install the bulb socket securely for watertightness.

DAYTIME RUNNING LIGHT

Exploded View

INFOID:0000000011732935



1. Daytime running light
2. Front bumper fascia assembly
3. U nut
4. Harness connector assembly

N·m (kg-m, in-lb)

Removal and Installation

INFOID:0000000011732936

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front bumper fascia lower. Refer to EXT-17, "Removal and Installation".
2. Disconnect daytime running light harness connector.
3. Remove daytime running light mounting nuts.
4. Remove daytime running light from front bumper fascia lower.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000011732937

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

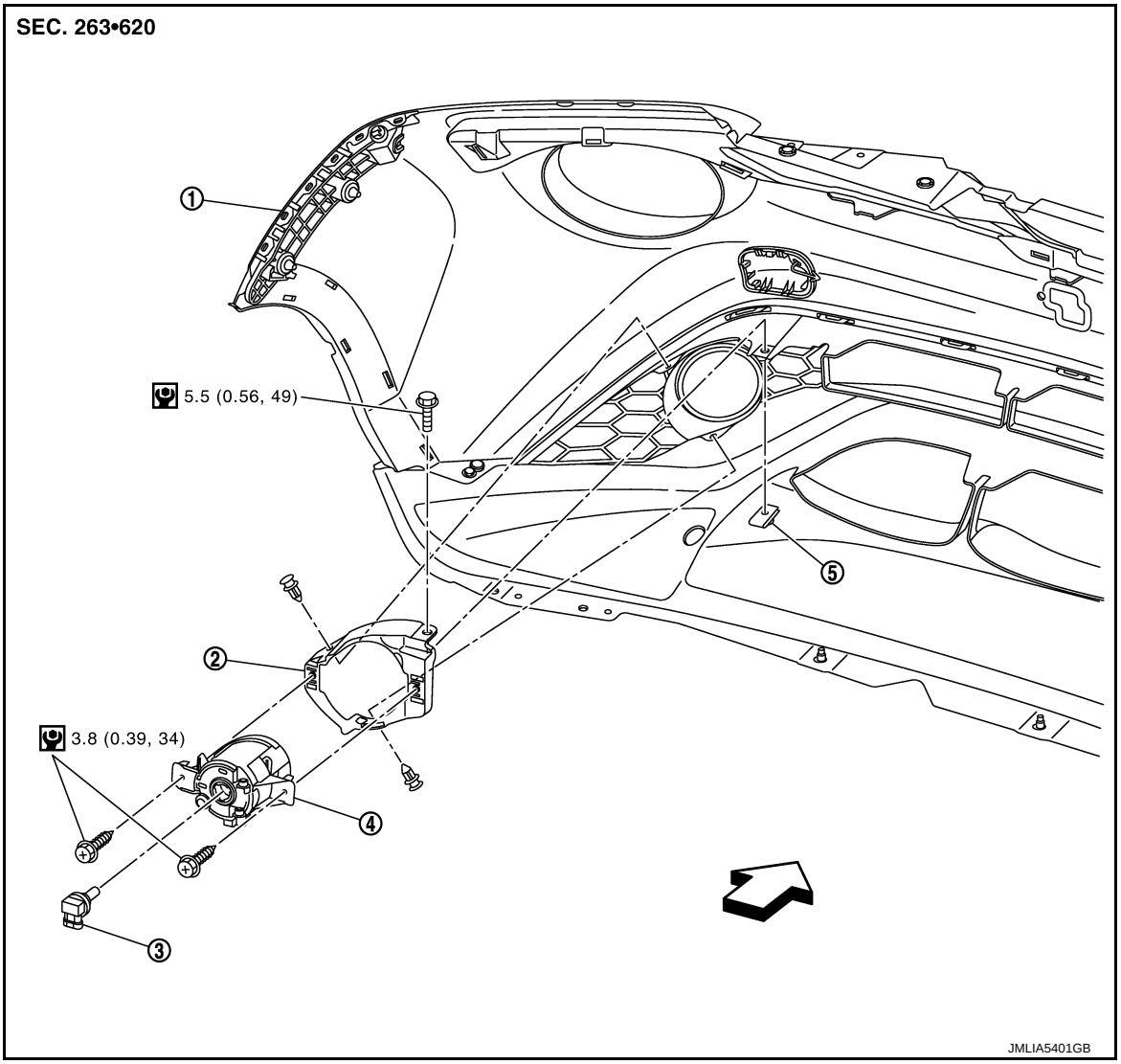
DAYTIME RUNNING LIGHT

CAUTION:
Replacement of a single part is not possible due to the adoption of LED. For replacement, replace daytime running light as a set. Refer to EXL-100, "Removal and Installation".

FRONT FOG LAMP

Exploded View

INFOID:0000000011732938



1. Front bumper fascia assembly
2. Front fog lamp bracket
3. Front fog lamp bulb
4. Front fog lamp
5. U nut

⇦ : Vehicle front

: N·m (kg-m, in-lb)

Removal and Installation

INFOID:0000000011732939

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front fender protector to make work space. Refer to EXT-31, "Removal and Installation".
2. Disconnect front fog lamp harness connector.
3. Remove front fog lamp fixing screws, and then remove front fog lamp from front fog lamp bracket.
4. Remove front fog lamp bracket mounting bolt and fixing clips, and then remove front fog lamp bracket.

INSTALLATION

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

NOTE:

After installation, perform aiming adjustment. Refer to EXL-92, "Description".

Replacement

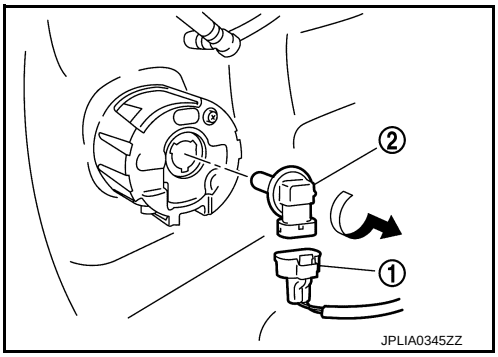
INFOID:0000000011732940

CAUTION:

- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

FRONT FOG LAMP BULB

1. Remove fender protector to make work space. Refer to EXT-31, "Removal and Installation".
2. Remove front fog lamp bulb connector (1).
3. Rotate front fog lamp bulb (2) counterclockwise and unlock it.



SIDE TURN SIGNAL LAMP

Exploded View

INFOID:0000000011732941

Refer to MIR-17, "Exploded View".

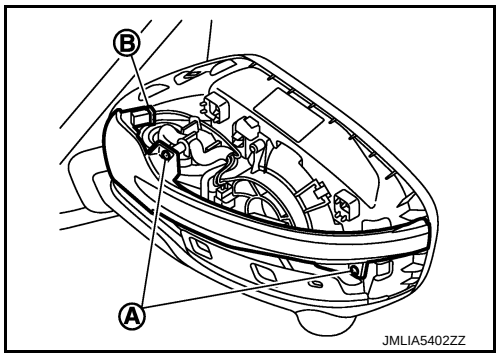
Removal and Installation

INFOID:0000000011732942

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove door mirror cover. Refer to MIR-20, "DOOR MIRROR COVER : Removal and Installation".
2. Remove side turn signal lamp fixing screws (A), and then disconnect side turn signal lamp harness connector (B).



3. Remove side turn signal lamp.

INSTALLATION
Install in the reverse order of removal.

Replacement

INFOID:0000000011732943

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

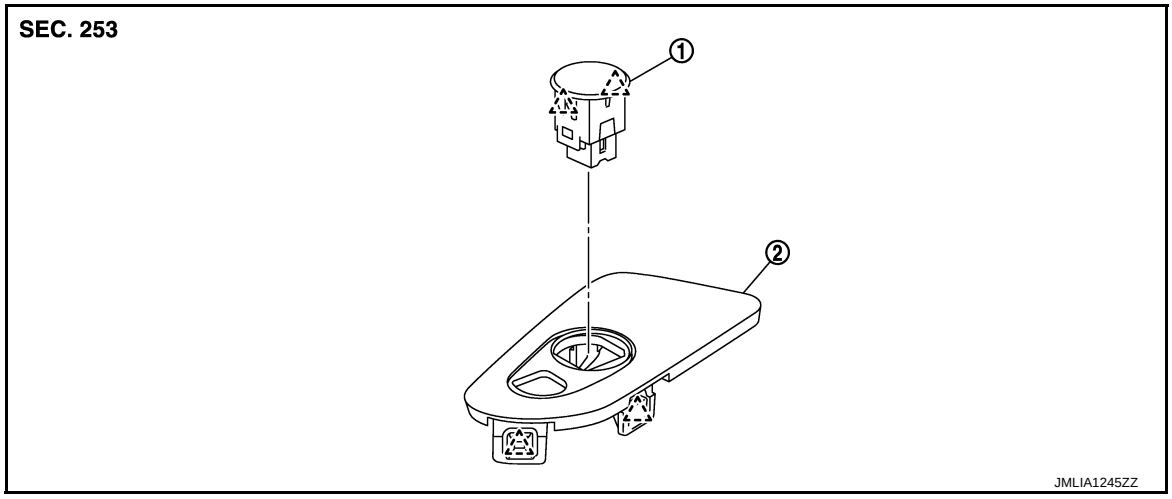
SIDE TURN SIGMNAL LAMP BULB

CAUTION:
Replacement of a single part is not possible due to the adoption of LED. For replacement, replace side turn signal lamp as a set. Refer to EXL-103, "Removal and Installation".

OPTICAL SENSOR

Exploded View

INFOID:0000000011732055



1. Optical sensor
2. Switch panel

: Pawl

Removal and Installation

INFOID:0000000011732056

REMOVAL

1. Insert an appropriate 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.

LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:0000000011732057

REMOVAL

Remove light & turn signal switch. Refer to BCS-94, "Removal and Installation".

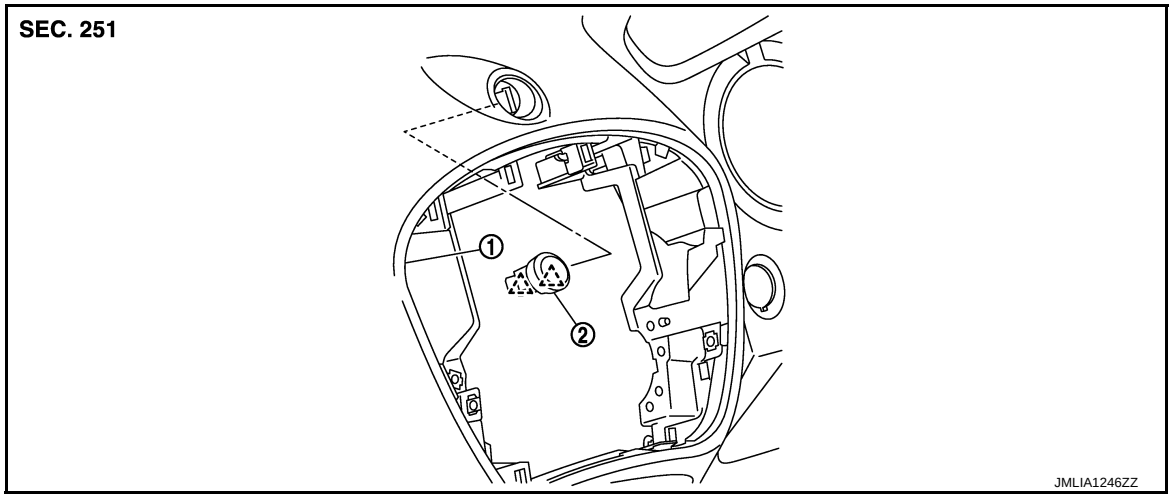
INSTALLATION

Install in the reverse order of removal.

HAZARD SWITCH

Exploded View

INFOID:0000000011732058



1. Instrument panel assembly
2. Hazard switch

: Pawl

Removal and Installation

INFOID:0000000011732059

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove audio unit. Refer to AV-49, "Removal and Installation".
2. Disengage fixing pawls, and then remove hazard switch from instrument panel inside to outside.

INSTALLATION

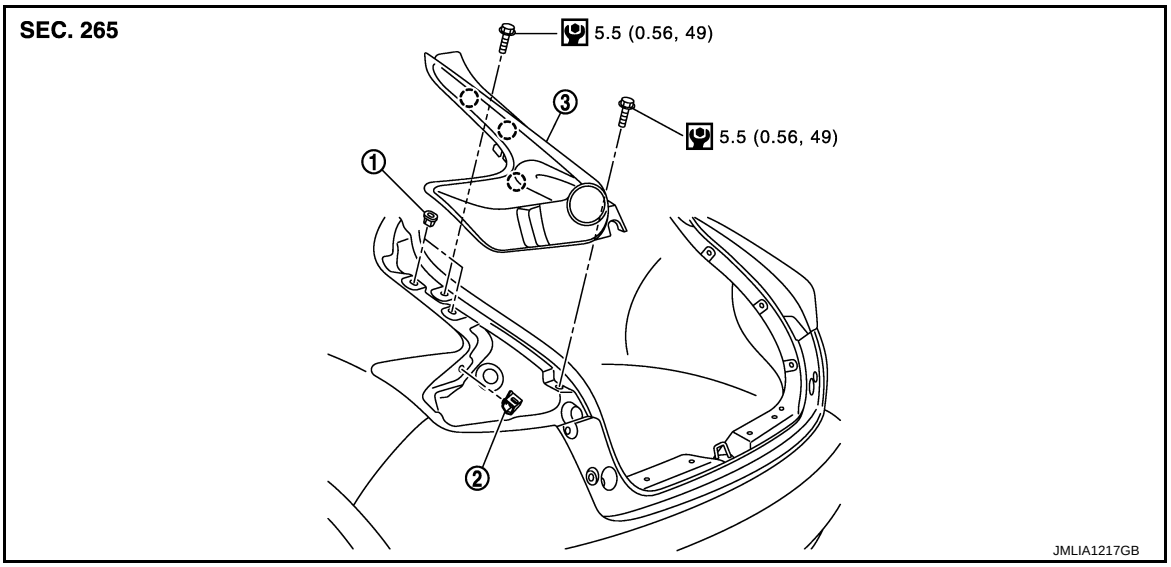
Install in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000011732950

REMOVAL

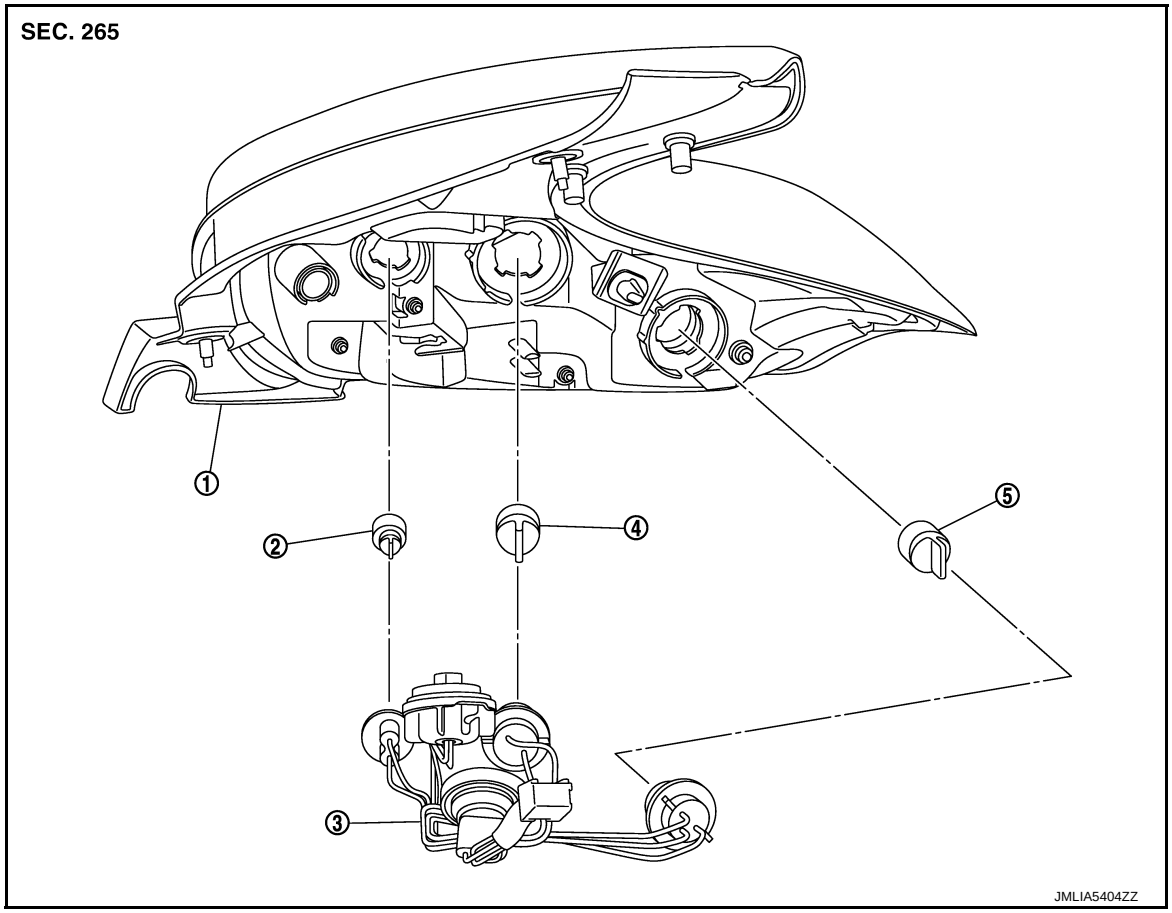


1. Grommet
2. Grommet
3. Rear combination lamp

: Clip

: N·m (kg-m, in-lb)

DISASSEMBLY



1.	Rear combination lamp	2.	Back-up lamp bulb	3.	Harness connector
4.	Rear turn signal lamp bulb	5.	Stop/Tail lamp bulb (Rear side marker lamp)		

Removal and Installation

INFOID:0000000011732951

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".**
- **When removing, always use a remover tool that is made of plastic.**

REMOVAL

1. Full open back door.
2. Remove luggage side lower finisher. Refer to INT-35, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
3. Remove rear combination lamp mounting bolts.
4. Insert a remover tool into the rear combination lamp and rear fender to disengage the clips.
5. Pull up rear combination lamp, and then remove rear combination lamp.
6. Disconnect rear combination lamp connector.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000011732952

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**

- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

TAIL LAMP (LED)

CAUTION:

Replacement of a single part is not possible due to the adoption of LED. For replacement, replace rear combination lamp as a set. Refer to EXL-108, "Removal and Installation".

STOP/TAIL LAMP BULB (REAR SIDE MARKER LAMP)

1. Remove rear combination lamp assembly. Refer to EXL-108, "Removal and Installation".
2. Rotate stop/tail lamp bulb socket counterclockwise, and then remove stop/tail lamp bulb socket.
3. Remove stop/tail lamp bulb from stop/tail lamp bulb socket.

REAR TURN SIGNAL LAMP BULB

1. Remove rear combination lamp assembly. Refer to EXL-108, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise, and then remove rear turn signal lamp bulb socket.
3. Remove rear turn signal lamp bulb from rear turn signal lamp bulb socket.

BACK-UP LAMP BULB

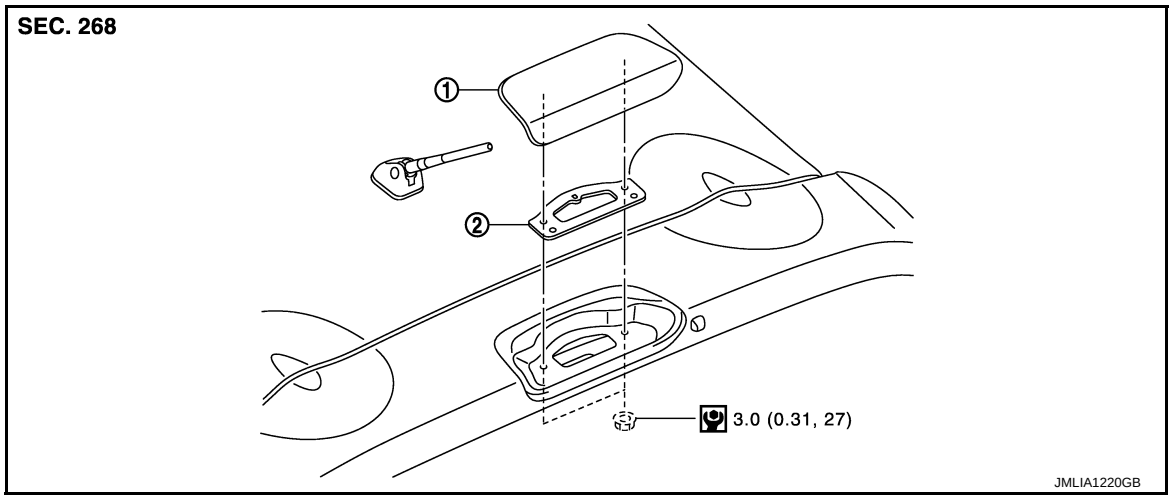
1. Remove rear combination lamp assembly. Refer to EXL-108, "Removal and Installation".
2. Rotate back-up lamp bulb socket counterclockwise, and then remove back-up lamp bulb socket.
3. Remove back-up lamp bulb from back-up lamp bulb socket.

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000011732953

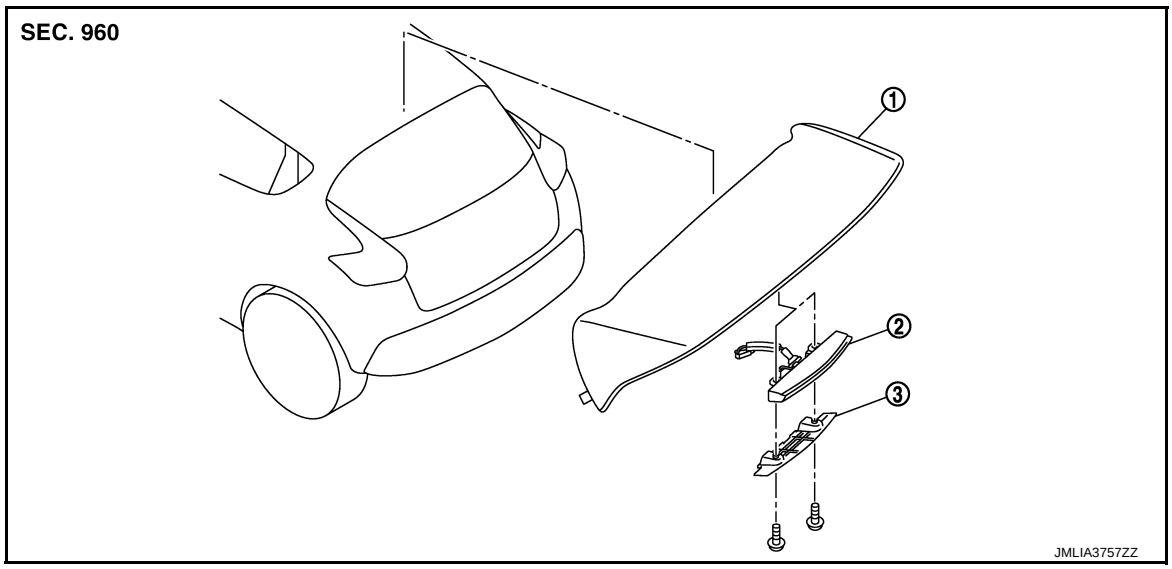
EXCEPT FOR NISMO AND NISMO RS



1. High-mounted stop lamp
2. Seal packing

: N·m (kg-m, in-lb)

NISMO AND NISMO RS



1. Rear spoiler
2. High-mounted stop lamp
3. High-mounted stop lamp cover

Removal and Installation

INFOID:0000000011732954

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

Except for NISMO and NISMO RS

1. Remove blind seal from back door inside.
   CAUTION:

Never damage the blind seal, so that it can be reused.

2. Remove high-mounted stop lamp mounting nuts and connector.
3. Pull high-mounted stop lamp toward vehicle upside, and then remove high-mounted stop lamp.

NISMO and NISMO RS

1. Remove rear spoiler. Refer to EXT-49, "Removal and Installation".
2. Remove high-mounted stop lamp cover mounting bolts, and then remove high-mounted stop lamp cover.
3. Remove high-mounted stop lamp harness connector from rear spoiler.
4. Pull out high-mounted stop lamp, and then remove high-mounted stop lamp.

INSTALLATION

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

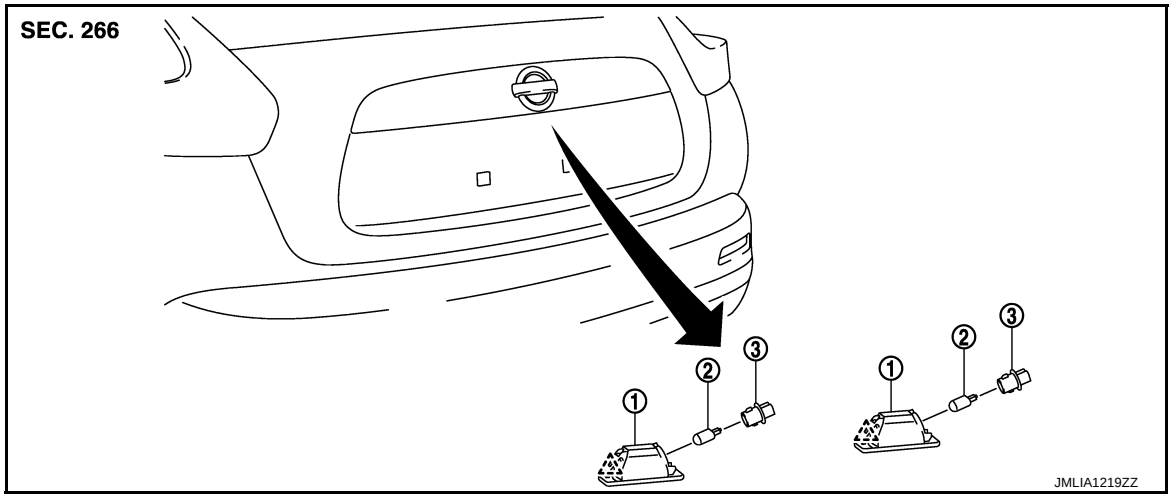
CAUTION:

Seal packing cannot be reused.

LICENSE PLATE LAMP

Exploded View

INFOID:0000000011732070



1. License plate lamp housing assembly
2. Bulb
3. License plate lamp bulb socket

: Pawl

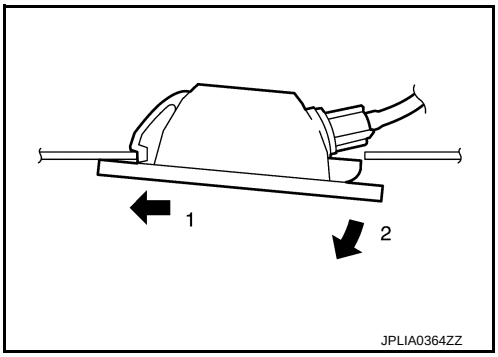
Removal and Installation

INFOID:0000000011732071

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".

REMOVAL

1. While pressing the license plate lamp to direction right side, pull it to direction outside and then remove it.
2. Disconnect license plate lamp connector.



INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000011732072

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-7, "Precautions for Removing Battery Terminal".**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

LICENSE PLATE LAMP BULB

1. Remove license plate lamp. Refer to EXL-112, "Removal and Installation".
2. Rotate the bulb socket counterclockwise and unlock it.

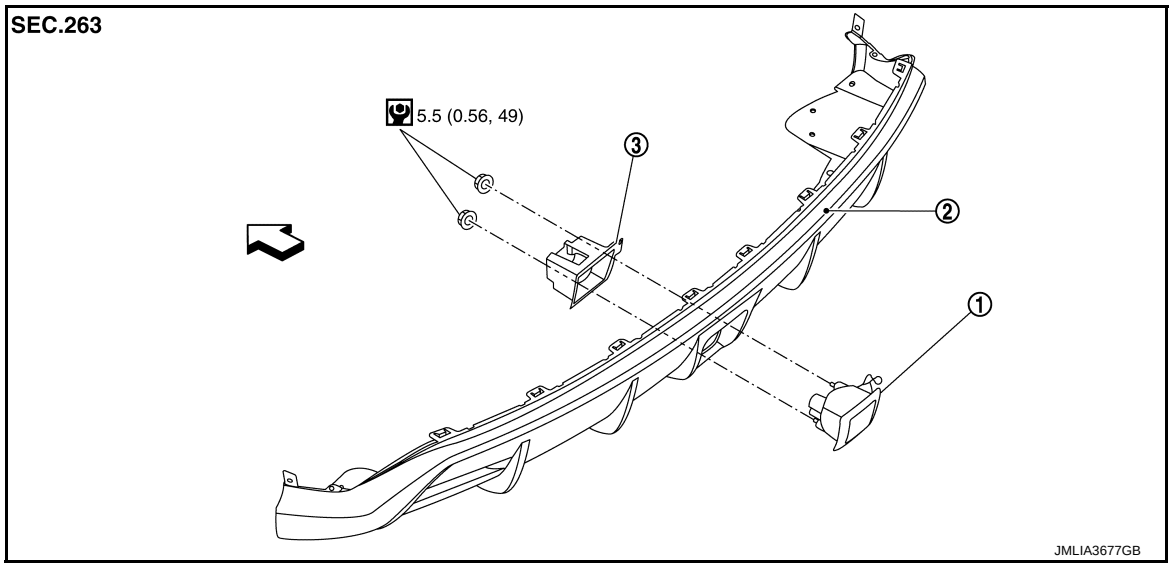
3. Remove the bulb from the socket.

REAR FOG LAMP

Exploded View

INFOID:0000000011732961

REMOVAL



1. Rear fog lamp housing
2. Rear bumper fascia lower
3. Rear fog lamp housing bracket

N·m (kg-m, in-lb)

: Vehicle front

Removal and Installation

INFOID:0000000011732962

REMOVAL

1. Remove rear bumper fascia lower. Refer to EXT-23, "Removal and Installation".
2. Remove rear fog lamp housing mounting nuts.
3. Remove rear fog lamp housing from the rear bumper fascia lower.
4. Remove rear fog lamp housing bracket from rear bumper fascia lower.

INSTALLATION

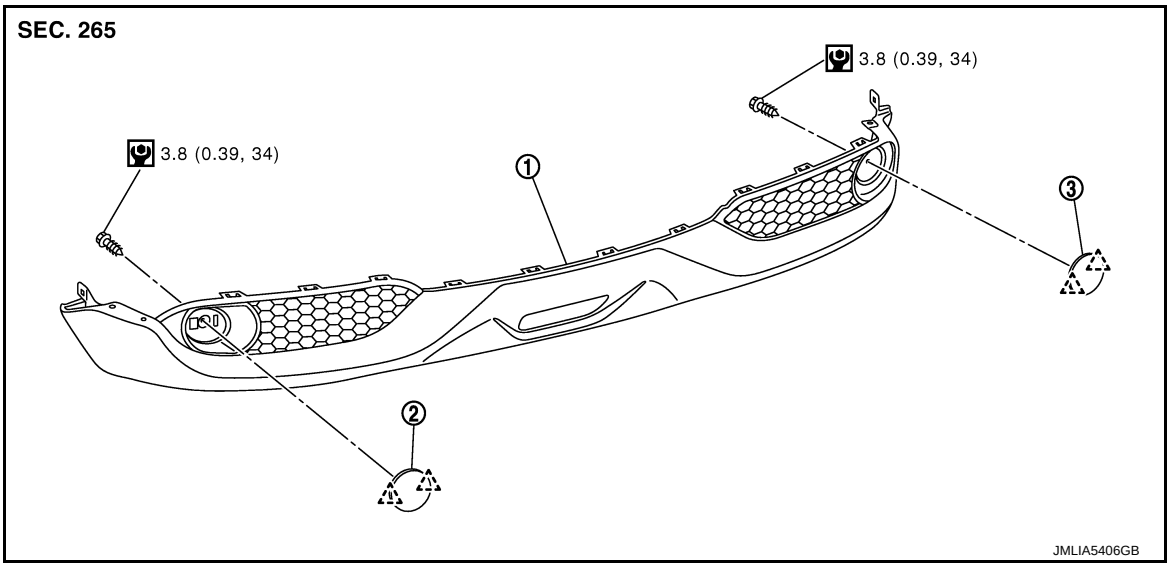
Installation is the reverse order of removal.

REAR REFLEX REFLECTOR

Exploded View

INFOID:0000000011732955

EXCEPT FOR NISMO AND NISMO RS

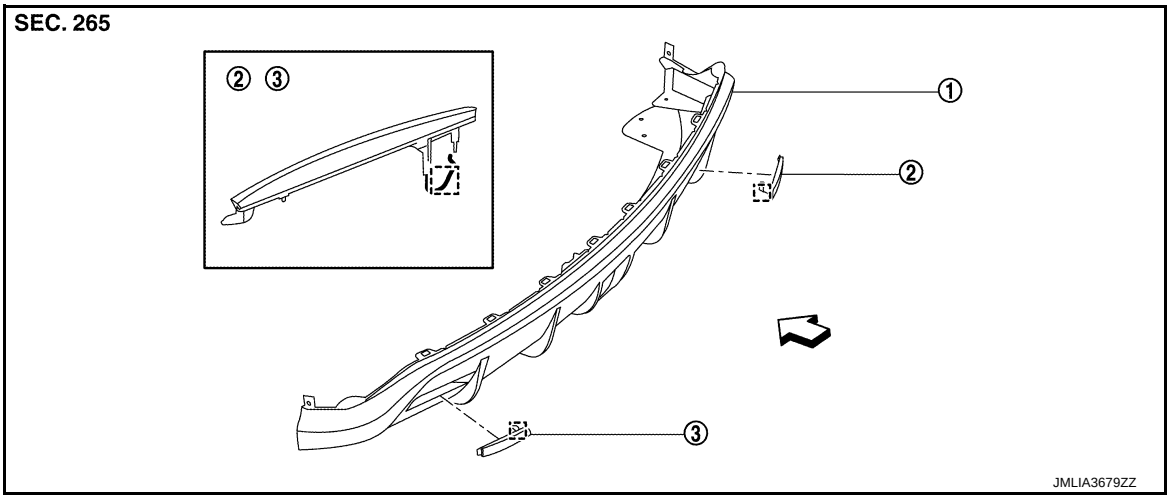


1. Rear bumper fascia lower
2. Rear reflex reflector LH
3. Rear reflex reflector RH

: Pawl

: N·m (kg-m, in-lb)

NISMO AND NISMO RS



1. Rear bumper fascia lower
2. Rear reflex reflector RH
3. Rear reflex reflector LH

: Metal clip

: Vehicle front

Removal and Installation

INFOID:0000000011732956

REMOVAL

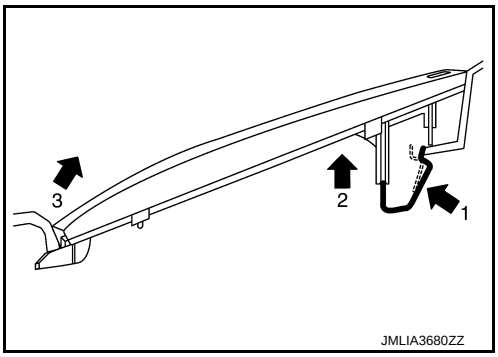
Except for NISMO and NISMO RS

1. Remove rear bumper fascia lower. Refer to EXT-23, "Removal and Installation".

2. Remove rear reflex reflector fixing screw.
3. Disengage rear reflex reflector fixing pawls, and then remove rear reflex reflector.

NISMO and NISMO RS

1. Remove rear bumper fascia lower. Refer to EXT-23, "Removal and Installation".
2. Disengage rear reflex reflector fixing metal clip, and then remove rear reflex reflector according to numerical order 1→3 indicated by arrows as shown in the figure.



INSTALLATION

Install in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000011732073

EXCEPT FOR NISMO AND NISMO RS

Item		Type	Wattage (W)
Headlamp	High Beam	HB3 (Halogen)	60
	Low Beam	D2S (Xenon)	35
Front combination lamp	Front turn signal lamp	WY21W (Amber)	21
	Front side marker lamp	W5W	5
	Parking lamp	LED	—
Front fog lamp		H11	55
Side turn signal lamp		LED	—
Rear combination lamp	Tail lamp (LED)	LED	—
	Stop lamp/Tail lamp (Rear side marker)	W21/5W	21/5
	Rear turn signal lamp	WY21W (Amber)	21
	Back-up lamp	W16W	16
High-mounted stop lamp		LED	—
License plate lamp		W5W	5

NISMO AND NISMO RS

Item		Type	Wattage (W)
Headlamp	High Beam	HB3 (Halogen)	60
	Low Beam	D2S (Xenon)	35
Front combination lamp	Front turn signal lamp	WY21W (Amber)	21
	Front side marker lamp	W5W	5
	Parking lamp	LED	—
Daytime running light		LED	—
Side turn signal lamp		LED	—
Rear combination lamp	Tail lamp (LED)	LED	—
	Stop lamp/Tail lamp (Rear side marker)	W21/5W	21/5
	Rear turn signal lamp	WY21W (Amber)	21
	Back-up lamp	W16W	16
High-mounted stop lamp		LED	—
License plate lamp		W5W	5

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011462587

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

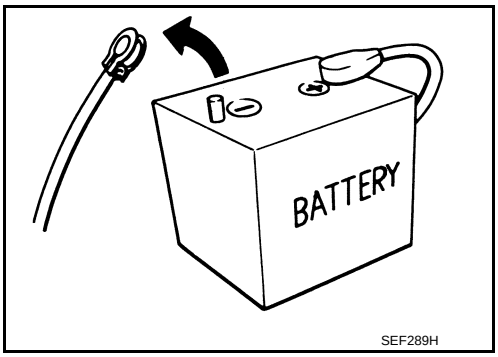
Always observe the following items for preventing accidental activation.

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

Precautions for Removing Battery Terminal

INFOID:0000000011462589

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



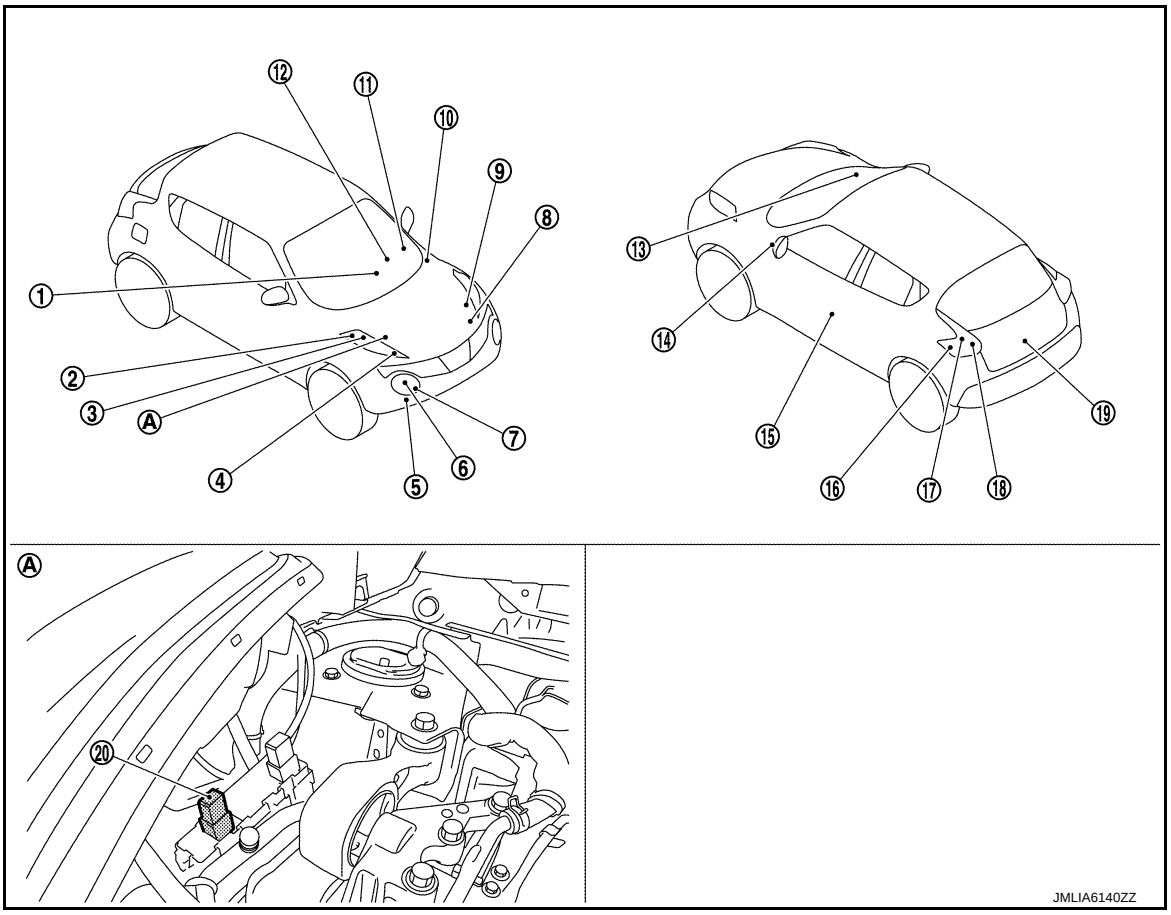
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011738928



1.	Hazard switch	2.	Front turn signal lamp	3.	Front side marker lamp
4.	Parking lamp	5.	Front fog lamp*1	6.	Headlamp LO (Halogen headlamp)
7.	Headlamp HI (Halogen headlamp)	8.	ECM*2 Refer to EC-26, "ENGINE CONTROL SYSTEM : Component Parts Location" (NISMO RS models) or EC-588, "ENGINE CONTROL SYSTEM : Component Parts Location" (Except for NISMO RS models).	9.	IPDM E/R Refer to PCS-4, "Component Parts Location".
10.	BCM Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".	11.	Combination switch	12.	Combination meter
13.	Optical sensor*3	14.	Side turn signal lamp	15.	Front door switch (driver side)
16.	Stop lamp / Tail lamp	17.	Rear turn signal lamp	18.	Tail lamp
19.	License plate lamp	20.	Daytime running light relay*4		
A.	Engine room (RH)				

*1: With front fog lamp
*2: With daytime running light system

*3: With auto light system
*4: Except for NISMO models with daytime running light system

Component Description

INFOID:0000000011738929

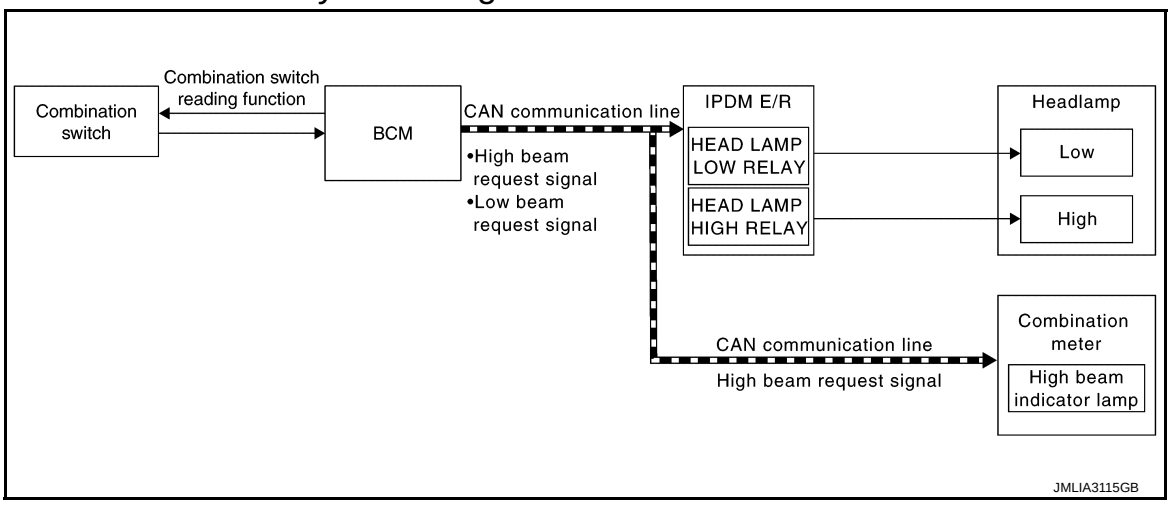
Part	Description
BCM	• Detects each switch condition by the combination switch reading function • Judges that the headlamp is turned ON according to the vehicle condition • Requests the headlamp relay (High/Low) ON to IPDM E/R (via CAN communication) • Requests the high beam indicator lamp and position lamp indicator lamp ON to the combination meter (via CAN communication) • Judges the outside brightness from the optical sensor signal. • Judges the ON/OFF status of the exterior lamp from the outside brightness and the vehicle condition.
IPDM E/R	Controls the integrated relay and daytime running light relay, and supplies voltage to the load according to the request from BCM (via CAN communication).
Combination meter	• Turns the high beam indicator lamp and position lamp indicator lamp ON according to the request from BCM (via CAN communication). • 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). • Combination meter transmits parking brake switch signal to BCM via CAN communication.
ECM*1	ECM transmits engine status signal to BCM via CAN communication.
Optical sensor*2	Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
Door switch	Refer to DLK-10, "Component Description".
Combination switch (Lighting & turn signal switch)	Refer to BCS-7, "COMBINATION SWITCH READING SYSTEM : System Description".
Hazard switch	Inputs the hazard switch ON/OFF signal to BCM.

*1: With daytime running light system
*2: With auto light system

SYSTEM
HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Diagram

INFOID:0000000011738930



HEADLAMP SYSTEM : System Description

INFOID:0000000011738931

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 via CAN communication according to the headlamp (LO) ON condition.

Headlamp (LO) ON condition
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-122, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

- IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp (LO) ON according to the low beam request signal.

HEADLAMP (HI) OPERATION

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

Headlamp (HI) ON condition
- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-122, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

- 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 (HI) ON according to the high beam request signal.

FOLLOW ME HOME FUNCTION

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

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

Follow me home ON condition
- Ignition switch OFF

- Lighting switch OFF
• IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp (LO) ON according to the low beam request signal.
• When in any of following conditions, follow me home function can be cancelled while follow me home function is operating.

Follow me home OFF condition
- Ignition switch is turned from OFF→ACC or ON
- Lighting switch is turned from OFF→ON

NOTE:
• Flash-to-pass operation illumination time for 1 time can be extended to approximately 30 seconds during operation of follow me home function.
• Flash-to-pass operation can be illuminated continuously for approximately 60 seconds (flash-to-pass operation, 2 times), approximately 90 seconds (flash-to-pass operation, 3 times), and a maximum of approximately 120 seconds (flash-to-pass operation, 4 times).
• Follow me home function activating time can be set by CONSULT. Refer to EXL-130, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (HALOGEN TYPE)".

HEADLAMP SYSTEM : Fail-Safe

INFOID:0000000011738932

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.

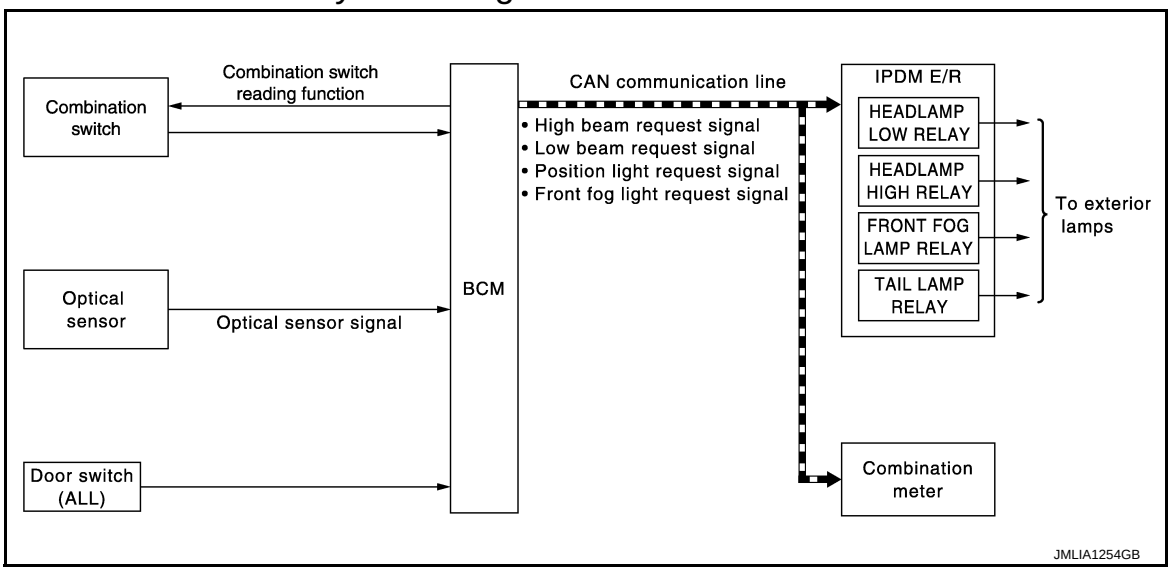
If No CAN Communication Is Available With BCM

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

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Diagram

INFOID:0000000011738933



AUTO LIGHT SYSTEM : System Description

INFOID:0000000011738934

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

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

*: Headlamp (LO/HI), front fog lamp, parking lamp, license plate lamp, tail 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 EXL-130, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (HALOGEN TYPE)".

AUTO LIGHT FUNCTION

Description
- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to the optical sensor when the ignition switch is turned ON.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- When ignition switch is turned ON, BCM detects outside brightness from the optical sensor signal and judges ON/OFF condition of each exterior lamp, depending on the outside brightness condition.
- 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 EXL-130, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (HALOGEN TYPE)".

DELAY TIMER FUNCTION

- BCM turns the headlamp (LO) OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.
- Turns the headlamp (LO) OFF 5 minutes after the ignition switch is turned OFF.
- Turns the headlamp (LO) OFF 5 minutes after detecting that any door opens. (Door switch ON).
- Turns the headlamp (LO) OFF a certain period of time* after closing all doors. (Door switch ON → OFF).
- Delay timer function turns OFF, when the ignition switch is other than OFF or the lighting switch is other than AUTO.

*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to EXL-130, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (HALOGEN TYPE)".

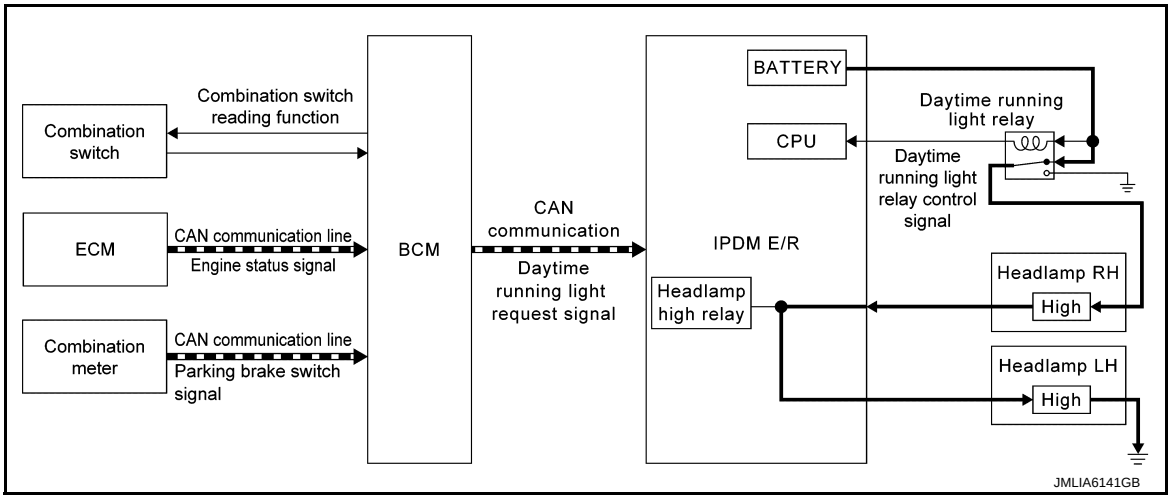
NOTE:
When any position other than the lighting switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

DAYTIME RUNNING LIGHT SYSTEM

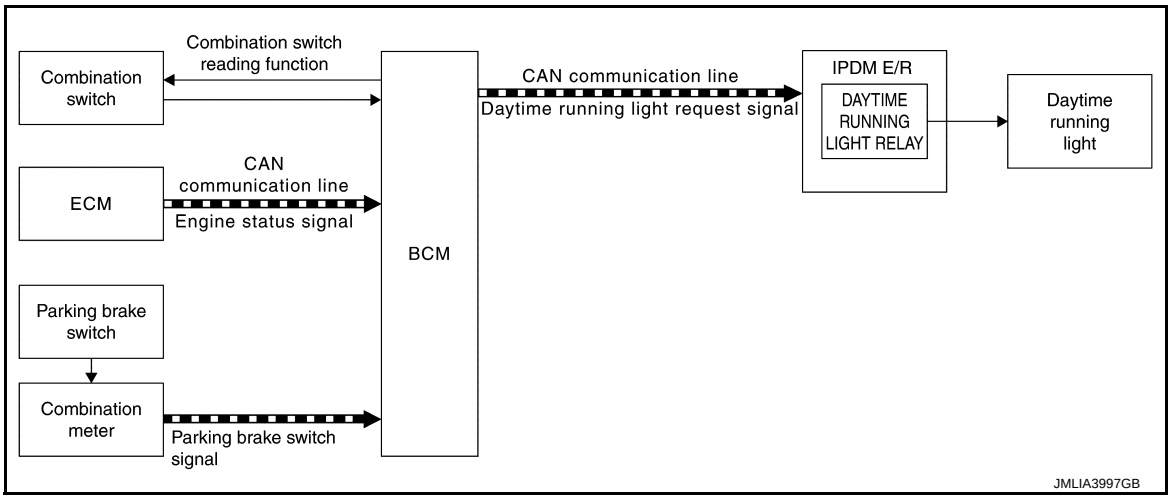
DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:0000000011740266

EXCEPT FOR NISMO MODELS



NISMO MODELS



DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000011740267

OUTLINE

Except for NISMO Models

- Turns the headlamp (HI) ON [Headlamp (HI) 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.

NISMO Models

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

Except for NISMO Models

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the following signals.
- Engine status signal (received from ECM via CAN communication)
- Parking brake switch signal (received from combination meter via CAN communication)
- BCM transmits the daytime running light request signal to IPDM E/R via CAN communication according to the daytime running light ON condition.

Daytime running light ON condition

- Engine running with the parking brake released, and any following conditions are satisfied.

- Lighting switch OFF
- Lighting switch 1ST
- 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.

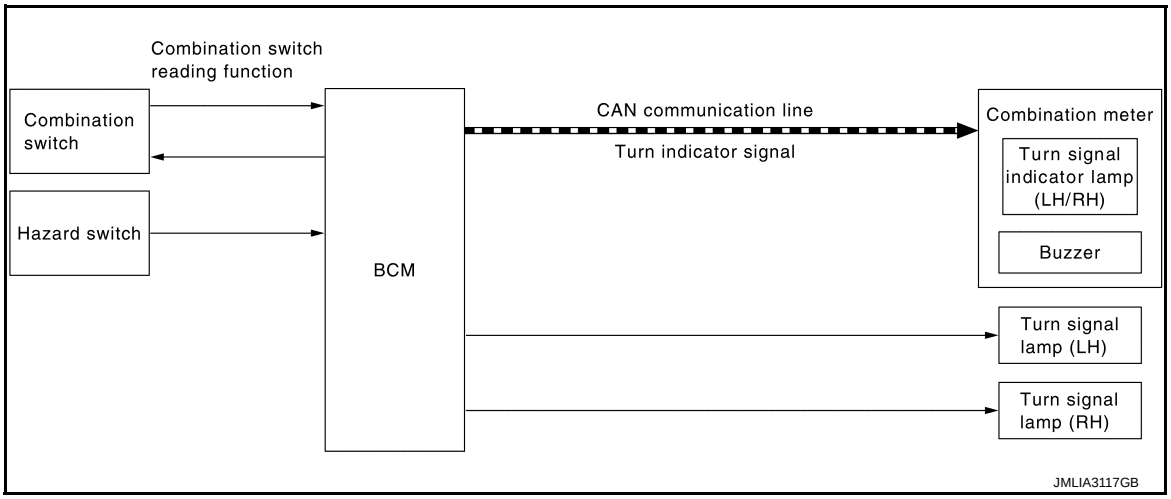
NISMO Models
- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the following signals.
- Engine status signal (received from ECM via CAN communication)
- Parking brake switch signal (received from combination meter via CAN communication)
- BCM transmits the daytime running light request signal to IPDM E/R via CAN communication according to the daytime running light ON condition.

Daytime running light ON condition
- Engine running with the parking brake released, and any following conditions are satisfied.
- Lighting switch OFF
- Lighting switch 1ST
- IPDM E/R turns the integrated daytime running light relay ON, and turns the daytime running light ON according to the daytime running light request signal.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram

INFOID:0000000011738936



TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000011738937

OUTLINE

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

TURN SIGNAL LAMP OPERATION

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

HAZARD WARNING LAMP OPERATION

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

TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION

- BCM transmits the turn indicator signal to the combination meter using CAN communication while the turn signal lamp and the hazard warning lamp are operating.

- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn indicator signal.

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.

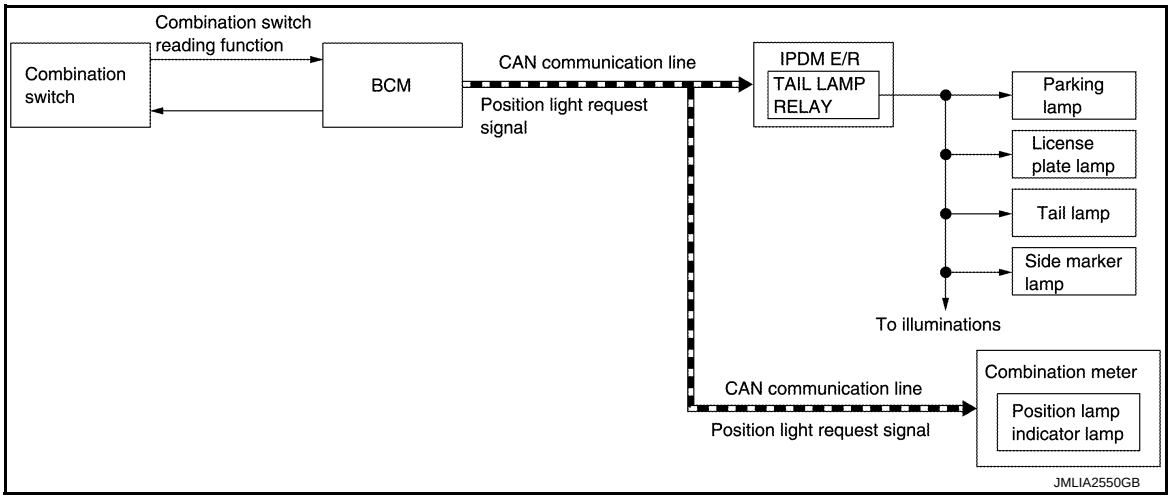
NOTE:

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 Diagram

INFOID:0000000011738938



PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description

INFOID:0000000011738939

OUTLINE

Parking, license plate, side marker and tail lamps are controlled by combination switch reading function and parking, license plate, side marker and tail lamps 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 parking, license plate, side marker and tail lamps ON condition.

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

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-122, "AUTO LIGHT SYSTEM : System Description".)

- IPDM E/R turns the integrated tail lamp relay ON and turns the parking, license plate 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:0000000011738940

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.

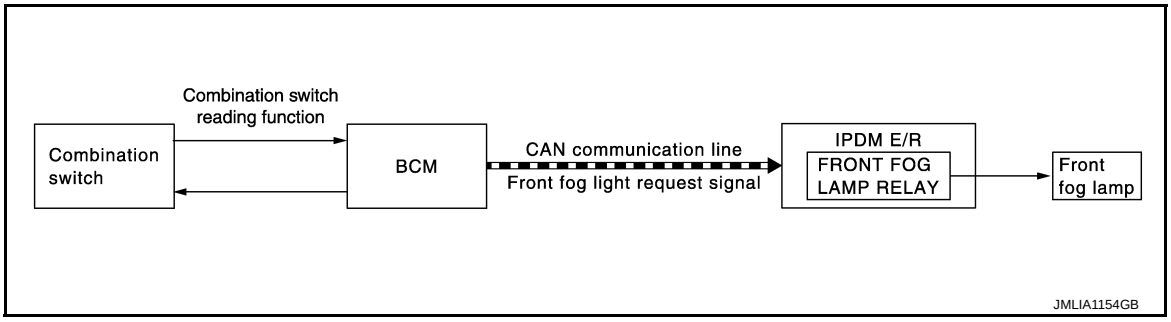
If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
• Parking lamp • License plate lamp • Tail lamp	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Diagram

INFOID:0000000011738941



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000011738942

OUTLINE

Front fog lamp is controlled by combination switch reading function and 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 light request signal to IPDM E/R via CAN communication according to the front fog lamp ON condition.

Front fog lamp ON condition

- Front fog lamp switch ON, and any of the following conditions are satisfied. [Except headlamp (HI) ON condition]
- Lighting switch 2ND
- Lighting switch AUTO (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-122, "AUTO LIGHT SYSTEM : System Description".)
- IPDM E/R turns the integrated front fog lamp relay ON, and turns the front fog lamp ON according to the front fog light request signal.

FRONT FOG LAMP SYSTEM : Fail-Safe

INFOID:0000000011738943

CAN COMMUNICATION CONTROL

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

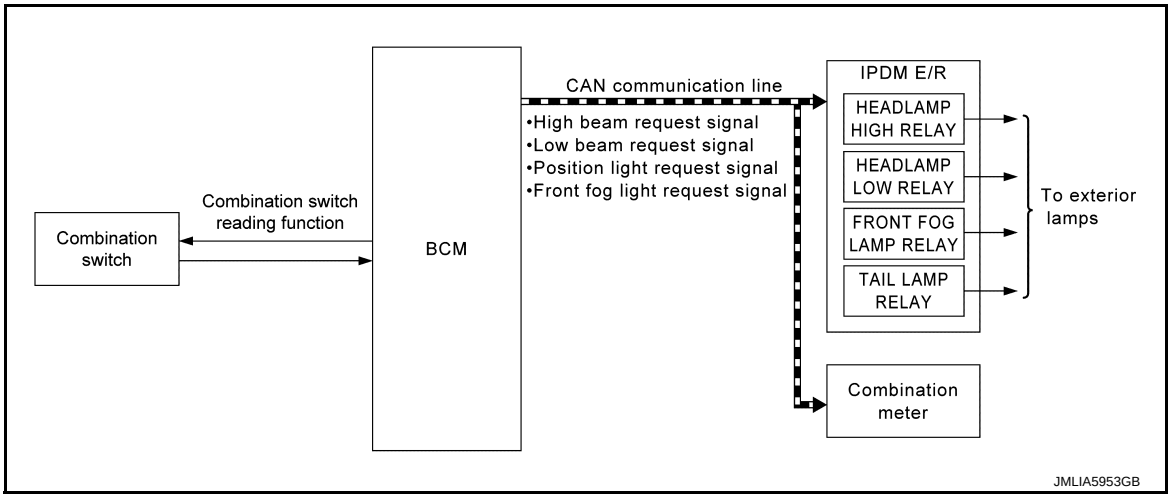
If No CAN Communication Is Available With BCM

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

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM : System Diagram

INFOID:0000000011738944



EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000011738945

OUTLINE

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

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

EXTERIOR LAMP BATTERY SAVER ACTIVATION

- BCM activates the timer and turns the exterior lamp OFF 45 seconds after the ignition switch is turned from ON → OFF with the exterior lamps ON.
- When in any of following conditions (after the exterior lamp battery saver is activated), exterior lamps can be turned ON.

- Ignition switch is turned from OFF → ON
- Lighting switch is changed
- Front fog lamp switch is changed

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011739589

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning system	AIR CONDITONER		×	×*
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

NOTE:

*: For models with automatic A/C, this diagnosis mode is not used.

FREEZE FRAME DATA (FFD)

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

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power position is “LOCK”*.)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is “OFF”.)
	LOCK>ACC		While turning power position from “LOCK”* *to “ACC”
	ACC>ON		While turning power position from “ACC” to “IGN”
	RUN>ACC		While turning power position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power position from “ACC” to “OFF”
	OFF>LOCK		While turning power position from “OFF” to “LOCK”*
	OFF>ACC		While turning power position from “OFF” to “ACC”
	ON>CRANK		While turning power position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is “LOCK”*.) to low power consumption mode
	LOCK		Power position is “LOCK”*
	OFF		Power position is “OFF” (Ignition switch OFF)
	ACC		Power position is “ACC” (Ignition switch ACC)
	ON		Power position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:

*: Power position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), and any of the following conditions are met.

- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (HALOGEN TYPE)

INFOID:0000000011738947

WORK SUPPORT

Service item	Setting item	Setting	
CUSTOM A/LIGHT SETTING*1	MODE1*2	Normal	
	MODE2	More sensitive setting than normal setting (Turns ON earlier than normal operation)	
	MODE3	More sensitive setting than MODE2 (Turns ON earlier than MODE2)	
	MODE4	Less sensitive setting than normal setting (Turns ON later than normal operation)	
BATTERY SAVER SET	On*2	With the exterior lamp battery saver function	
	Off	Without the exterior lamp battery saver function	
ILL DELAY SET*1	MODE1*2	45 sec.	Sets delay timer function timer operation time. (All doors closed)
	MODE2	Without the function	
	MODE3	30 sec.	
	MODE4	60 sec.	
	MODE5	90 sec.	
	MODE6	120 sec.	
	MODE7	150 sec.	
	MODE8	180 sec.	
HEAD LIGHT TIMER	MODE1	10 sec.	Sets follow me home function activating time
	MODE2*2	30 sec.	
AUTO LIGHT LOGIC SET	MODE1	**NOTE:** This item is displayed, but cannot be used	
	MODE2		
	MODE3		
	MODE4		
	MODE5		
	MODE6		

*1: For models without auto light system, this item cannot be used.

*2: Factory setting

DATA MONITOR

NOTE:

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

Monitor item [Unit]	Description
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates [STOP/STALL/CRANK/RUN] condition of engine states
VEH SPEED 1 [km/h]	Display the vehicle speed signal received from combination meter by numerical value [km/h]

Monitor item [Unit]	Description
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	
HEAD LAMP SW 2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW*1 [On/Off]	
FR FOG SW*2 [On/Off]	
DOOR SW-DR [On/Off]	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS [On/Off]	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR [On/Off]	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL [On/Off]	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK [On/Off]	Indicated [On/Off] condition of back door switch
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM
OPTICAL SENSOR [On/Off/NG]	**NOTE:** This item is displayed, but cannot be monitored

*1: For models without auto light system, this item cannot be monitored.
*2: For models without front fog lamp, this item cannot be monitored.

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	• Transmits the position light request signal to IPDM E/R via CAN communication to turn the parking, license plate and tail lamps ON • Transmits the position light request signal to combination meter via CAN communication to turn the position lamp indicator lamp ON
	Off	Stops the position light request signal transmission
HEAD LAMP	HI	• Transmits the high beam request signal to IPDM E/R via CAN communication to turn the headlamp (HI) ON • Transmits the high beam request signal to combination meter via CAN communication to turn the high beam indicator lamp ON
	Low	Transmits the low beam request signal to IPDM E/R via CAN communication to turn the headlamp (LO) ON
	Off	Stops the high beam request signal and low beam request signal transmission

Test item	Operation	Description
FR FOG LAMP*1	On	• Transmits the front fog light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON (With front fog lamp) • Transmits the daytime running light request signal to IPDM E/R via CAN communication to turn the daytime running light ON (NISMO models with daytime running light system)
	Off	• Stops the front fog light request signal transmission (With front fog lamp) • Stops the front fog light request signal transmission (NISMO models with daytime running light system)
DAYTIME RUNNING LIGHT*2	On	Transmits the daytime running light request signal to IPDM E/R via CAN communication to turn the headlamp (HI) ON [Headlamp (HI) at approximately half illumination]
	Off	Stops the daytime running light request signal transmission
ILL DIM SIGNAL	On	**NOTE:** This item is displayed, but cannot be tested
	Off	

*1: For models without front fog lamp and except for NISMO models with daytime running light system, this item cannot be tested.
*2: For models without daytime running light system and NISMO models with daytime running light system, this item cannot be tested.

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER) (HALOGEN TYPE)

INFOID:0000000011738948

WORK SUPPORT

Service item	Setting item	Setting	
HAZARD ANSWER BACK	Lock Only	With locking only	Sets the hazard warning lamp answer back function when the door is lock/unlock with the door request switch and Intelligent Key
	Unlock Only	With unlocking only	
	Lock/ Unlock*	With locking/unlocking	
	Off	Without the function	

*: Factory setting

DATA MONITOR

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

Monitor item [Unit]	Description
REQ SW -DR [On/Off]	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS [On/Off]	Indicates [On/Off] condition of door request switch (passenger side)
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
TURN SIGNAL R [On/Off]	Each switch status that BCM detects from the combination switch reading function
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch

Monitor item [Unit]	Description
RKE-LOCK [On/Off]	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK [On/Off]	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-PANIC* [On/Off]	Indicates [On/Off] condition of PANIC button of Intelligent Key

*: For models without panic alarm function, this item cannot be used.

ACTIVE TEST

Test item	Operation	Description
FLASHER	RH	• Outputs voltage to turn the right side turn signal lamps ON • Transmits the turn indicator signal to combination meter via CAN communication to turn the turn signal indicator lamp (RH) ON
	LH	• Outputs voltage to turn the left side turn signal lamps ON • Transmits the turn indicator signal to combination meter via CAN communication to turn the turn signal indicator lamp (LH) ON
	Off	• Stops the voltage to turn the turn signal lamps OFF • Stops the turn indicator signal transmission

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000011739590

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
- Side marker lamp
- Front fog lamp
- Headlamp (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan

Operation Procedure

CAUTION:

Wiper arm interferes with hood when wiper is operated while wiper arm is in the raised position. Always perform auto active test without setting wiper arm in the raised position. Always pour water on front windshield glass in advance to auto active test so that damage on front windshield glass surface is prevented.

1. Turn the ignition switch OFF.
2. Turn the ignition switch ON, and within 20 seconds, press the driver door switch 10 times. Then turn the ignition switch OFF.
   CAUTION:
   Close passenger door.
3. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
   CAUTION:
   Engine starts when ignition switch is turned ON while brake pedal is depressed.
4. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

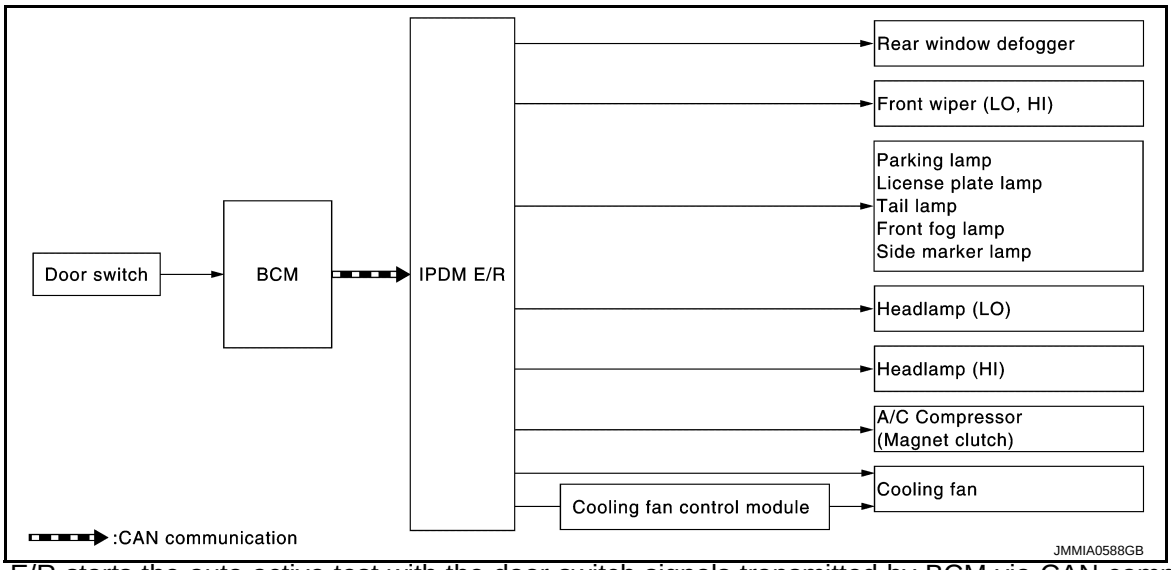
- When auto active test mode has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-78, "Component Function Check".

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 • Side marker lamp • Front fog lamp	10 seconds
4	Headlamp	LO for 10 seconds →HI ON ⇔ OFF 5 times
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
6	Cooling fan	50% duty for 5 seconds → 100% duty for 5 seconds

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
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	YES	BCM signal input circuit
		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 operate • Parking lamp • License plate lamp • Tail lamp • Side marker lamp • Front fog lamp • Headlamp (HI, LO) • Front wiper motor	Perform auto active test. Does the applicable system operate?	YES	BCM signal input circuit
		NO	• Lamp or motor • Lamp or motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES	• A/C amp. signal input circuit • CAN communication signal between A/C amp. and ECM • CAN communication signal between ECM and IPDM E/R
		NO	• Magnet clutch • Harness or connector between IPDM E/R and magnet clutch • IPDM E/R

Symptom	Inspection contents		Possible cause
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	• Harness or connector between IPDM E/R and cooling fan relay • Harness or connector between IPDM E/R and cooling fan control module. • Harness or connector between cooling fan control module and cooling fan motor • Cooling fan motor • Cooling fan relay • Cooling fan control module • IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000011739591

APPLICATION ITEM

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

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

SELF DIAGNOSTIC RESULT

Refer to PCS-23, "DTC Index".

DATA MONITOR

NOTE:

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

Monitor Item [Unit]	MAIN SIGNALS	Description
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.

Monitor Item [Unit]	MAIN SIGNALS	Description
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the ignition power supply (M/T models) or shift position (CVT models) judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the CVT shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		**NOTE:** This item is indicated, but not monitored.
S/L STATE [LOCK/UNLK/UNKWN]		**NOTE:** This item is indicated, but not monitored.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication. **NOTE:** This item is monitored only for the except for NISMO models.
OIL P SW [Open/Close]		**NOTE:** This item is indicated, but not monitored.
HOOD SW [Off/On]		**NOTE:** This item is indicated, but not monitored.
HL WASHER REQ [Off/On]		**NOTE:** This item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder request signal received from BCM via CAN communication.

ACTIVE TEST

Test item

Test item	Operation	Description
HORN	On	Operates horn relay for 20 ms.
REAR DEFOGGER	Off	OFF
	On	Operates the rear window defogger relay.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	Transmits 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Transmits 75% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Transmits 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	**NOTE:** This item is indicated, but cannot be tested.

Test item	Operation	Description
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000011738956

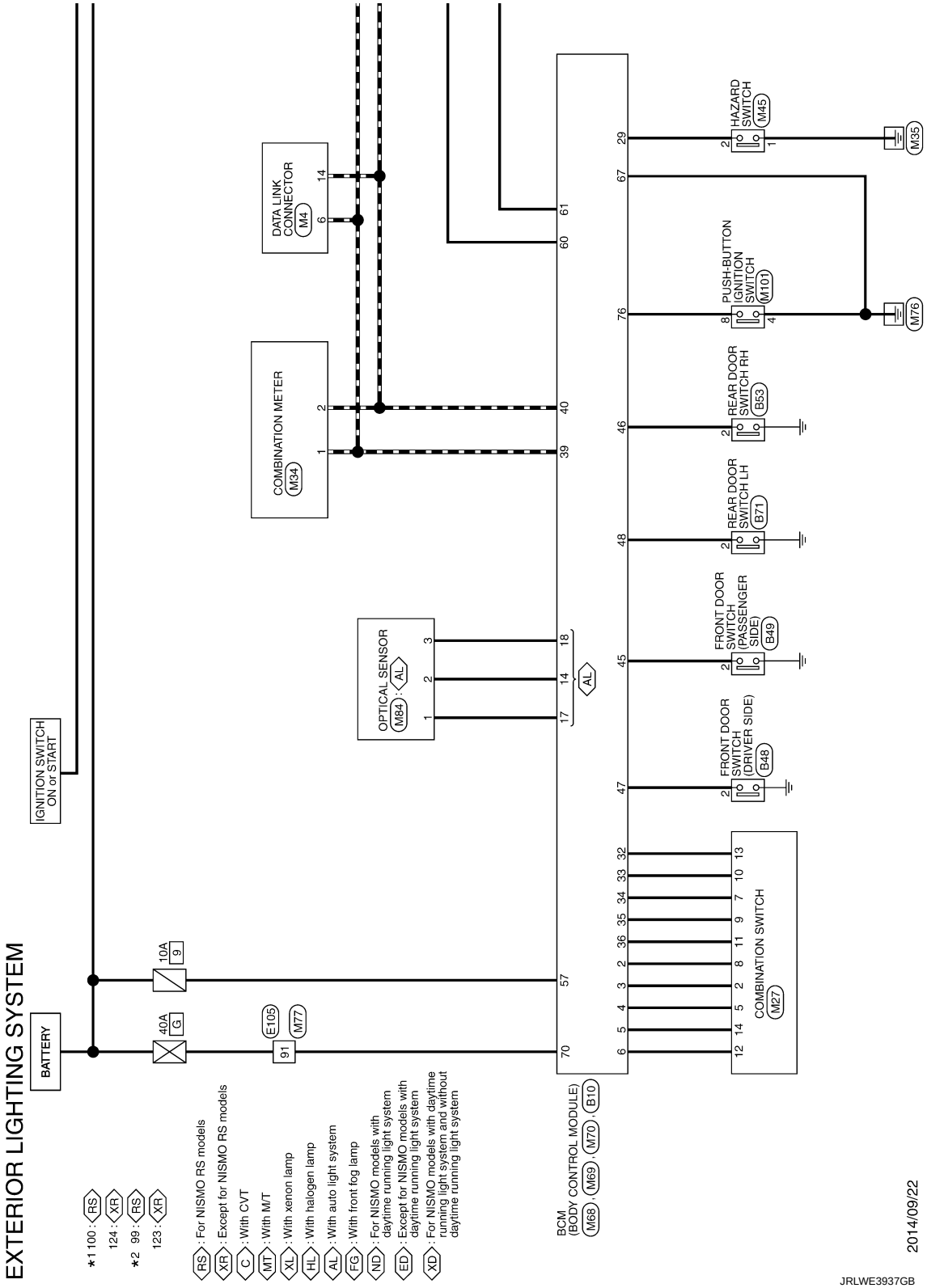
ECU	Reference
BCM	BCS-38, "Reference Value"
	BCS-60, "Fail-safe"
	BCS-61, "DTC Inspection Priority Chart"
	BCS-62, "DTC Index"
IPDM E/R	PCS-16, "Reference Value"
	PCS-22, "Fail-safe"
	PCS-23, "DTC Index"

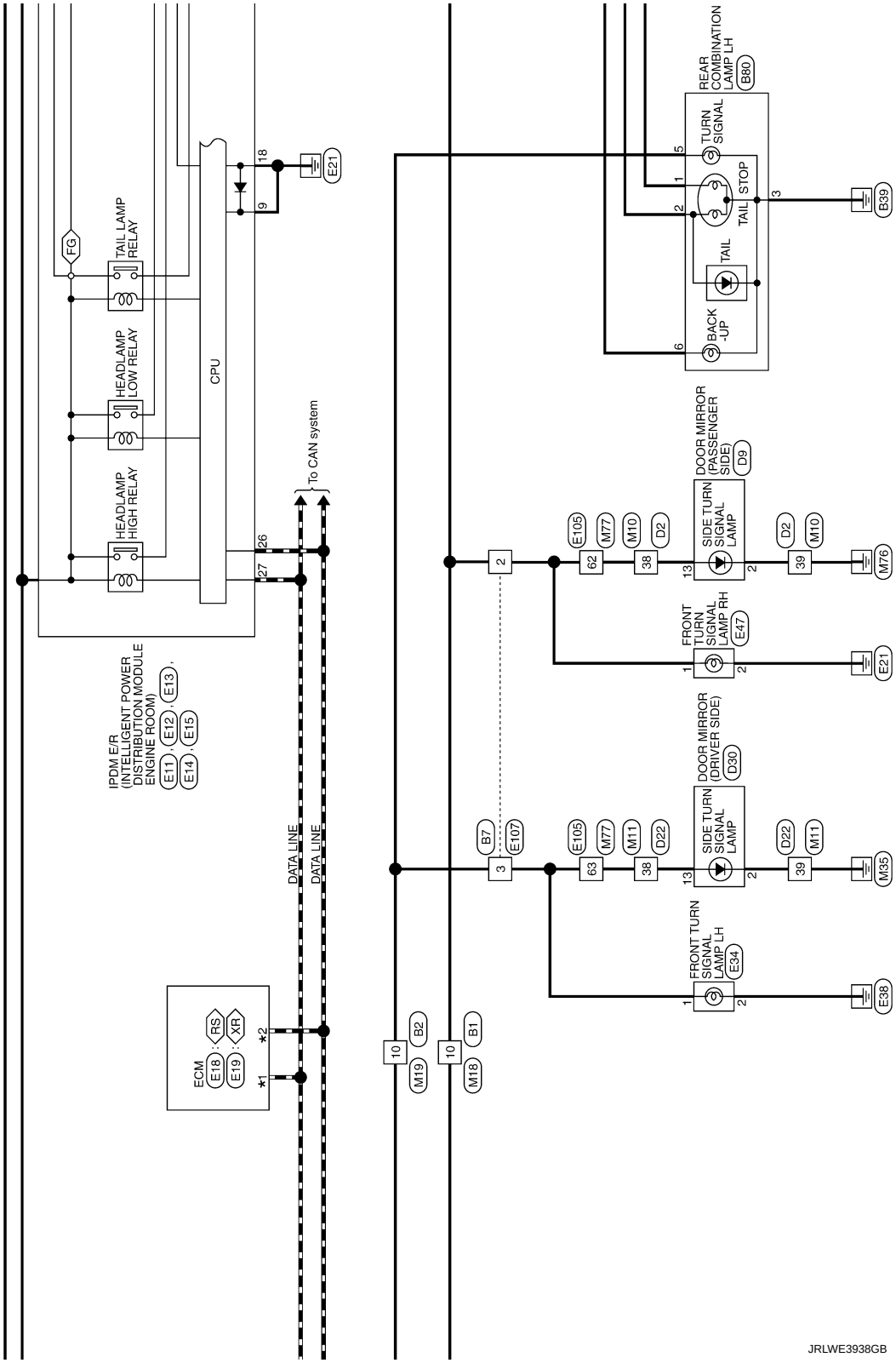
WIRING DIAGRAM

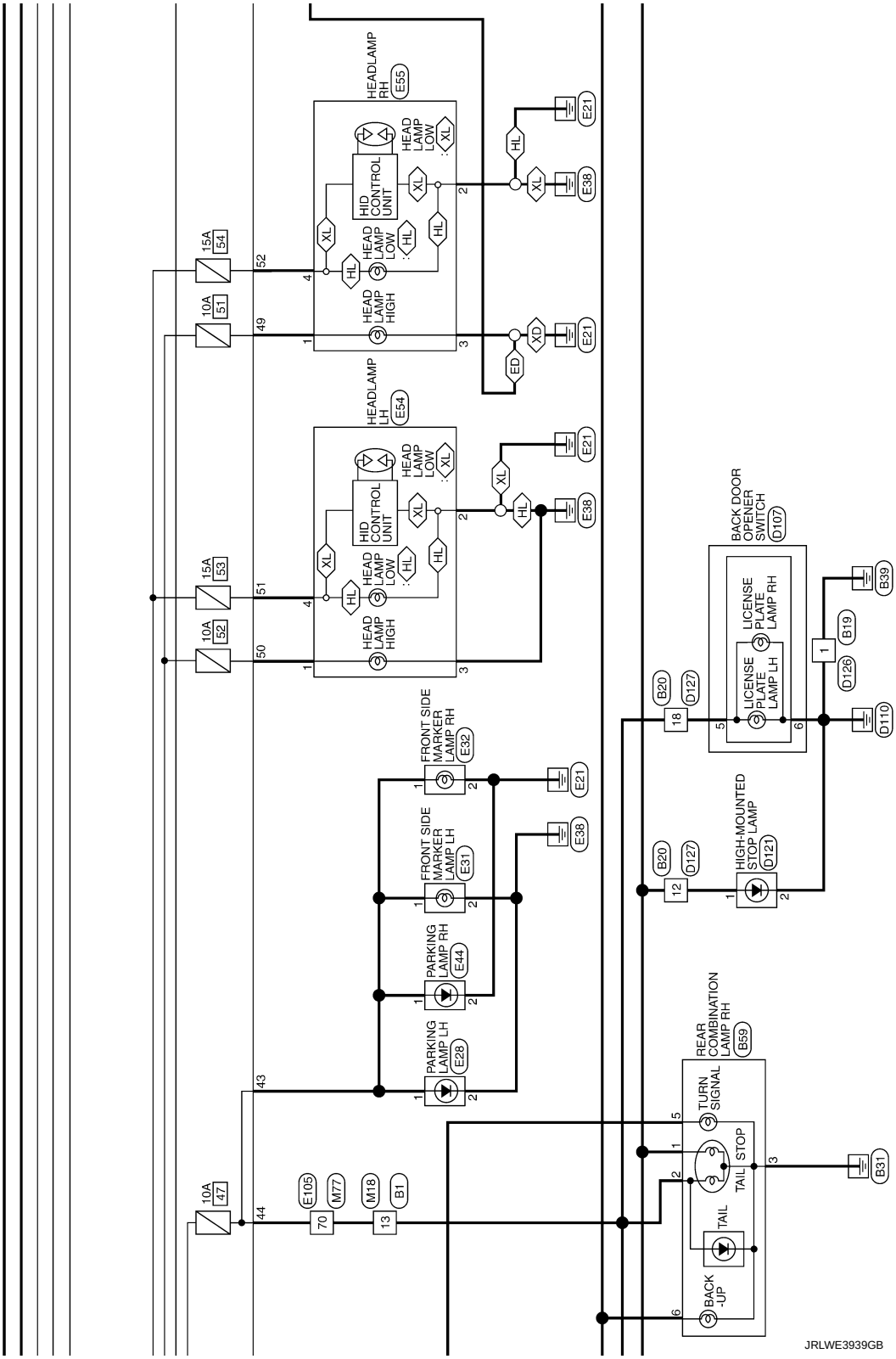
EXTERIOR LIGHTING SYSTEM

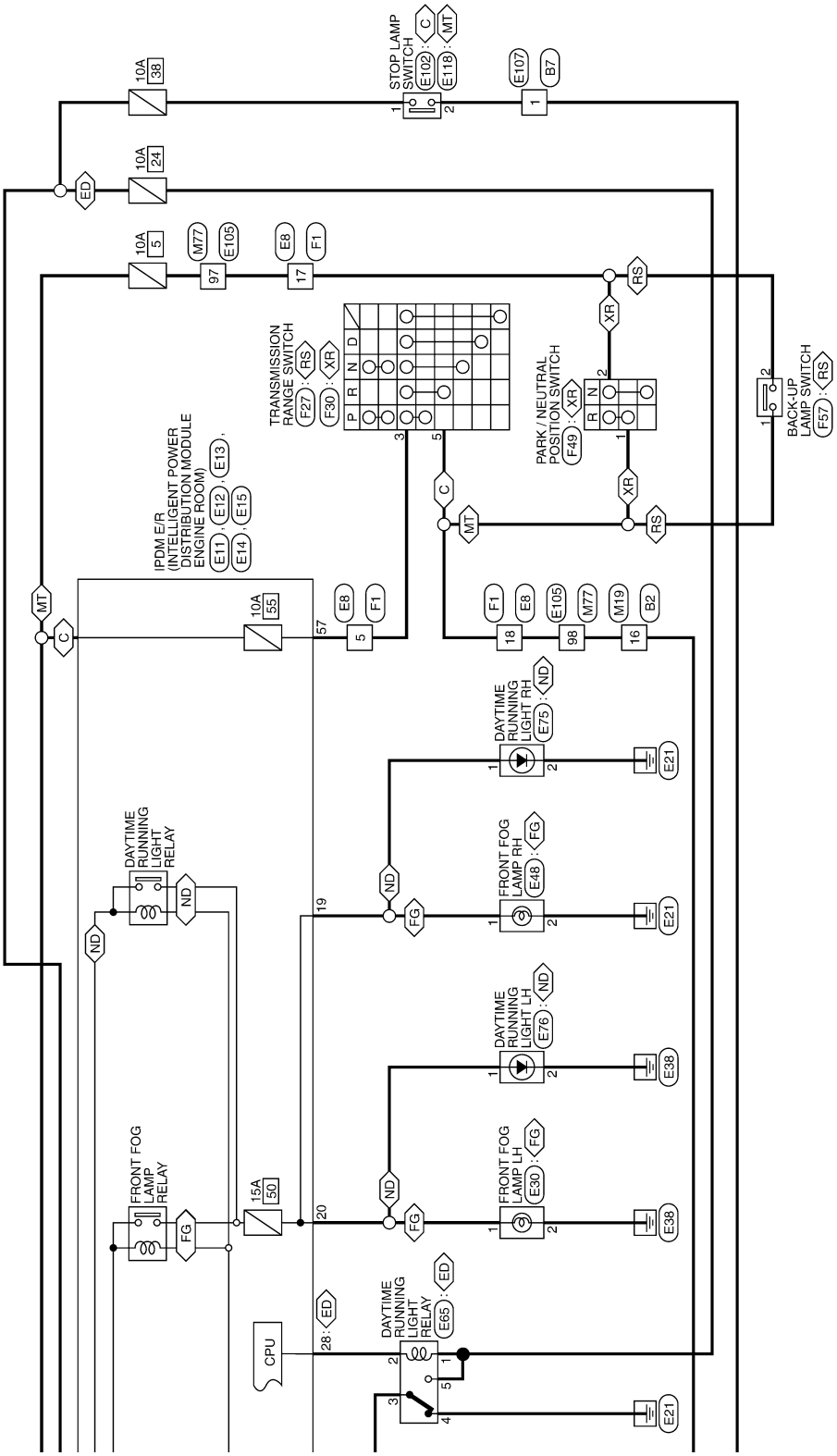
Wiring Diagram

INFOID:0000000011739140




REAR COMBINATION LAMP LH B80
TURN SIGNAL
STOP
TAIL
BACK -UP
B39
DOOR MIRROR (PASSENGER SIDE) D9
SIDE TURN SIGNAL LAMP
FRONT TURN SIGNAL LAMP RH E47
M76
E21
DOOR MIRROR (DRIVER SIDE) D30
FRONT TURN SIGNAL LAMP LH E34
M35
E38
TAIL LAMP RELAY
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
FG
CPU
To CAN system
DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E11, E12, E13, E14, E15
ECM
E18, E19
RS, XR
M19
M18
JRLWE3938GB


HEADLAMP RH E55
HEADLAMP LH E54
HID CONTROL UNIT
HEAD LAMP LOW
HEAD LAMP HIGH
15A 54
10A 51
15A 53
10A 52
10A 47
FRONT SIDE MARKER LAMP RH E32
FRONT SIDE MARKER LAMP LH E31
PARKING LAMP RH E44
PARKING LAMP LH E28
BACK DOOR OPENER SWITCH D107
LICENSE PLATE LAMP RH
LICENSE PLATE LAMP LH
HIGH-MOUNTED STOP LAMP D121
REAR COMBINATION LAMP RH B59
TURN SIGNAL
TAIL
STOP
BACK -UP
JRLWE3939GB



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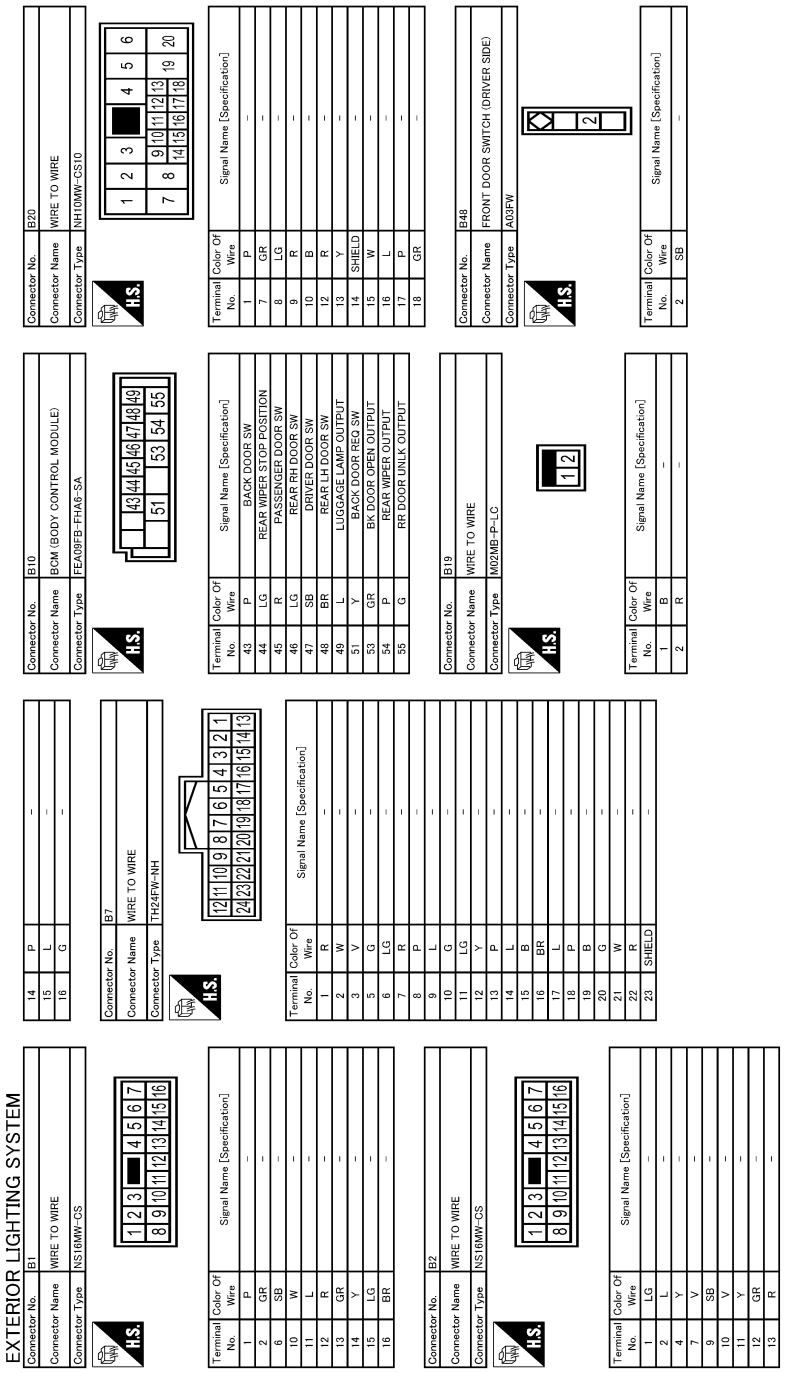
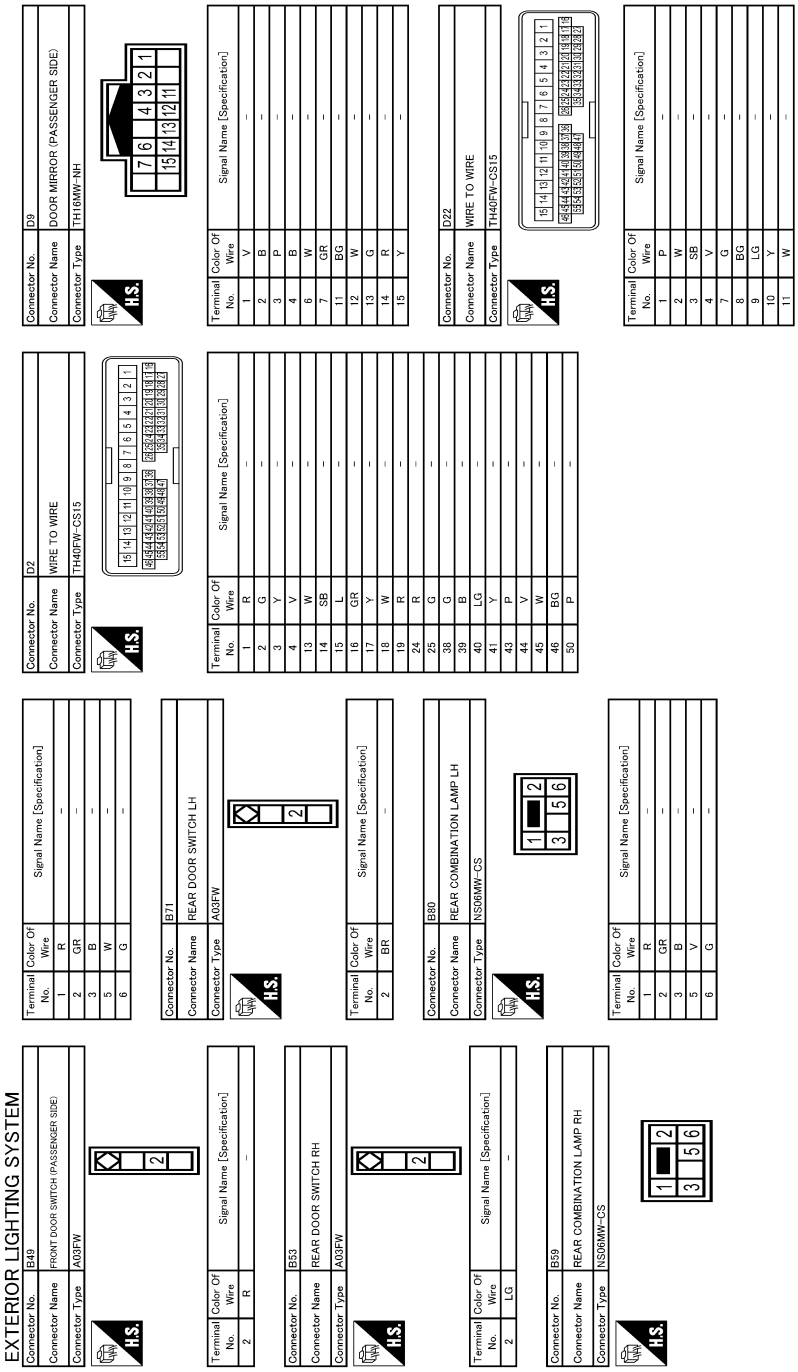


JRLWE3941GB

EXTERIOR LIGHTING SYSTEM



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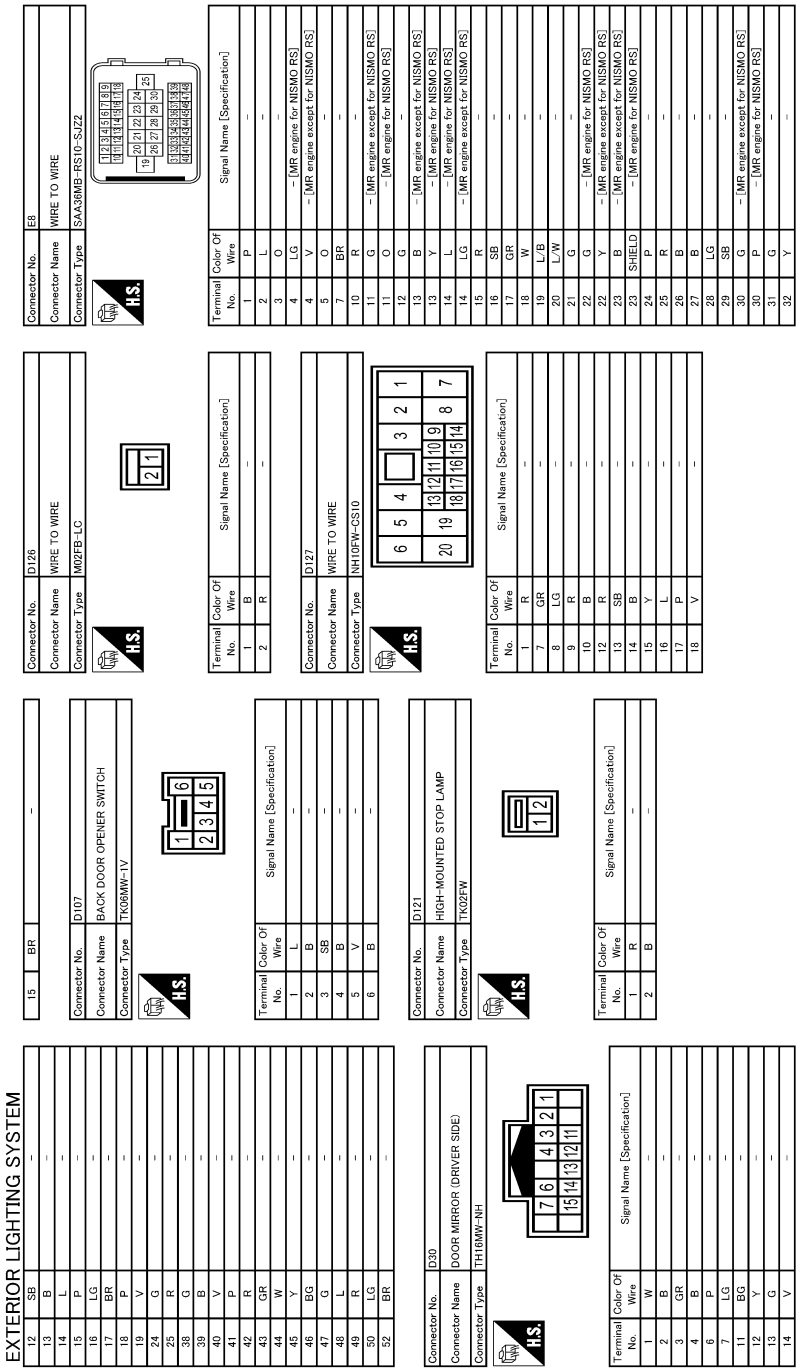

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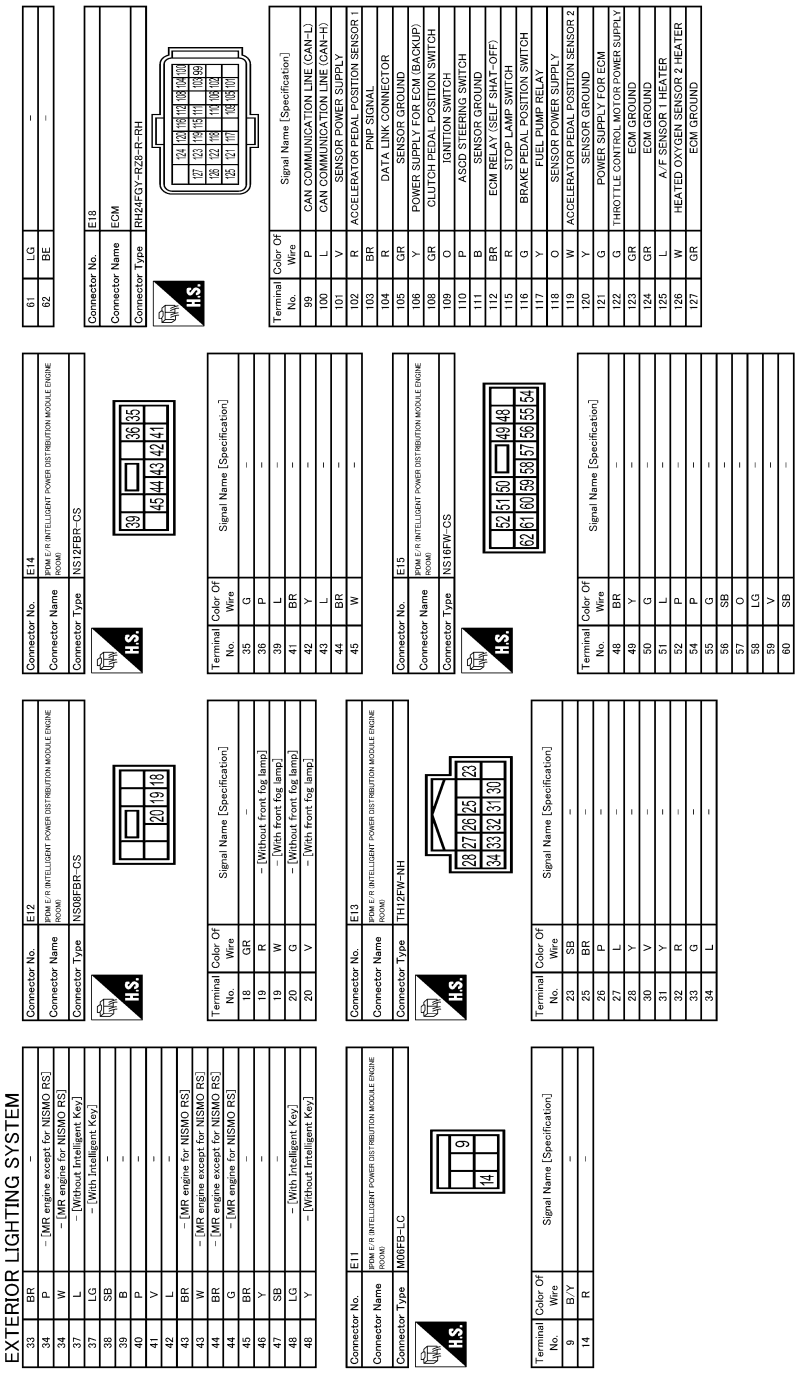
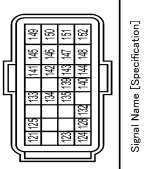


JRLWE3944GB

EXTERIOR LIGHTING SYSTEM

Connector No.	E19
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
121	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
123	P	CAN COMMUNICATION LINE (CAN-L)
124	L	CAN COMMUNICATION LINE (CAN-H)
125	G	SENSOR POWER SUPPLY
128	SB	FUEL TANK TEMPERATURE SENSOR
132	GR	CLUTCH PEDAL POSITION SWITCH
133	LG	IGNITION SWITCH
134	P	ASCD STEERING SWITCH
135	B	SENSOR GROUND
139	R	STOP LAMP SWITCH
140	G	BRAKE PEDAL POSITION SWITCH
141	L	EVAP CANISTER VENT CONTROL VALVE
142	O	SENSOR POWER SUPPLY
143	W	ACCELERATOR PEDAL POSITION SENSOR 2
144	Y	SENSOR GROUND
145	G	POWER SUPPLY FOR ECM
146	V	SENSOR POWER SUPPLY
147	GR	ECM GROUND
148	Y	SENSOR GROUND
149	GR	ECM GROUND
150	R	ACCELERATOR PEDAL POSITION SENSOR 1
151	GR	SENSOR GROUND
152	GR	ECM GROUND

Connector No.	E28
Connector Name	PARKING LAMP LH
Connector Type	RS02FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	B	–

Connector No.	E30
Connector Name	FRONT FOG LAMP LH
Connector Type	FH202FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	–
2	B	–

Connector No.	E31
Connector Name	FRONT SIDE MARKER LAMP LH
Connector Type	T02FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	B/R	–

Connector No.	E32
Connector Name	FRONT SIDE MARKER LAMP RH
Connector Type	T02FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	B	–

Connector No.	E34
Connector Name	FRONT TURN SIGNAL LAMP LH
Connector Type	HS02FGY-1V

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	–
2	B	–

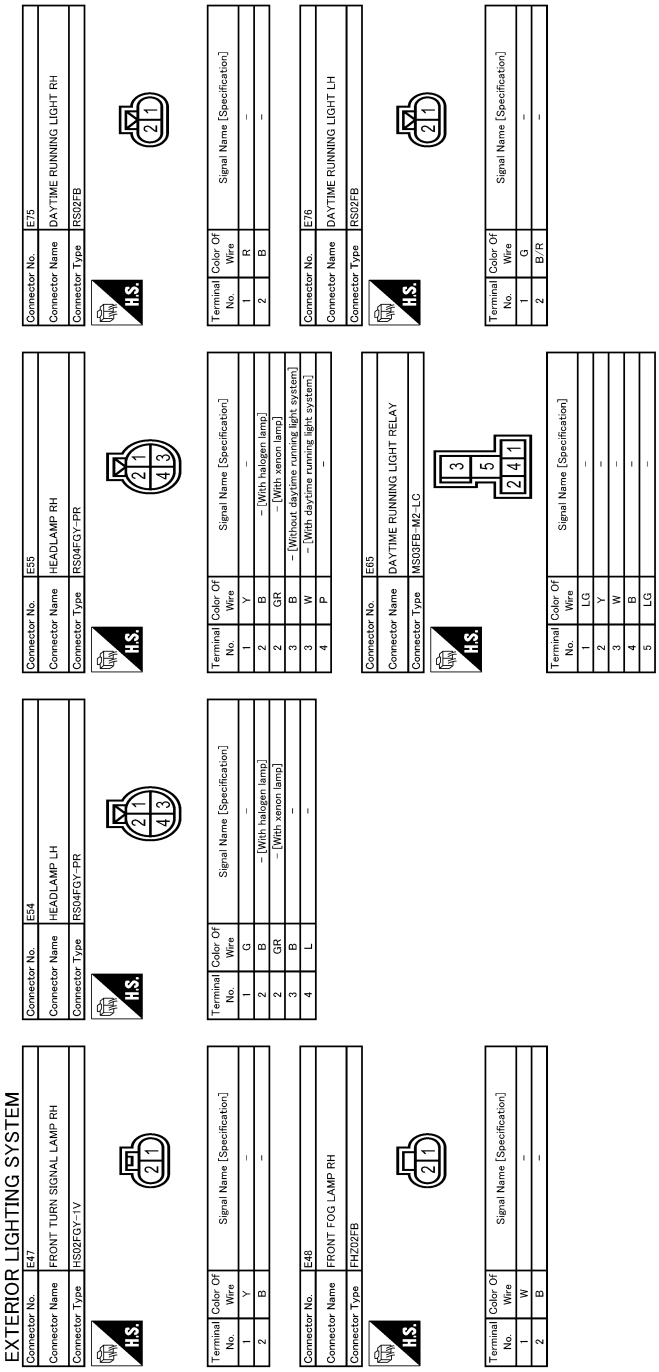
Connector No.	E44
Connector Name	PARKING LAMP RH
Connector Type	RS02FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	B	–

JRLWE3945GB

EXTERIOR LIGHTING SYSTEM



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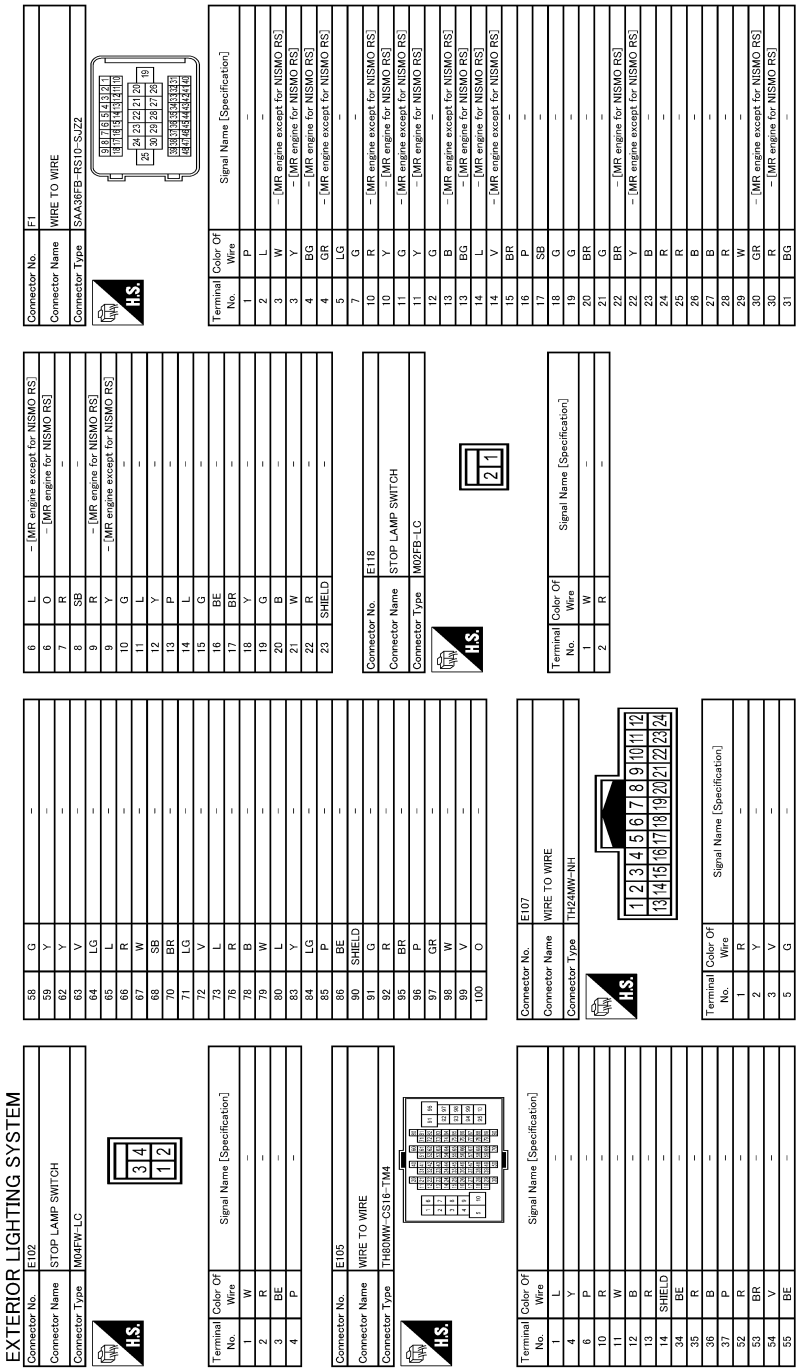


JRLWE3947GB

EXTERIOR LIGHTING SYSTEM

32	LG	–
33	BR	–
34	G	– [MR engine for NISMO RS]
34	P	– [MR engine except for NISMO RS]
37	G	– [Without Intelligent Key]
37	GR	– [With Intelligent Key]
38	R	–
39	GR	–
40	P	– [MR engine for NISMO RS]
41	BR	– [MR engine except for NISMO RS]
41	V	– [MR engine for NISMO RS]
42	L	– [MR engine except for NISMO RS]
42	W	– [MR engine for NISMO RS]
43	L	– [MR engine for NISMO RS]
43	W	– [MR engine except for NISMO RS]
44	BR	– [MR engine except for NISMO RS]
44	G	– [MR engine for NISMO RS]
45	BR	–
46	R	–
47	Y	–
48	GR	– [With Intelligent Key]
48	Y	– [Without Intelligent Key]

Connector No.	F27
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	RK08FG

H.S.

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

Connector No.	F30
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	YDX08FB-HS4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	–
2	BR	–
3	LG	–
4	SB	–
5	G	–
6	LG	–
7	W	–
8	BR	–

Connector No.	F49
Connector Name	PARK / NEUTRAL POSITION SWITCH
Connector Type	FEA03FG-LC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	SB	–
3	BR	–

Connector No.	F57
Connector Name	BACK-UP LAMP SWITCH
Connector Type	RK02FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	SB	–

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

H.S.

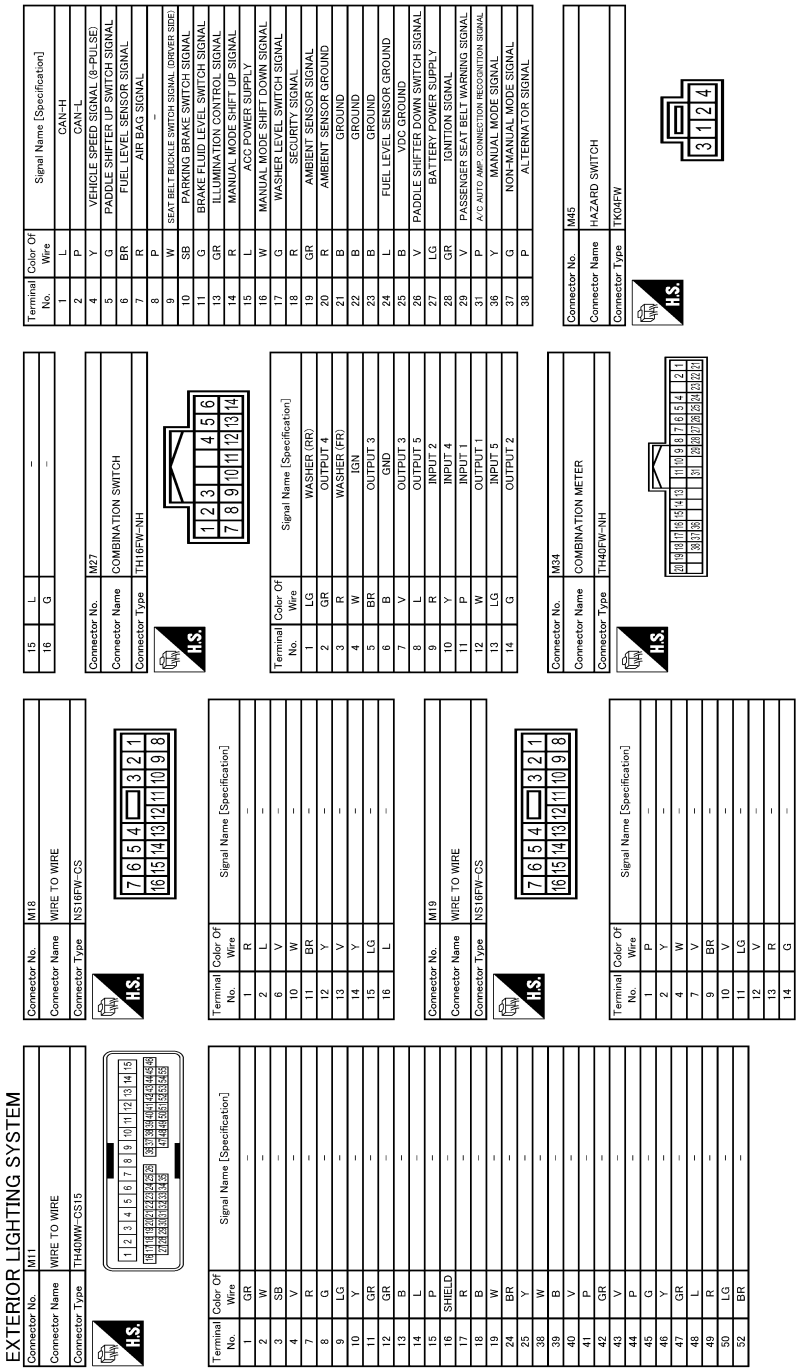
Terminal No.	Color Of Wire	Signal Name [Specification]
4	B	–
5	B	–
6	L	–
7	W	–
8	LG	–
14	P	–
16	Y	–

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	G	–
3	SB	–
4	V	–
13	GR	–
14	GR	–
15	L	–
16	SHIELD	–
17	Y	–
18	G	–
19	L	–
24	R	–
25	G	–
38	Y	–
39	B	–
40	BR	–
41	G	–
43	V	–
44	V	–
45	LG	–
46	BR	–
50	P	–

JRLWE3948GB



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EXTERIOR LIGHTING SYSTEM

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	–
2	SB	–
3	V	–
4	GR	–
35	R	COMBI SW OUTPUT 2
36	P	COMBI SW OUTPUT 1
37	G	DETENT SW
38	SB	RECEIVER COMM
39	L	CAN-H
40	P	CAN-L

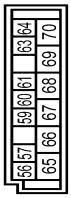
Connector No. M68
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FB-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	BR	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	W	COMBI SW INPUT 1
7	L	KEY CYL UNLOCK SW
8	R	KEY CYL LOCK SW
9	R	STOP LAMP SW 1
10	W	–
12	GR	DOOR LK & UNLK SW LOCK
13	BR	DOOR LK & UNLK SW UNLOCK
14	SB	OPTICAL SENS
15	W	REAR WINDOW DEF SW
17	Y	OPTICAL SENS PWR SPLY
18	V	RECEIVER GND
21	P	NATS ANT AMP.
23	R	SECURITY IND LAMP CONT
24	SB	DONGLE LINK
25	LG	NATS ANT AMP.
26	BR	THERMO AMP.
27	Y	A/C SW
28	LG	BLOWER FAN SW
29	SB	HAZARD SW
30	L	BK DOOR OPENER SW
31	GR	DR DOOR UNLK SENS
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	V	COMBI SW OUTPUT 3

Connector No. M69
Connector Name BCM (BODY CONTROL MODULE)
Connector Type FEA09FW-FHA6-SA

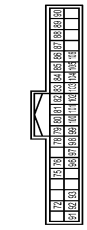
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
56	P	INT ROOM LAMP PWR SPLY
57	P	BATT (FUSE)
59	SB	PASS DOOR UNLK OUTPUT
60	V	TURN SIG LH OUTPUT
61	W	TURN SIG RH OUTPUT
63	BR	INT ROOM LAMP CONT
64	R	REVERSE SW
65	V	ALL DOOR LOCK OUTPUT
66	SB	DOOR UNLOCK DR
67	B	GND
68	L	PW PWR SPLY (IGN)
69	P	PW PWR SPLY (BAT)
70	Y	BAT (F/L)

Connector No. M70
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FW-NH

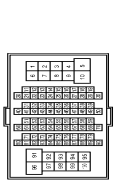
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
72	SB	A/C IND OUTPUT
75	LG	DR DOOR REQ SW
76	LG	PASS DOOR REQ SW
78	P	DRIVER DOOR ANT+
79	V	DRIVER DOOR ANT–
80	BR	PASS DOOR ANT+
81	G	PASS DOOR ANT–
82	W	REAR BMPR ANT+
83	B	REAR BMPR ANT–
84	BR	ROOM ANT 1+
85	GR	ROOM ANT 1–
86	G	ROOM ANT 2+
87	R	ROOM ANT 2–
88	V	LUGGAGE ROOM ANT+
89	LG	LUGGAGE ROOM ANT–
90	W	PUSH–BTN IGN SW ILL PWR
91	V	ACC / ON IND
92	R	PUSH–BTN IGN SW ILL GND
93	GR	I–KEY WARN BUZZER
96	BR	ACC RELAY CONT
97	SB	STARTER RELAY CONT
98	P	IGN RELAY (IPDM E/R) CONT
99	R	IGN RELAY (F/B) CONT
100	P	PUSH SW
101	Y	CLUTCH INTERLOCK SW
102	L	NEUTRAL SW
103	G	FR DEFROST SW
104	SB	CVT SHIFT SELECT PWR SPLY
105	V	STOP LAMP SW 2
106	Y	BLWR RELAY CONT

Connector No. M77
Connector Name WIRE TO WIRE
Connector Type TH80FW-CS16-TM4

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
4	V	–
6	P	–
10	R	–
11	R	–
12	LG	–
13	V	–
14	SHIELD	–
34	LG	–
35	SB	–
36	B	–
37	P	–
52	R	–
53	L	–
54	SB	–
55	P	–
58	LG	–
59	G	–
62	Y	–
63	W	–
64	G	–
65	GR	–
66	Y	–
67	V	–
68	R	–
70	V	–
71	R	–
72	GR	–
73	G	–
76	W	–
78	LG	–
79	V	–
80	LG	–
83	P	–
84	G	–
85	BR	–

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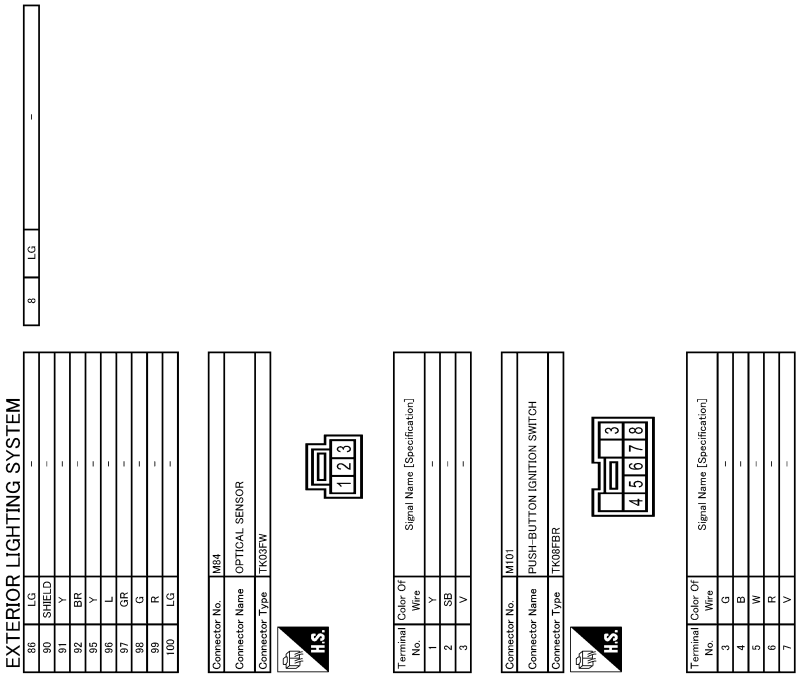


JRLWE3951GB

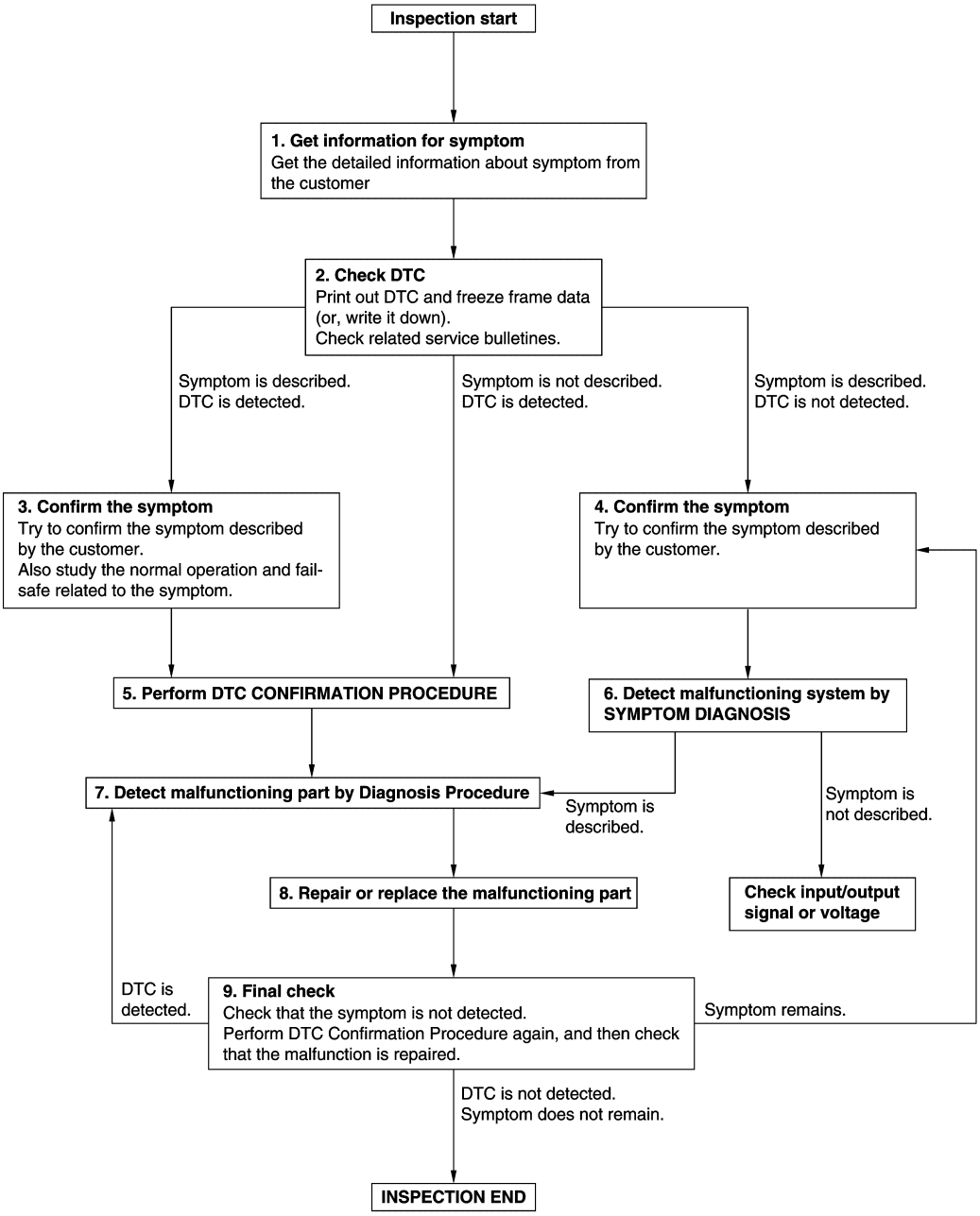
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000011738959

OVERALL SEQUENCE



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DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is detected.

- Record DTC and freeze frame data (Print them out using CONSULT.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.

3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.
Symptom is described, DTC is not detected>>GO TO 4.
Symptom is not described, DTC is detected>>GO TO 5.

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.
Also study the normal operation and fail-safe related to the symptom.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

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

NOTE:

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

Is DTC detected?

YES >> GO TO 7.
NO >> Check according to GI-44, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.
NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check according to GI-44, "Intermittent Incident".

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during 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.

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

INFOID:0000000011738960

1.CHECK HEADLAMP (HI) OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the headlamp (HI) blinks.

Hi : Headlamp (HI) blinks (ON/OFF is repeated 1 second each.)
Off : Headlamp (HI) OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the headlamp (HI) blinks.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-159, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738961

1.CHECK HEADLAMP (HI) FUSE

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK HEADLAMP (HI) POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E15	49	Ground	EXTERNAL LAMPS	Hi	9 – 16 V (Repeated 1 second)
					Off	0 – 1 V
LH		50			Hi	9 – 16 V (Repeated 1 second)
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

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

IPDM E/R			Headlamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E15	49	E55	1	Existed
LH		50	E54		

Is the inspection result normal?

YES-1 >> Without daytime running light system: GO TO 4.
YES-2 >> NISMO models with daytime running light system: GO TO 4.
YES-3 >> Except for NISMO models with daytime running light system: GO TO 6.
NO >> Repair or replace harness.

4.CHECK HEADLAMP (HI) GROUND CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp			—	Continuity
Connector		Terminal		
RH	E55	3	Ground	Existed
LH	E54			

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5.CHECK HEADLAMP (HI) BULB

Check the applicable headlamp (HI) bulb.

Is the inspection result normal?

YES >> Check the corresponding headlamp (HI) harness. Repair or replace if necessary.
NO >> Replace the corresponding headlamp (HI) bulb. Refer to EXL-204, "Replacement".

6.CHECK ILLUMINATION STATUS OF HEADLAMPS

Check illumination status of headlamps.

Which headlamp does not turn ON?

RH >> GO TO 7.
LH >> GO TO 11.

7.CHECK HEADLAMP (HI) RH GROUND CIRCUIT-1

1. Remove daytime running light relay.
2. Check continuity between headlamp harness connector and daytime running light relay harness connector.

Headlamp		Daytime running light relay		Continuity
Connector	Terminal	Connector	Terminal	
E55	3	E65	3	Existed

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace harness.

8.CHECK HEADLAMP (HI) RH GROUND CIRCUIT-2

Check continuity between daytime running light relay harness connector and ground.

Daytime running light relay		—	Continuity
Connector	Terminal		
E65	4	Ground	Existed

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace harness.

9.CHECK DAYTIME RUNNING LIGHT RELAY

Check daytime running light relay. Refer to EXL-161, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace daytime running light relay.

10.CHECK HEADLAMP (HI) RH BULB

Check the headlamp (HI) RH bulb.

Is the inspection result normal?

YES >> Check the headlamp (HI) RH harness. Repair or replace if necessary.
NO >> Replace headlamp (HI) RH bulb. Refer to EXL-204, "Replacement".

11.CHECK HEADLAMP (HI) LH GROUND CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp		—	Continuity
Connector	Terminal		
E54	3	Ground	Existed

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace harness.

12.CHECK HEADLAMP (HI) LH BULB

Check the headlamp (HI) LH bulb.

Is the inspection result normal?

YES >> Check the headlamp (HI) LH harness. Repair or replace if necessary.
NO >> Replace headlamp (HI) LH bulb. Refer to EXL-204, "Replacement".

Component Inspection

INFOID:0000000011740276

1.CHECK DAYTIME RUNNING LIGHT RELAY

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

Daytime running light relay		Condition		Continuity
Terminal				
3	4	Battery voltage	Apply	Not existed
			Not apply	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace daytime running light relay.

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000011738962

1.CHECK HEADLAMP (LO) OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the headlamp (LO) is turned ON.

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

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the headlamp (LO) is turned ON.

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.
NO >> Refer to EXL-162, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738963

1.CHECK HEADLAMP (LO) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	#54	15 A
Headlamp LO (LH)		#53	

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK HEADLAMP (LO) POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E15	52	Ground	EXTERNAL LAMPS	LO	9 – 16 V
					Off	0 – 1 V
LH		51			LO	9 – 16 V
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK HEADLAMP (LO) POWER SUPPLY CIRCUIT

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

IPDM E/R			Headlamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E15	52	E55	4	Existed
LH		51	E54		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK HEADLAMP (LO) GROUND CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp			—	Continuity
Connector		Terminal		
RH	E55	2	Ground	Existed
LH	E54			

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK HEADLAMP (LO) BULB

Check the applicable headlamp (LO) bulb.

Is the inspection result normal?

YES >> Check the corresponding headlamp (LO) harness. Repair or replace if necessary.
NO >> Replace the corresponding headlamp (LO) bulb. Refer to EXL-204, "Replacement".

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000011738967

1.CHECK TAIL LAMP OPERATION

Check that the tail lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check tail lamp circuit. Refer to EXL-168, "Component Function Check".

2.CHECK PARKING LAMP OPERATION

With CONSULT

1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON
Off : Parking lamp OFF

Without CONSULT

1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> Parking lamp circuit is normal.
NO >> Refer to EXL-164, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738968

1.CHECK PARKING LAMP POWER SUPPLY

With CONSULT

1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+		-	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E14	43	Ground	EXTERNAL LAMPS	TAIL	9 – 16 V
				Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

2.CHECK PARKING LAMP POWER SUPPLY CIRCUIT

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

IPDM E/R			Parking lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E14	43	E44	1	Existed
LH			E28		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK PARKING LAMP GROUND CIRCUIT

Check continuity between parking lamp harness connector and ground.

Parking lamp			—	Continuity
Connector		Terminal		
RH	E44	2	Ground	Existed
LH	E28			

Is the inspection result normal?

YES >> Replace the corresponding front combination lamp. Refer to EXL-208, "Removal and Installation".
NO >> Repair or replace harness.

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000011740274

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-164, "Component Function Check".

2.CHECK FRONT SIDE MARKER LAMP OPERATION

With CONSULT

1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With 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

Without CONSULT

1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. 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-166, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011740275

1.CHECK FRONT SIDE MARKER LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. 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 marker lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E14	43	E32	1	Existed
LH			E31		

Is the inspection result normal?

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

2.CHECK FRONT SIDE MARKER LAMP GROUND CIRCUIT

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

Front side marker lamp			—	Continuity
Connector		Terminal		
RH	E32	2	Ground	Existed
LH	E31			

Is the inspection result normal?

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

3.CHECK FRONT SIDE MARKER LAMP BULB

Check the applicable front side marker lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding front side marker lamp bulb socket. Repair or replace if necessary.
NO >> Replace the corresponding front side marker lamp bulb. Refer to EXL-208, "Replacement".

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000011738971

1.CHECK TAIL LAMP OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the tail lamp is turned ON.

TAIL : Tail lamp ON
Off : Tail lamp OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the tail lamp is turned ON.

Is the inspection result normal?

YES >> Tail lamp circuit is normal.
NO >> Refer to EXL-168, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738972

1.CHECK FUSE

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

Unit	Location	Fuse No.	Capacity
• Parking lamp RH • Parking lamp LH • Front side marker lamp RH • Front side marker lamp LH • Tail lamp RH • Tail lamp LH • License plate lamp RH • License plate lamp LH	IPDM E/R	#47	10 A

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK TAIL LAMP POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check voltage between IPDM E/R harness connector and ground.

+		-	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E14	44	Ground	EXTERNAL LAMPS	TAIL	9 – 16 V
				Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK TAIL LAMP POWER SUPPLY CIRCUIT

1. Turn ignition 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
Connector		Terminal	Connector	Terminal	
RH	E14	44	B59	2	Existed
LH			B80		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			—	Continuity
Connector		Terminal		
RH	B59	3	Ground	Existed
LH	B80			

Is the inspection result normal?

YES-1 >> Stop lamp / tail lamp (Bulb side): GO TO 5.
YES-2 >> Tail lamp (LED side): Check the corresponding tail lamp harness, and if check result is normal, replace the corresponding rear combination lamp. Refer to EXL-217, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK STOP LAMP / TAIL LAMP BULB

Check the applicable stop lamp / tail lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding stop lamp / tail lamp bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace the corresponding stop lamp / tail lamp bulb. Refer to EXL-217, "Replacement".

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000011738973

1.CHECK TAIL LAMP OPERATION

Check that the tail lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check tail lamp circuit. Refer to EXL-168, "Component Function Check".

2.CHECK LICENSE PLATE LAMP OPERATION

With CONSULT

1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check that the license plate lamp is turned ON.

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

Without CONSULT

1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the license plate lamp is turned ON.

Is the inspection result normal?

YES >> License plate lamp circuit is normal.
NO >> Refer to EXL-170, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738974

1.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and back door opener switch connector.
3. Check continuity between IPDM E/R harness connector and back door opener switch harness connector.

IPDM E/R		Back door opener switch		Continuity
Connector	Terminal	Connector	Terminal	
E14	44	D107	5	Existed

Is the inspection result normal?

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

2.CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between back door opener switch harness connector and ground.

Back door opener switch		—	Continuity
Connector	Terminal		
D107	6	Ground	Existed

Is the inspection result normal?

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

3.CHECK LICENSE PLATE LAMP BULB

Check the applicable license plate lamp bulb.

Is the inspection result normal?

YES >> Check the corresponding license plate lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding license plate lamp bulb. Refer to EXL-221, "Replacement".

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:0000000011740278

1.CHECK DAYTIME RUNNING LIGHT OPERATION

With CONSULT
1. Select “HEAD LAMP” of “BCM” using CONSULT.
2. Select “DAYTIME RUNNING LIGHT” in “Active Test” mode.
3. With operating the test items, check that the daytime running light is turned ON [Headlamp (HI) at approximately half illumination].

On : Daytime running light ON [Headlamp (HI) at approximately half illumination]
Off : Daytime running light OFF

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal.
NO >> Refer to EXL-172, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011740279

1.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

Unit	Fuse No.	Capacity
Daytime running light relay	#24	10 A

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK DAYTIME RUNNING LIGHT RELAY POWER SUPPLY

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

+		-	Voltage (Approx.)
Daytime running light relay			
Connector	Terminal		
E65	1	Ground	Battery voltage
	5		

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-173, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace daytime running light relay.

4.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL

With CONSULT
1. Install daytime running light relay.
2. Turn ignition switch ON.
3. Select “HEAD LAMP” of “BCM” using CONSULT.
4. Select “DAYTIME RUNNING LIGHT” in “Active Test” mode.

5. With operating the test item, check voltage between IPDM E/R harness connector and ground.

+		-	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E13	28	Ground	DAYTIME RUNNING LIGHT	On	0 – 1 V
				Off	9 – 16 V

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal.
NO-1 >> Fixed at 0 – 1 V: GO TO 6.
NO-2 >> Fixed at 9 – 16 V: GO TO 5.

5. CHECK DAYTIME RUNNING LIGHT REQUEST SIGNAL

With CONSULT
1. Select “DTRL REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
2. With operating the daytime running light ON condition, check the monitor status.

Monitor item	Condition		Monitor status
DTRL REQ	Daytime running light	ON condition	On
		OFF condition	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

6. CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL CIRCUIT

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

IPDM E/R		Daytime running light relay		Continuity
Connector	Terminal	Connector	Terminal	
E13	28	E65	2	Existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Repair or replace harness.

Component Inspection

INFOID:0000000011740280

1. CHECK DAYTIME RUNNING LIGHT RELAY

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

Daytime running light relay		Condition		Continuity
Terminal				
5	3	Battery voltage	Apply	Existed
			Not apply	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace daytime running light relay.

DAYTIME RUNNING LIGHT CIRCUIT

Component Function Check

INFOID:0000000011740270

1.CHECK DAYTIME RUNNING LIGHT OPERATION

With CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
2. With operating the test items, check that the daytime running light is turned ON.

Fog : Daytime running light ON
Off : Daytime running light OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the daytime running light is turned ON.

Is the measurement normal?

YES >> Daytime running light circuit is normal.
NO >> Refer to EXL-175, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011740271

1.CHECK DAYTIME RUNNING LIGHT FUSE

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

Unit	Location	Fuse No.	Capacity
Daytime running light	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 if a fuse is blown.

2.CHECK DAYTIME RUNNING LIGHT POWER SUPPLY

With CONSULT
1. Turn ignition switch ON.
2. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
3. With operating the test items, check the voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E12	19	Ground	EXTERNAL LAMPS	Fog	9 – 16 V
					Off	0 – 1 V
LH		20			Fog	9 – 16 V
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK DAYTIME RUNNING LIGHT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and daytime running light connector.
3. Check continuity between IPDM E/R harness connector and daytime running light harness connector.

IPDM E/R			Daytime running light		Continuity
Connector		Terminal	Connector	Terminal	
RH	E12	19	E75	1	Existed
LH		20	E76		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK DAYTIME RUNNING LIGHT GROUND CIRCUIT

Check continuity between daytime running light harness connector and ground.

Daytime running light			—	Continuity
Connector		Terminal		
RH	E75	2	Ground	Existed
LH	E76			

Is the inspection result normal?

YES >> Replace the corresponding daytime running light. Refer to EXL-209, "Removal and Installation".
NO >> Repair or replace harness.

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000011738975

1.CHECK FRONT FOG LAMP OPERATION

With CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
2. With operating the test items, check that the front fog lamp is turned ON.

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

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
2. Check that the front fog lamp is turned ON.

Is the measurement normal?

YES >> Front fog lamp circuit is normal.
NO >> Refer to EXL-177, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738976

1.CHECK FRONT FOG LAMP FUSE

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

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 if a fuse is blown.

2.CHECK FRONT FOG LAMP POWER SUPPLY

With CONSULT
1. Disconnect front fog lamp connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R” using CONSULT.
4. With operating the test items, check the voltage between IPDM E/R harness connector and ground.

+			-	Test item		Voltage
IPDM E/R						
Connector		Terminal				
RH	E12	19	Ground	EXTERNAL LAMPS	Fog	9 – 16 V
					Off	0 – 1 V
LH		20			Fog	9 – 16 V
					Off	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

3.CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT

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

IPDM E/R			Front fog lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E12	19	E48	1	Existed
LH		20	E30		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp			—	Continuity
Connector		Terminal		
RH	E48	2	Ground	Existed
LH	E30			

Is the inspection result normal?

YES >> Replace the corresponding front fog lamp bulb. Refer to EXL-211, "Replacement".
NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000011738977

1.CHECK TURN SIGNAL LAMP OPERATION

With CONSULT
1. Turn ignition switch ON.
2. Select “FLASHER” of “BCM” using CONSULT.
3. Select “FLASHER” in “Active Test” mode.
4. With operating the test items, check that the turn signal lamps is turned ON.

RH : Turn signal lamps (RH) ON
LH : Turn signal lamps (LH) ON
Off : Turn signal lamps OFF

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-179, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738978

1.CHECK TURN SIGNAL LAMP POWER SUPPLY

With CONSULT
1. Turn ignition switch OFF.
2. Disconnect the following connectors.
- Front turn signal lamp
- Door mirror
- Rear combination lamp
3. Turn ignition switch ON.
4. Select “FLASHER” of “BCM” using CONSULT.
5. Select “FLASHER” in “Active Test” mode.
6. With operating the test items, check voltage between BCM harness connector and ground.

+			-	Test item		Voltage
BCM						
Connector		Terminal				
RH	M69	61	Ground	FLASHER	RH	9 – 16 V
					Off	0 V
LH		60			LH	9 – 16 V
					Off	0 V

Is the inspection result normal?

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

2.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (SHORT)

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

BCM			—	Continuity
Connector		Terminal		
RH	M69	61	Ground	Not existed
LH		60		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and each turn signal lamp harness connector.

Front turn signal lamp

BCM			Front turn signal lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	M69	61	E47	1	Existed
LH		60	E34		

Side turn signal lamp

BCM			Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
RH	M69	61	D9	13	Existed
LH		60	D30		

Rear turn signal lamp

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	M69	61	B59	5	Existed
LH		60	B80		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

Check continuity between each turn signal lamp harness connector and ground.

Front turn signal lamp

Front turn signal lamp			—	Continuity
Connector		Terminal		
RH	E47	2	Ground	Existed
LH	E34			

Side turn signal lamp

Door mirror			—	Continuity
Connector		Terminal		
RH	D9	2	Ground	Existed
LH	D30			

Rear turn signal lamp

Rear combination lamp			—	Continuity
Connector		Terminal		
RH	B59	3	Ground	Existed
LH	B80			

Is the inspection result normal?

YES-1 >> Front turn signal lamp or rear turn signal lamp: GO TO 5.
YES-2 >> Side turn signal lamp: Replace the corresponding side turn signal lamp. Refer to EXL-212, "Removal and Installation".
NO >> Repair or replace harness.

5.CHECK TURN SIGNAL LAMP BULB

Check the applicable turn signal lamp bulb.

Is the inspection result normal?

YES-1 >> Front turn signal lamp: Check the corresponding front turn signal lamp bulb socket. Repair or replace if necessary.

YES-2 >> Rear turn signal lamp: Check the corresponding rear turn signal lamp bulb socket and harness. Repair or replace if necessary.

NO >> Replace the corresponding turn signal lamp bulb. Refer to EXL-208, "Replacement" (front turn signal lamp) or EXL-217, "Replacement" (rear turn signal lamp).

OPTICAL SENSOR

Component Function Check

INFOID:0000000011738979

1.CHECK OPTICAL SENSOR SIGNAL

With CONSULT
1. Turn ignition switch ON.
2. Select “HEAD LAMP” of “BCM” using CONSULT.
3. Select “OPTI SEN (DTCT)” in “Data Monitor” mode.
4. Turn lighting switch AUTO.
5. With the optical sensor illuminating, check the monitor status.

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

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

Is the inspection result normal?

YES >> Optical sensor is normal.
NO >> Refer to EXL-182, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738980

1.CHECK OPTICAL SENSOR POWER SUPPLY

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

+		-	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M84	1	Ground	5 V

Is the inspection result normal?

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

2.CHECK OPTICAL SENSOR GROUND

Check voltage between optical sensor harness connector and ground.

+		-	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M84	3	Ground	0 V

Is the inspection result normal?

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

3.CHECK OPTICAL SENSOR SIGNAL

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

+		-	Condition		Voltage (Approx.)
Optical sensor					
Connector	Terminal				
M84	2	Ground	Optical sensor	When illuminating	3.1 V or more*
				When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace optical sensor. Refer to EXL-213, "Removal and Installation".

4. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT (OPEN)

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M84	1	M68	17	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

Optical sensor		—	Continuity
Connector	Terminal		
M84	1	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK OPTICAL SENSOR GROUND CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M84	3	M68	18	Existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

7. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (OPEN)

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M84	2	M68	14	Existed

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace harness.

8. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

Optical sensor		—	Continuity
Connector	Terminal		
M84	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".
NO >> Repair or replace harness.

HAZARD SWITCH

Component Function Check

INFOID:0000000011738981

1.CHECK HAZARD SWITCH SIGNAL

With CONSULT
1. Turn ignition switch ON.
2. Select “FLASHER” of “BCM” using CONSULT.
3. Select “HAZARD SW” in “Data Monitor” mode.
4. With operating the hazard switch, check the monitor status.

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

Is the inspection result normal?

YES >> Hazard switch circuit is normal.
NO >> Refer to EXL-185, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011738982

1.CHECK HAZARD SWITCH SIGNAL

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

+		-	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M45	2	Ground	12 V

Is the inspection result normal?

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

2.CHECK HAZARD SWITCH SIGNAL CIRCUIT (OPEN)

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

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M45	2	M68	29	Existed

Is the inspection result normal?

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

3.CHECK HAZARD SWITCH SIGNAL CIRCUIT (SHORT)

Check continuity between hazard switch harness connector and ground.

Hazard switch		—	Continuity
Connector	Terminal		
M45	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		—	Continuity
Connector	Terminal		
M45	1	Ground	Existed

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-215, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000011738986

EXCEPT FOR NISMO MODELS

Without Daytime Running Light System

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply/ ground circuit • Headlamp (HI) bulb • Headlamp assembly - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-159, "Component Function Check".
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to EXL-195, "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 "HEAD LAMP"
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply/ ground circuit • Headlamp (LO) bulb (Xenon bulb) • Headlamp assembly - HID control unit - Xenon bulb socket - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-162, "Component Function Check".
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-196, "Diagnosis Procedure".	
Each lamp is not turned ON/OFF with lighting switch AUTO		• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".
		• Optical sensor power supply/ ground/signal circuit • Optical sensor • BCM	Optical sensor Refer to EXL-182, "Component Function Check".
Parking lamp is not turned ON		• Parking lamp power supply/ ground circuit • Front combination lamp - LED (Parking lamp) - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-164, "Component Function Check".
Front side marker lamp is not turned ON		• Front side marker lamp power supply/ground circuit • Front side marker lamp bulb • Front side marker lamp bulb socket	Front side marker lamp circuit Refer to EXL-166, "Component Function Check".

Symptom		Possible cause	Inspection item
Tail lamp is not turned ON	Stop lamp / Tail lamp (Bulb side)	• Fuse • Tail lamp power supply/ground circuit • Stop lamp / Tail lamp bulb • Stop lamp / Tail lamp bulb socket/ harness • IPDM E/R	Tail lamp circuit Refer to EXL-168, "Component Function Check".
	Tail lamp (LED side)	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (Tail lamp) • Tail lamp harness • IPDM E/R	
License plate lamp is not turned ON		• License plate lamp power supply/ ground circuit • License plate lamp bulb • License plate lamp bulb socket/ harness	License plate lamp circuit Refer to EXL-170, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON		**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-197, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEAD LAMP) Active test “TAIL LAMP”
Front fog lamp is not turned ON	One side	• Front fog lamp power supply/ ground circuit • Front fog lamp bulb • IPDM E/R	Front fog lamp circuit Refer to EXL-177, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON” Refer to EXL-198, "Diagnosis Procedure".	
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp bulb - Front turn signal lamp bulb socket - BCM • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp - BCM • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Rear turn signal lamp bulb - Rear turn signal lamp bulb socket/ harness - BCM	Turn signal lamp circuit Refer to EXL-179, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".

Symptom		Possible cause	Inspection item
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-49, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Hazard switch • BCM	Hazard switch Refer to EXL-185, "Component Function Check".

With Daytime Running Light System

NOTE:

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply/ground circuit • Daytime running light relay • Headlamp (HI) bulb • Headlamp assembly - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-159, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-195, "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 “HEAD LAMP”
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply/ground circuit • Headlamp (LO) bulb (Xenon bulb) • Headlamp assembly - HID control unit - Xenon bulb socket - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-162, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-196, "Diagnosis Procedure".	
Parking lamp is not turned ON		• Parking lamp power supply/ground circuit • Front combination lamp - LED (Parking lamp) - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-164, "Component Function Check".
Front side marker lamp is not turned ON		• Front side marker lamp power supply/ground circuit • Front side marker lamp bulb • Front side marker lamp bulb socket	Front side marker lamp circuit Refer to EXL-166, "Component Function Check".

Symptom		Possible cause	Inspection item
Tail lamp is not turned ON	Stop lamp / Tail lamp (Bulb side)	• Fuse • Tail lamp power supply/ground circuit • Stop lamp / Tail lamp bulb • Stop lamp / Tail lamp bulb socket/ harness • IPDM E/R	Tail lamp circuit Refer to EXL-168, "Component Function Check".
	Tail lamp (LED side)	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (Tail lamp) • Tail lamp harness • IPDM E/R	
License plate lamp is not turned ON		• License plate lamp power supply/ ground circuit • License plate lamp bulb • License plate lamp bulb socket/ harness	License plate lamp circuit Refer to EXL-170, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON		**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-197, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEAD LAMP) Active test “TAIL LAMP”
Daytime running light is not turned ON [Headlamp (HI) at approximately half illumination] [Headlamp (HI) is turned ON]		• Fuse • Daytime running light relay power supply/control signal circuit • Daytime running light relay • IPDM E/R • BCM • ECM • Combination meter	• Daytime running light relay circuit Refer to EXL-172, "Component Function Check". • BCM (HEAD LAMP) Data monitor “ENGINE STATE” • Combination meter Data monitor “PKB SW”
Front fog lamp is not turned ON	One side	• Front fog lamp power supply/ ground circuit • Front fog lamp bulb • IPDM E/R	Front fog lamp circuit Refer to EXL-177, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON” Refer to EXL-198, "Diagnosis Procedure".	

Symptom		Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp bulb - Front turn signal lamp bulb socket - BCM • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp - BCM • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Rear turn signal lamp bulb - Rear turn signal lamp bulb socket/harness - BCM	Turn signal lamp circuit Refer to EXL-179, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-49, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Hazard switch • BCM	Hazard switch Refer to EXL-185, "Component Function Check".

NISMO MODELS

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply/ground circuit • Headlamp (HI) bulb • Headlamp assembly - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-159, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-195, "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 “HEAD LAMP”

Symptom		Possible cause	Inspection item
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply/ ground circuit • Headlamp (LO) bulb (Xenon bulb) • Headlamp assembly - HID control unit - Xenon bulb socket - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-162, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-196, "Diagnosis Procedure".	
Parking lamp is not turned ON		• Parking lamp power supply/ ground circuit • Front combination lamp - LED (Parking lamp) - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-164, "Component Function Check".
Front side marker lamp is not turned ON		• Front side marker lamp power supply/ground circuit • Front side marker lamp bulb • Front side marker lamp bulb socket	Front side marker lamp circuit Refer to EXL-166, "Component Function Check".
Tail lamp is not turned ON	Stop lamp / Tail lamp (Bulb side)	• Fuse • Tail lamp power supply/ground circuit • Stop lamp / Tail lamp bulb • Stop lamp / Tail lamp bulb socket/ harness • IPDM E/R	Tail lamp circuit Refer to EXL-168, "Component Function Check".
	Tail lamp (LED side)	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (Tail lamp) • Tail lamp harness • IPDM E/R	
License plate lamp is not turned ON		• License plate lamp power supply/ ground circuit • License plate lamp bulb • License plate lamp bulb socket/ harness	License plate lamp circuit Refer to EXL-170, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON		**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-197, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEAD LAMP) Active test “TAIL LAMP”
Daytime running light is not turned ON		• Fuse • Daytime running light power supply/ground circuit • Daytime running light • IPDM E/R • BCM • ECM • Combination meter	• Daytime running light circuit Refer to EXL-175, "Component Function Check". • BCM (HEAD LAMP) Data monitor “ENGINE STATE” • Combination meter Data monitor “PKB SW”

Symptom		Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp bulb - Front turn signal lamp bulb socket - BCM • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp - BCM • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Rear turn signal lamp bulb - Rear turn signal lamp bulb socket/harness - BCM	Turn signal lamp circuit Refer to EXL-179, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-91, "Symptom Table".
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-49, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Hazard switch • BCM	Hazard switch Refer to EXL-185, "Component Function Check".

NORMAL OPERATING CONDITION

Description

INFOID:0000000011738987

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 for the control difference. This is normal.

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

Description

INFOID:0000000011738988

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

Diagnosis Procedure

INFOID:0000000011738989

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK HIGH BEAM REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “HL HI REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000011738990

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

Diagnosis Procedure

INFOID:0000000011738991

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK LOW BEAM REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “HL LO REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000011738992

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

Diagnosis Procedure

INFOID:0000000011738993

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK POSITION LIGHT REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “TAIL & CLR REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With operating the lighting switch, check the monitor status.

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

Is the inspection result normal?

YES >> Perform the tail lamp diagnosis. Refer to EXL-168, "Component Function Check".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000011738994

Both side front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000011738995

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-91, "Symptom Table".

Is the inspection result normal?

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

2.CHECK FRONT FOG LIGHT REQUEST SIGNAL

With CONSULT

1. Turn ignition switch ON.
2. Select “FR FOG REQ” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
3. With 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 1ST)	ON	On
		OFF	Off

Is the inspection result normal?

YES >> Perform the front fog lamp diagnosis. Refer to EXL-177, "Component Function Check".
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description

INFOID:0000000011732729

PREPARATION BEFORE ADJUSTING

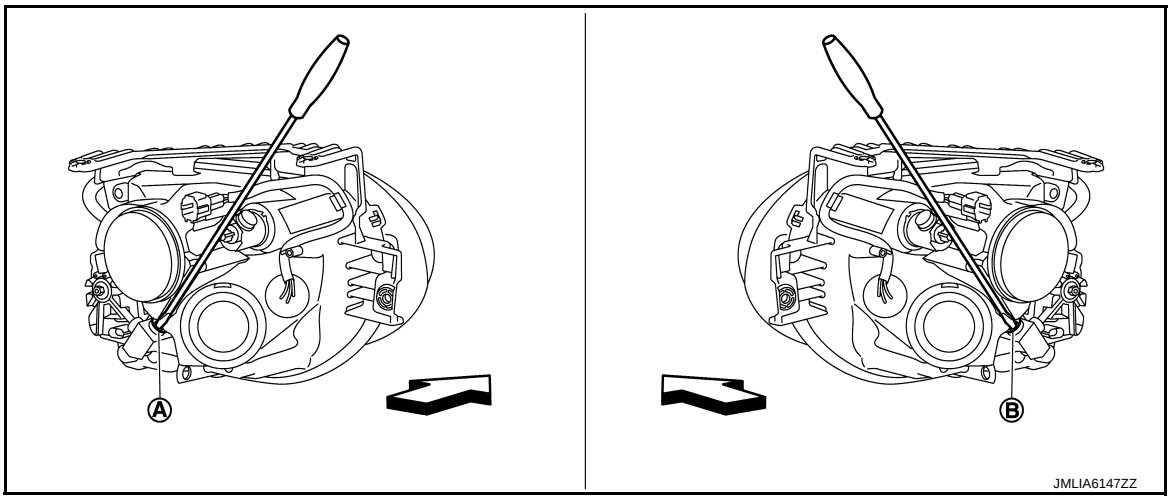
NOTE:

- 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 fuel, engine 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 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 front

Adjustment screw		Screw driver rotation	Facing direction
A	Headlamp LH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP
B	Headlamp RH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP

Aiming Adjustment Procedure

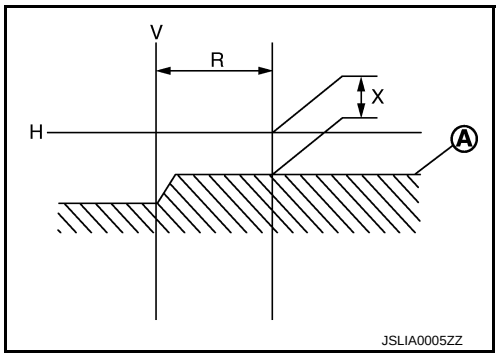
INFOID:0000000011732730

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.
   CAUTION:
   Never cover the lens surface with a tape etc. The lens is made of resin.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
4. 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

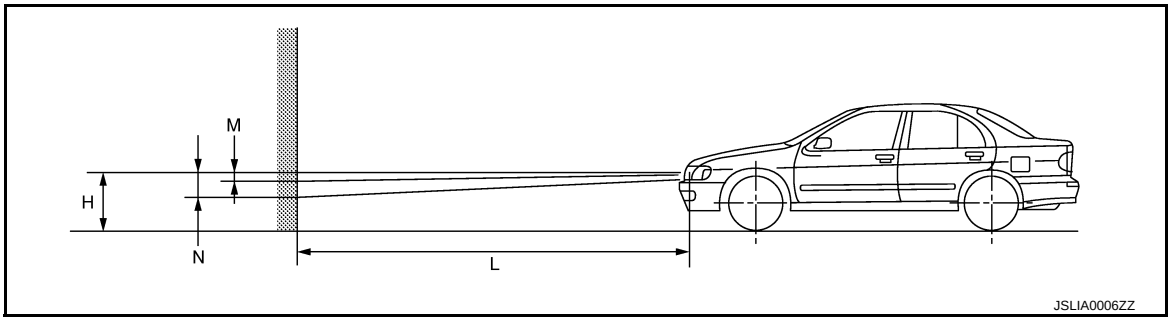


5. Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

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

Description

INFOID:0000000011732731

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 fuel, engine 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 headlamp.
  CAUTION:
  Never use organic solvent (thinner, gasoline etc.).
- Ride alone on the driver seat.

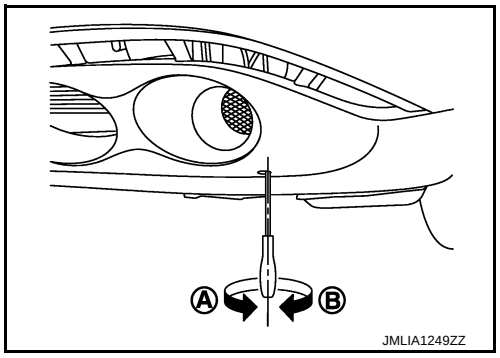
AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment.

  A: UP

  B: DOWN

- 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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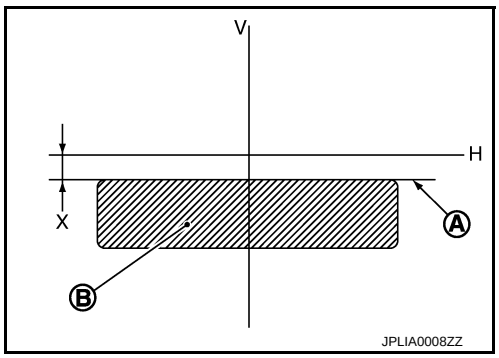
Aiming Adjustment Procedure

INFOID:0000000011732732

1. Place the screen.
   NOTE:
   - Stop the vehicle facing the wall.
   - Place the board on a plain road vertically.
2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.
3. Start the engine. Turn the front fog lamp ON.
   CAUTION:
   Never cover the lens surface with a tape etc. The lens is made of resin.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
4. Adjust the cutoff line height (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 (5.91 in).

Front fog lamp light distribution on the screen



A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

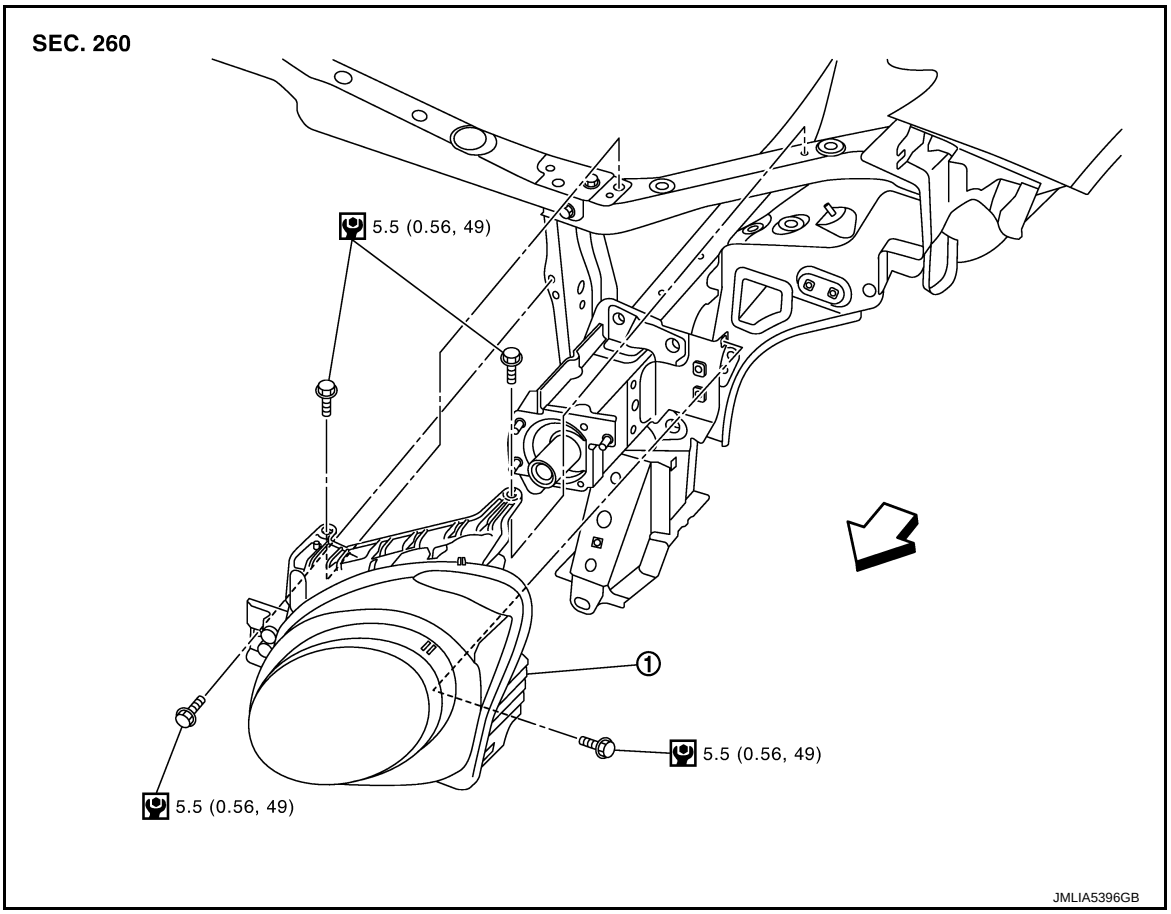
REMOVAL AND INSTALLATION

HEADLAMP

Exploded View

INFOID:0000000011733291

REMOVAL

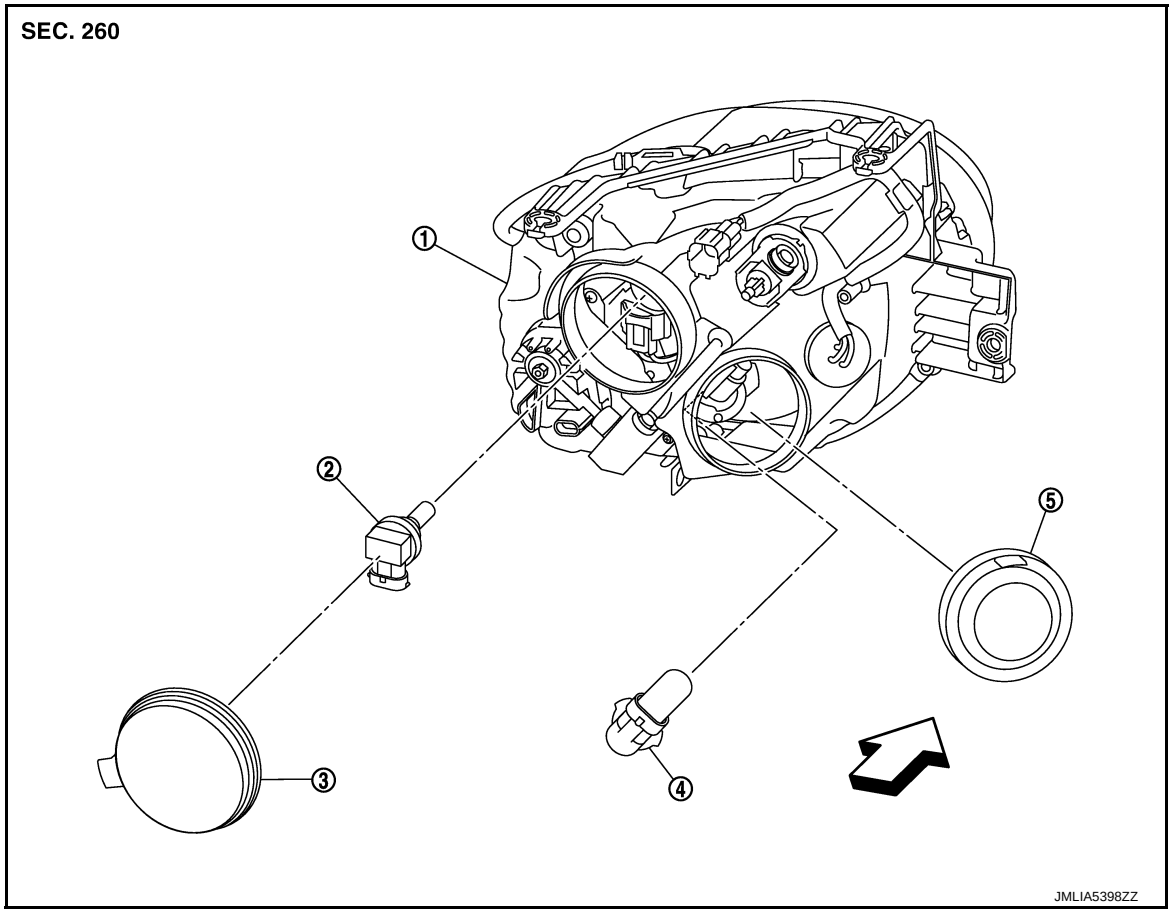


1. Headlamp assembly

⇦ : Vehicle front

: N·m (kg-m, in-lb)

DISASSEMBLY



1. Headlamp assembly
2. Halogen bulb (LO)
3. Back cover A
4. Halogen bulb (HI)
5. Back cover B

⇦ : Vehicle front

Removal and Installation

INFOID:0000000011733292

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Remove headlamp mounting bolts.
3. Pull out headlamp assembly forward the vehicle, and then disconnect the connector before removing the headlamp assembly.

INSTALLATION

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

CAUTION:
After installation, perform aiming adjustment. Refer to EXL-199, "Description".

Replacement

INFOID:0000000011733293

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".**
- **After installing the bulb, install the back cover 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.**
- **Never touch bulb by hand while it is lit or right after being turned off.**

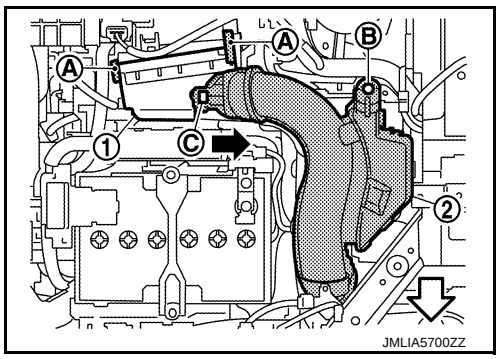
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

HALOGEN BULB (LO)

Left Side of The Vehicle

1. Remove fixing clips (A) of air cleaner assembly (1).
2. While pulling up on the (B) portion of the air duct inlet (upper) (2), disengage of the portion (C), and then remove air duct inlet (upper) as shown by the arrow in the figure.

⇦ : Vehicle front



3. Remove back cover A.
4. Disconnect halogen bulb harness connector.
5. Rotate halogen bulb (LO) counterclockwise and lock it, and then remove halogen bulb.

Right Side of The Vehicle

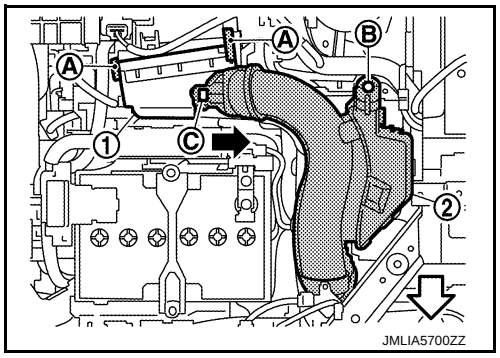
1. Remove washer tank inlet. Refer to WW-43, "Removal and Installation".
2. Remove back cover A.
3. Disconnect halogen bulb harness connector.
4. Rotate halogen bulb (LO) counterclockwise and lock it, and then remove halogen bulb.

HALOGEN BULB (HI)

Left Side of The Vehicle

1. Remove fixing clips (A) of air cleaner assembly (1).
2. While pulling up on the (B) portion of the air duct inlet (upper) (2), disengage of the portion (C), and then remove air duct inlet (upper) as shown by the arrow in the figure.

⇦ : Vehicle front



3. Remove back cover B.
4. Disconnect halogen bulb harness connector.
5. Rotate halogen bulb clockwise and unlock it, and then remove halogen bulb from headlamp assembly.

Right Side of The Vehicle

1. Remove washer tank inlet. Refer to WW-43, "Removal and Installation".
2. Remove back cover B.
3. Disconnect halogen bulb harness connector.
4. Rotate halogen bulb counterclockwise and unlock it, and then remove halogen bulb from headlamp assembly.

Disassembly and Assembly

INFOID:0000000011733294

DISASSEMBLY

1. Remove back cover A.
2. Disconnect halogen bulb harness connector.

3. Rotate halogen bulb (LO) counterclockwise and lock it, and then remove halogen bulb.
4. Remove back cover B.
5. Disconnect halogen bulb harness connector.
6. Remove halogen bulb (HI).

Left side of the vehicle
- Rotate halogen bulb (HI) clockwise and lock it, and then remove halogen bulb.

Right side of the vehicle
- Rotate halogen bulb (HI) counterclockwise and lock it, and then remove halogen bulb.

ASSEMBLY

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

CAUTION:

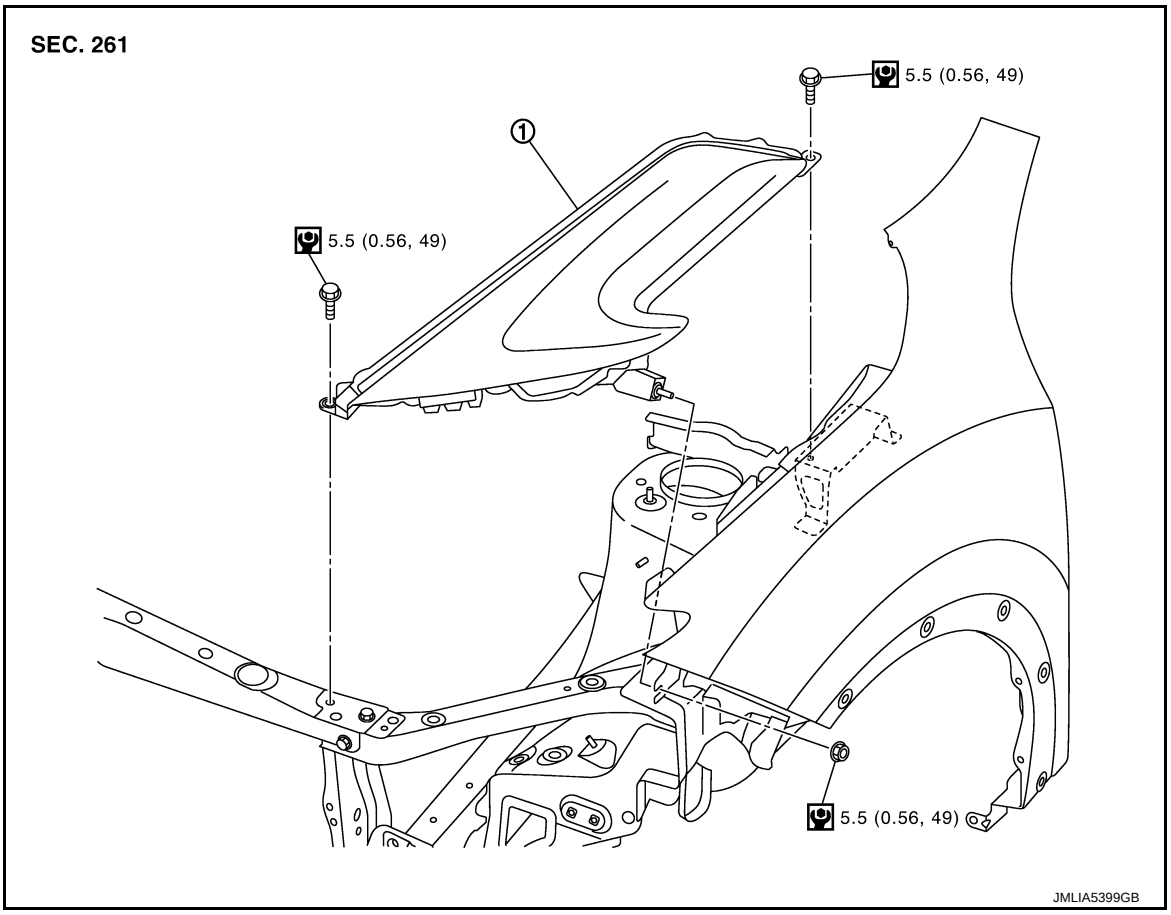
After installing the bulb, install the back cover and the bulb socket securely for watertightness.

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000011733296

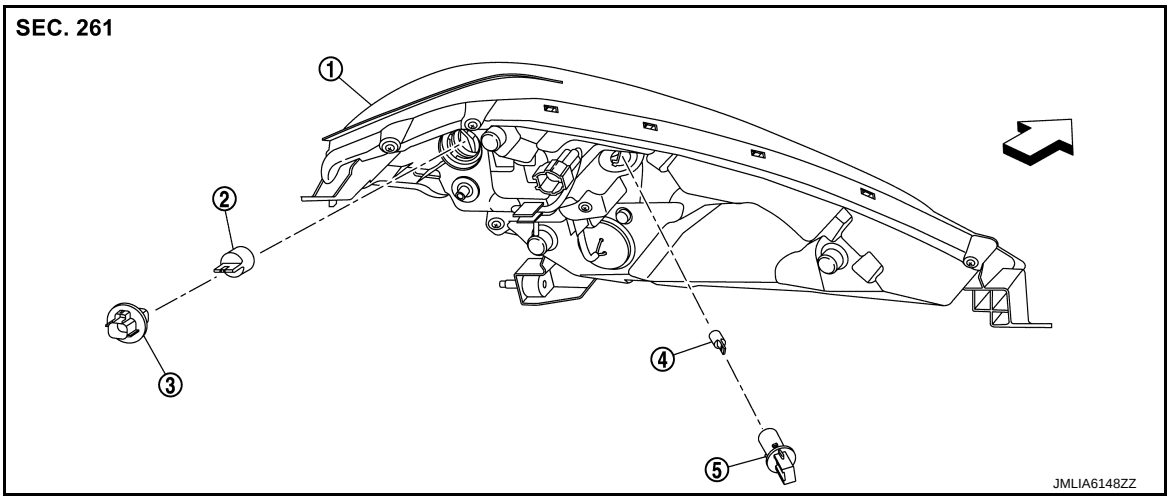
REMOVAL



1. Front combination lamp

: N·m (kg-m, in-lb)

DISASSEMBLY



1. Front combination lamp
2. Front turn signal lamp bulb
3. Front turn signal lamp bulb socket
4. Front side marker lamp bulb
5. Front side marker lamp bulb socket

⇦ : Vehicle front

Removal and Installation

INFOID:0000000011733297

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Remove front combination lamp mounting bolts and nut.
3. Pull out front combination lamp forward the vehicle, and then disconnect connector before removing the front combination lamp.

INSTALLATION

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

CAUTION:
Interference of front combination lamp lens with front fender may cause intrusion of water into front combination lamp or rusting of fender due to damage of painted surface. Be careful to operate without allowing parts to interfere with each other.

Replacement

INFOID:0000000011733298

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".**
- **After installing the bulb, install the bulb socket securely for watertightness.**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

PARKING LAMP BULB

CAUTION:
Replacement of a single part is not possible due to the adoption of LED. For replacement, replace front combination lamp as a set. Refer to EXL-208, "Removal and Installation".

FRONT TURN SIGNAL LAMP BULB

1. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
2. Remove front turn signal lamp bulb from the front turn signal lamp bulb socket.

FRONT SIDE MARKER LAMP BULB

1. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.
2. Remove front side marker lamp bulb from the front side marker lamp bulb socket.

Disassembly and Assembly

INFOID:0000000011733299

DISASSEMBLY

1. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
2. Remove front turn signal lamp bulb from the front turn signal lamp bulb socket.
3. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.
4. Remove front side marker lamp bulb from the front side marker lamp bulb socket.

ASSEMBLY

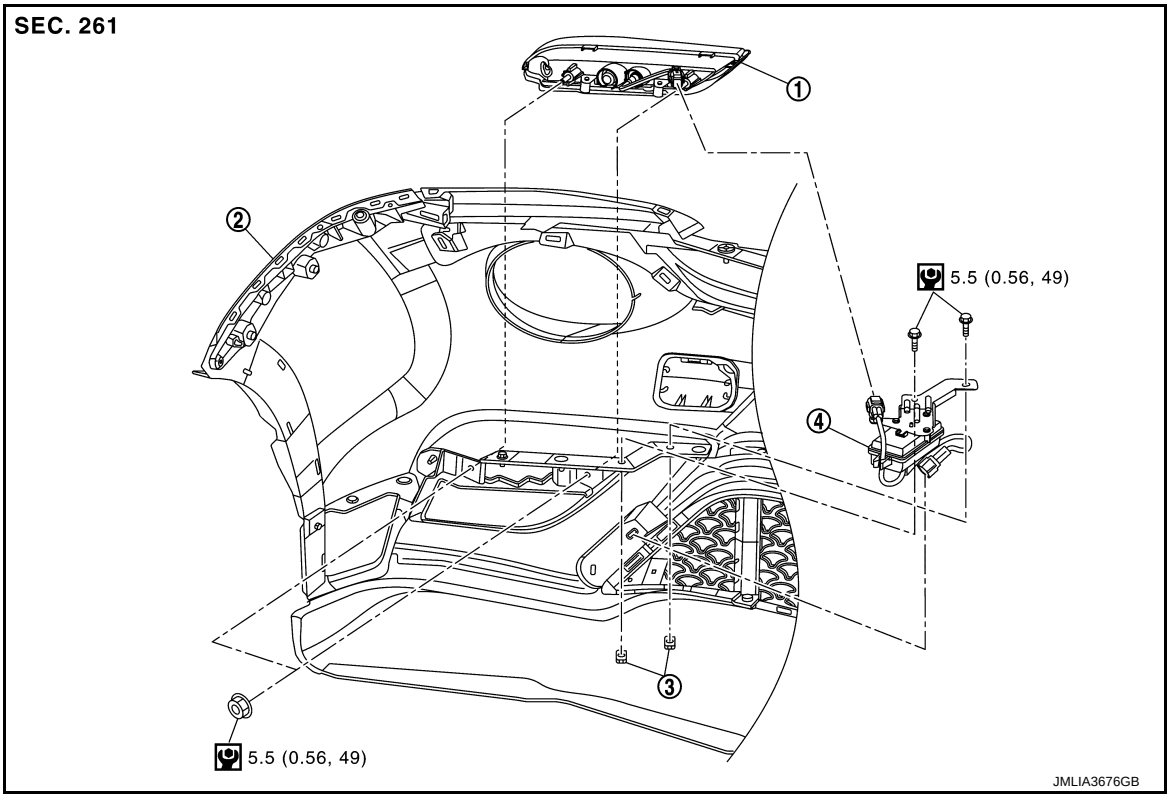
Note the following item, and then assemble in the reverse order of disassembly.

CAUTION:
After installing the bulb, install the bulb socket securely for watertightness.

DAYTIME RUNNING LIGHT

Exploded View

INFOID:0000000011733300



1. Daytime running light
2. Front bumper fascia assembly
3. U nut
4. Harness connector assembly

N·m (kg-m, in-lb)

Removal and Installation

INFOID:0000000011733301

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front bumper fascia lower. Refer to EXT-17, "Removal and Installation".
2. Disconnect daytime running light harness connector.
3. Remove daytime running light mounting nuts.
4. Remove daytime running light from front bumper fascia lower.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000011733302

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

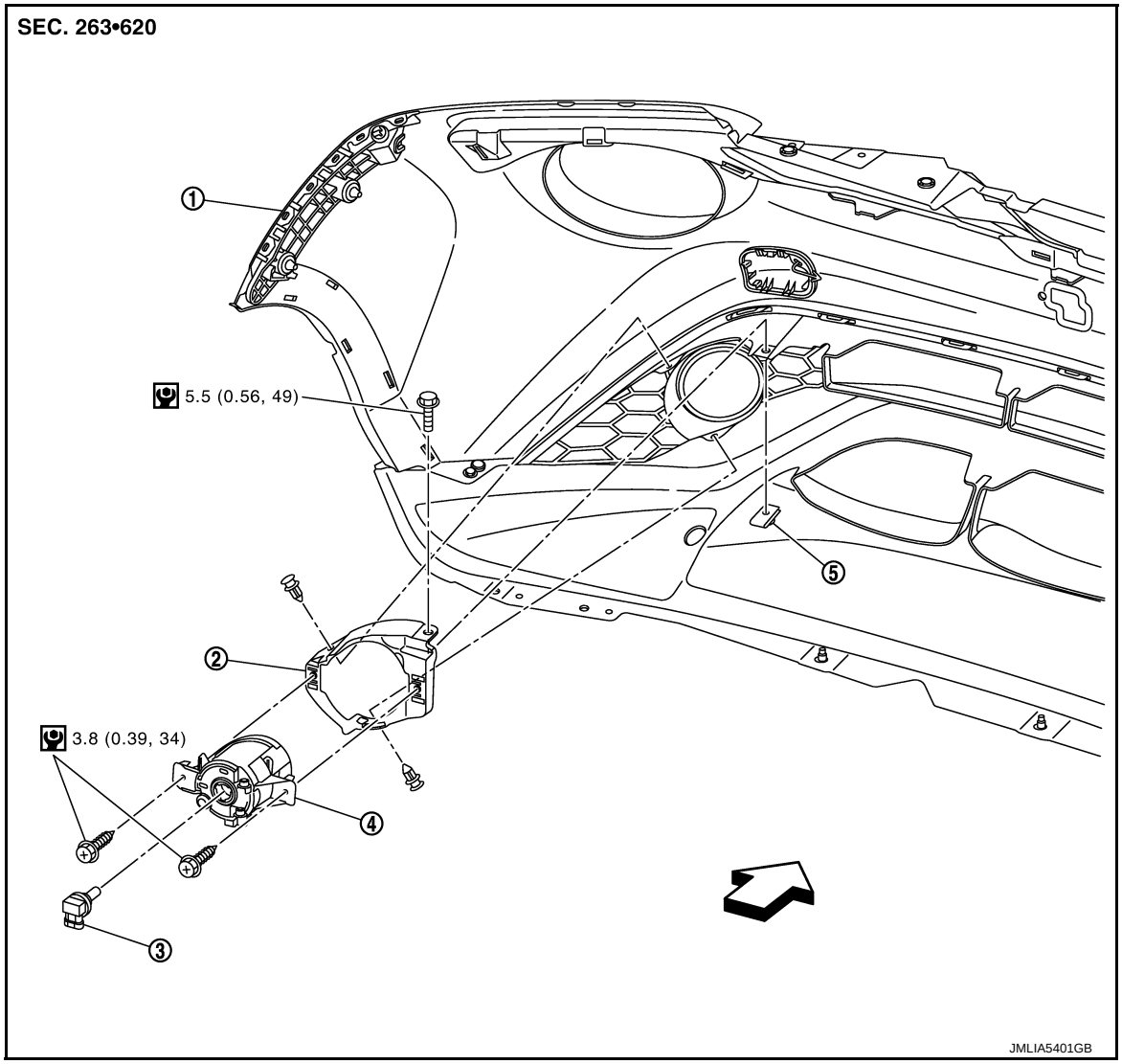
DAYTIME RUNNING LIGHT

CAUTION:
Replacement of a single part is not possible due to the adoption of LED. For replacement, replace daytime running light as a set. Refer to EXL-209, "Removal and Installation".

FRONT FOG LAMP

Exploded View

INFOID:0000000011733303



1. Front bumper fascia assembly
2. Front fog lamp bracket
3. Front fog lamp bulb
4. Front fog lamp
5. U nut

⇦ : Vehicle front

: N·m (kg-m, in-lb)

Removal and Installation

INFOID:0000000011733304

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove front fender protector to make work space. Refer to EXT-31, "Removal and Installation".
2. Disconnect front fog lamp harness connector.
3. Remove front fog lamp fixing screws, and then remove front fog lamp from front fog lamp bracket.
4. Remove front fog lamp bracket mounting bolt and fixing clips, and then remove front fog lamp bracket.

INSTALLATION

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

NOTE:

After installation, perform aiming adjustment. Refer to EXL-201, "Description".

Replacement

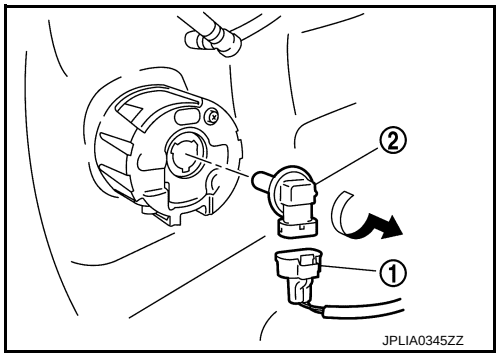
INFOID:0000000011733305

CAUTION:

- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

FRONT FOG LAMP BULB

1. Remove fender protector to make work space. Refer to EXT-31, "Removal and Installation".
2. Remove front fog lamp bulb connector (1).
3. Rotate front fog lamp bulb (2) counterclockwise and unlock it.



SIDE TURN SIGNAL LAMP

Exploded View

INFOID:0000000011733306

Refer to MIR-17, "Exploded View".

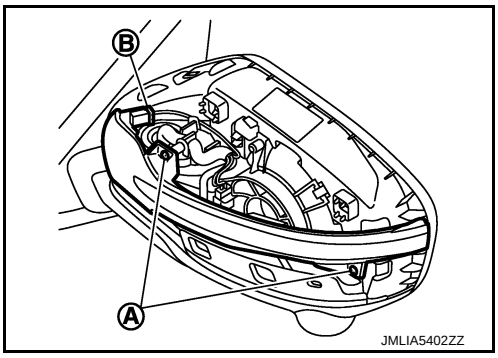
Removal and Installation

INFOID:0000000011733307

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove door mirror cover. Refer to MIR-20, "DOOR MIRROR COVER : Removal and Installation".
2. Remove side turn signal lamp fixing screws (A), and then disconnect side turn signal lamp harness connector (B).



3. Remove side turn signal lamp.

INSTALLATION
Install in the reverse order of removal.

Replacement

INFOID:0000000011733308

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

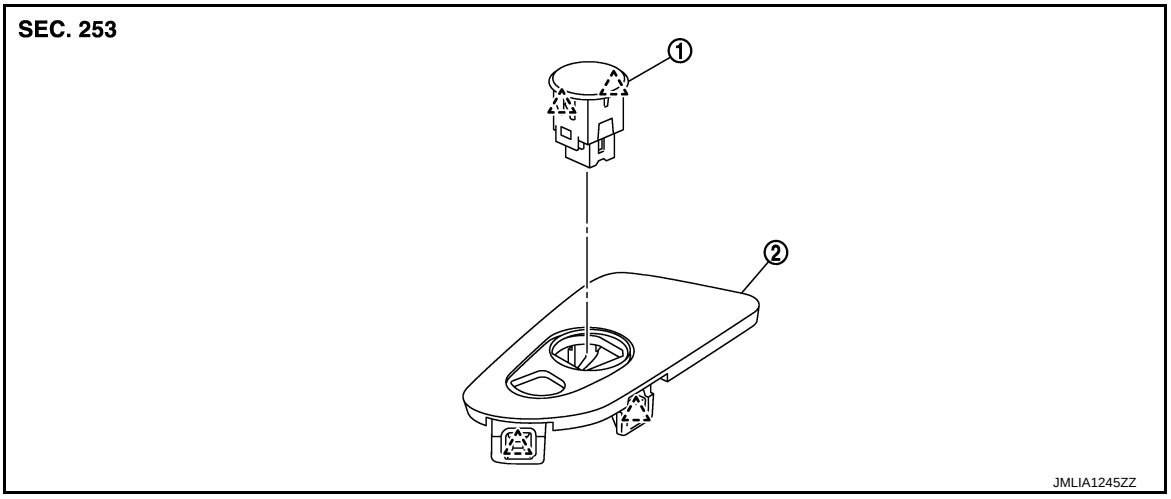
SIDE TURN SIGMNAL LAMP BULB

CAUTION:
Replacement of a single part is not possible due to the adoption of LED. For replacement, replace side turn signal lamp as a set. Refer to EXL-212, "Removal and Installation".

OPTICAL SENSOR

Exploded View

INFOID:0000000011733309



1. Optical sensor
2. Switch panel

: Pawl

Removal and Installation

INFOID:0000000011733310

REMOVAL

1. Insert an appropriate 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.

LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:0000000011733311

REMOVAL

Remove light & turn signal switch. Refer to BCS-94, "Removal and Installation".

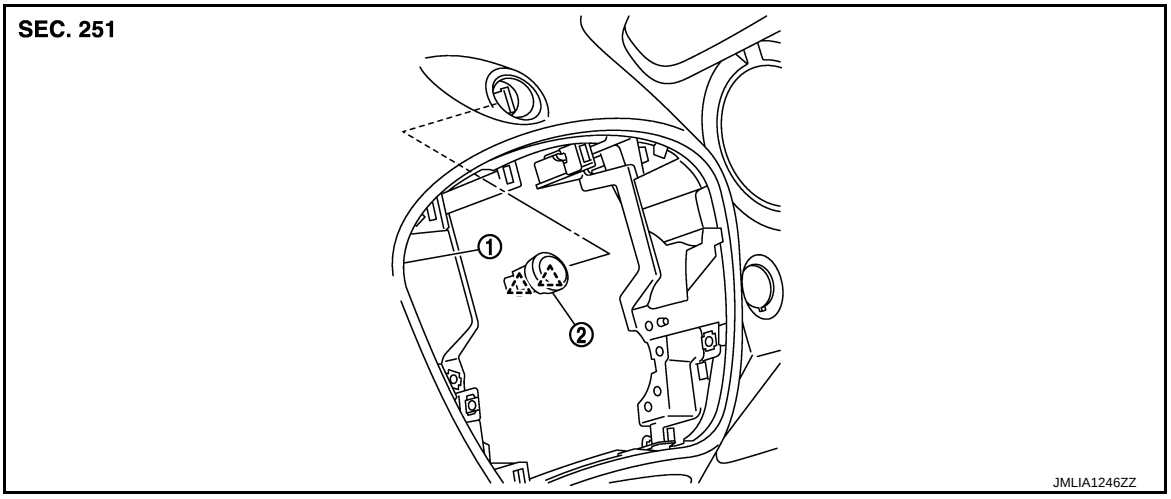
INSTALLATION

Install in the reverse order of removal.

HAZARD SWITCH

Exploded View

INFOID:0000000011733312



1. Instrument panel assembly
2. Hazard switch

: Pawl

Removal and Installation

INFOID:0000000011733313

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. Remove audio unit. Refer to AV-49, "Removal and Installation".
2. Disengage fixing pawls, and then remove hazard switch from instrument panel inside to outside.

INSTALLATION

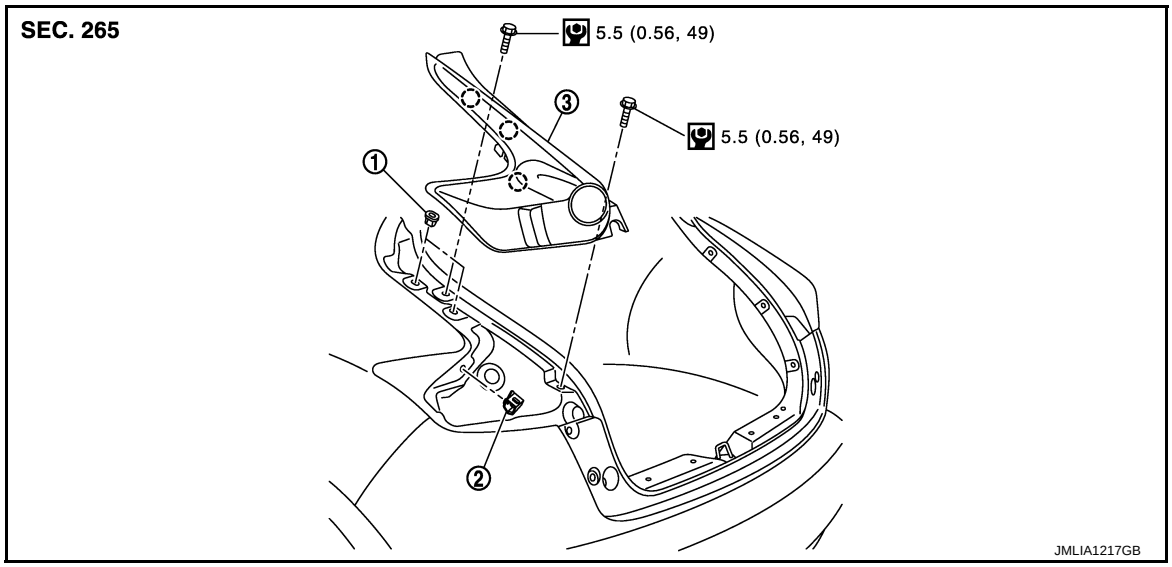
Install in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000011733314

REMOVAL

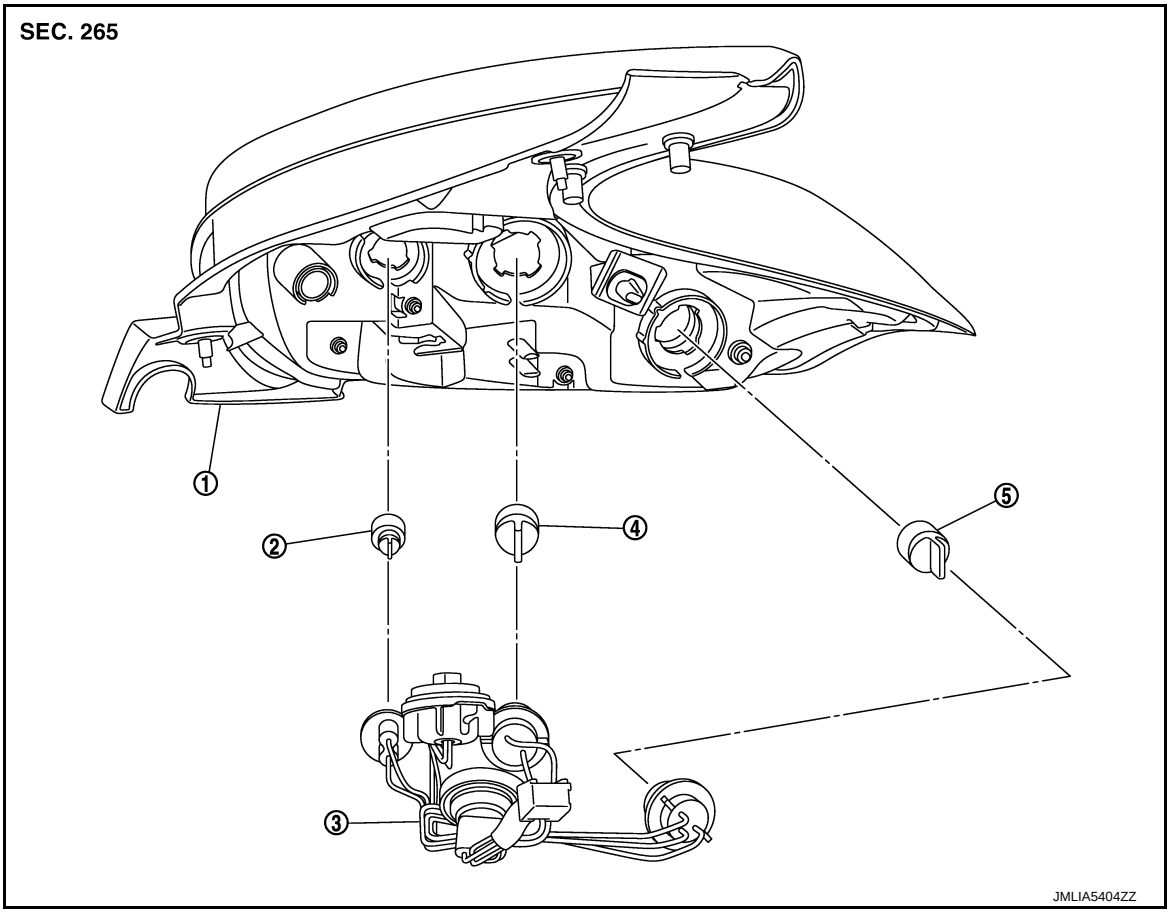


1. Grommet
2. Grommet
3. Rear combination lamp

: Clip

: N·m (kg-m, in-lb)

DISASSEMBLY



1.	Rear combination lamp	2.	Back-up lamp bulb	3.	Harness connector
4.	Rear turn signal lamp bulb	5.	Stop/Tail lamp bulb (Rear side marker lamp)		

Removal and Installation

INFOID:0000000011733315

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".**
- **When removing, always use a remover tool that is made of plastic.**

REMOVAL

1. Full open back door.
2. Remove luggage side lower finisher. Refer to INT-35, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
3. Remove rear combination lamp mounting bolts.
4. Insert a remover tool into the rear combination lamp and rear fender to disengage the clips.
5. Pull up rear combination lamp, and then remove rear combination lamp.
6. Disconnect rear combination lamp connector.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000011733316

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**

- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

TAIL LAMP (LED)

CAUTION:

Replacement of a single part is not possible due to the adoption of LED. For replacement, replace rear combination lamp as a set. Refer to EXL-217, "Removal and Installation".

STOP/TAIL LAMP BULB (REAR SIDE MARKER LAMP)

1. Remove rear combination lamp assembly. Refer to EXL-217, "Removal and Installation".
2. Rotate stop/tail lamp bulb socket counterclockwise, and then remove stop/tail lamp bulb socket.
3. Remove stop/tail lamp bulb from stop/tail lamp bulb socket.

REAR TURN SIGNAL LAMP BULB

1. Remove rear combination lamp assembly. Refer to EXL-217, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise, and then remove rear turn signal lamp bulb socket.
3. Remove rear turn signal lamp bulb from rear turn signal lamp bulb socket.

BACK-UP LAMP BULB

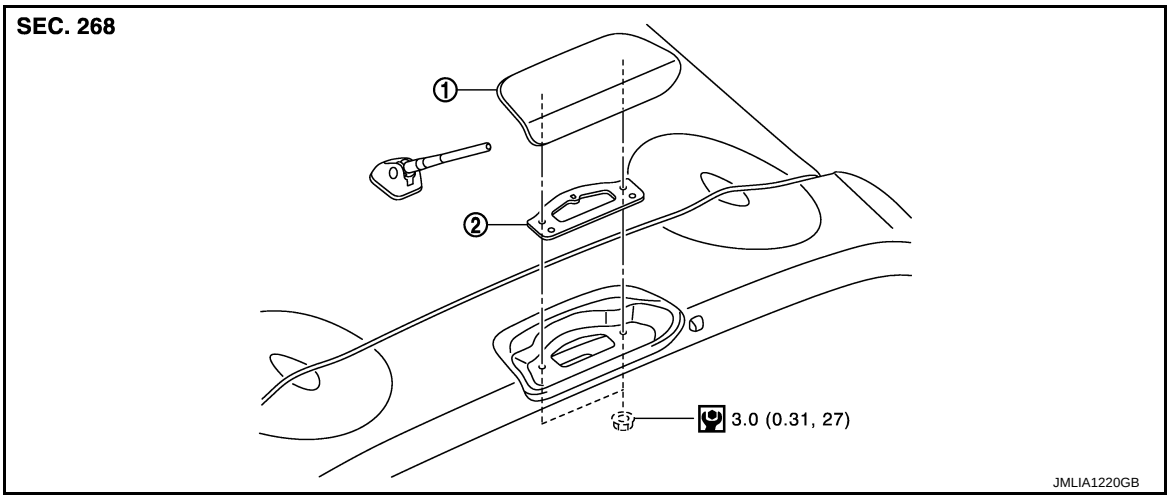
1. Remove rear combination lamp assembly. Refer to EXL-217, "Removal and Installation".
2. Rotate back-up lamp bulb socket counterclockwise, and then remove back-up lamp bulb socket.
3. Remove back-up lamp bulb from back-up lamp bulb socket.

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000011733317

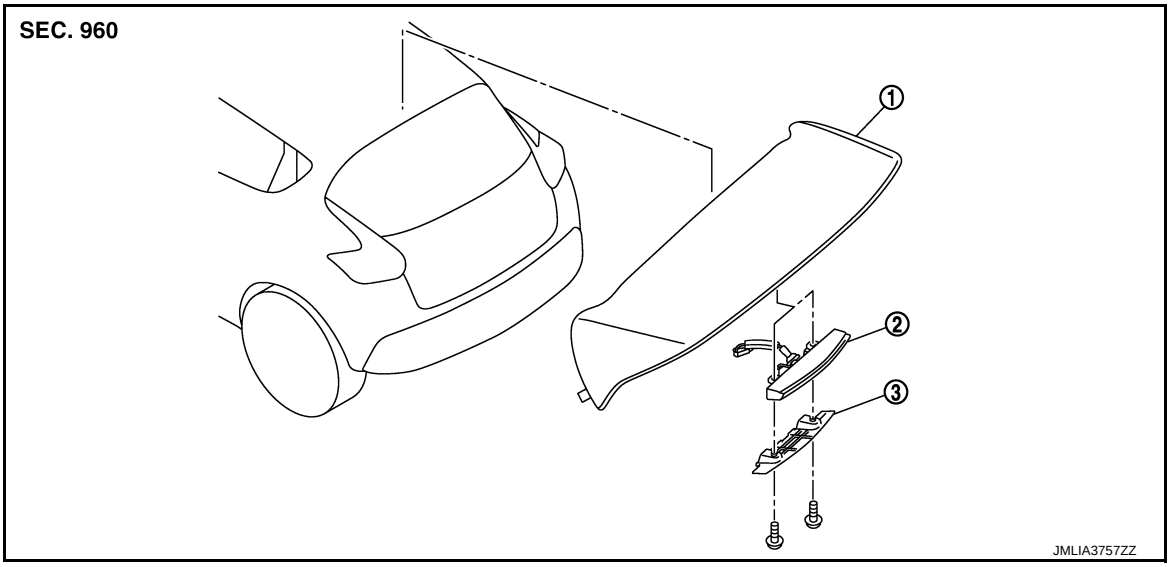
EXCEPT FOR NISMO AND NISMO RS



1. High-mounted stop lamp
2. Seal packing

: N·m (kg-m, in-lb)

NISMO AND NISMO RS



1. Rear spoiler
2. High-mounted stop lamp
3. High-mounted stop lamp cover

Removal and Installation

INFOID:0000000011733318

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

Except for NISMO and NISMO RS

1. Remove blind seal from back door inside.
   CAUTION:

Never damage the blind seal, so that it can be reused.

2. Remove high-mounted stop lamp mounting nuts and connector.
3. Pull high-mounted stop lamp toward vehicle upside, and then remove high-mounted stop lamp.

NISMO and NISMO RS

1. Remove rear spoiler. Refer to EXT-49, "Removal and Installation".
2. Remove high-mounted stop lamp cover mounting bolts, and then remove high-mounted stop lamp cover.
3. Remove high-mounted stop lamp harness connector from rear spoiler.
4. Pull out high-mounted stop lamp, and then remove high-mounted stop lamp.

INSTALLATION

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

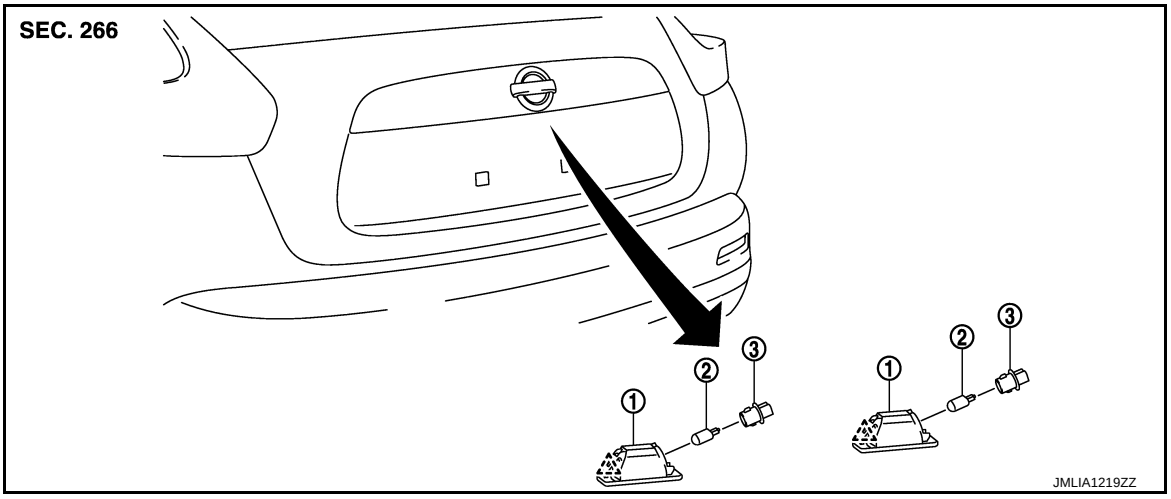
CAUTION:

Seal packing cannot be reused.

LICENSE PLATE LAMP

Exploded View

INFOID:0000000011733319



1. License plate lamp housing assembly
2. Bulb
3. License plate lamp bulb socket

: Pawl

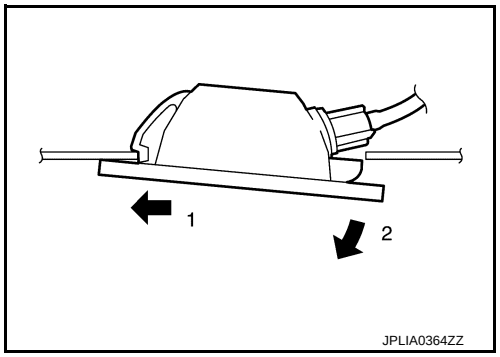
Removal and Installation

INFOID:0000000011733320

CAUTION:
Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".

REMOVAL

1. While pressing the license plate lamp to direction right side, pull it to direction outside and then remove it.
2. Disconnect license plate lamp connector.



INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000011733321

CAUTION:
- **Disconnect the battery negative terminal or remove power circuit fuse when performing the operation for preventing electric leakage. Refer to EXL-118, "Precautions for Removing Battery Terminal".**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

LICENSE PLATE LAMP BULB

1. Remove license plate lamp. Refer to EXL-221, "Removal and Installation".
2. Rotate the bulb socket counterclockwise and unlock it.

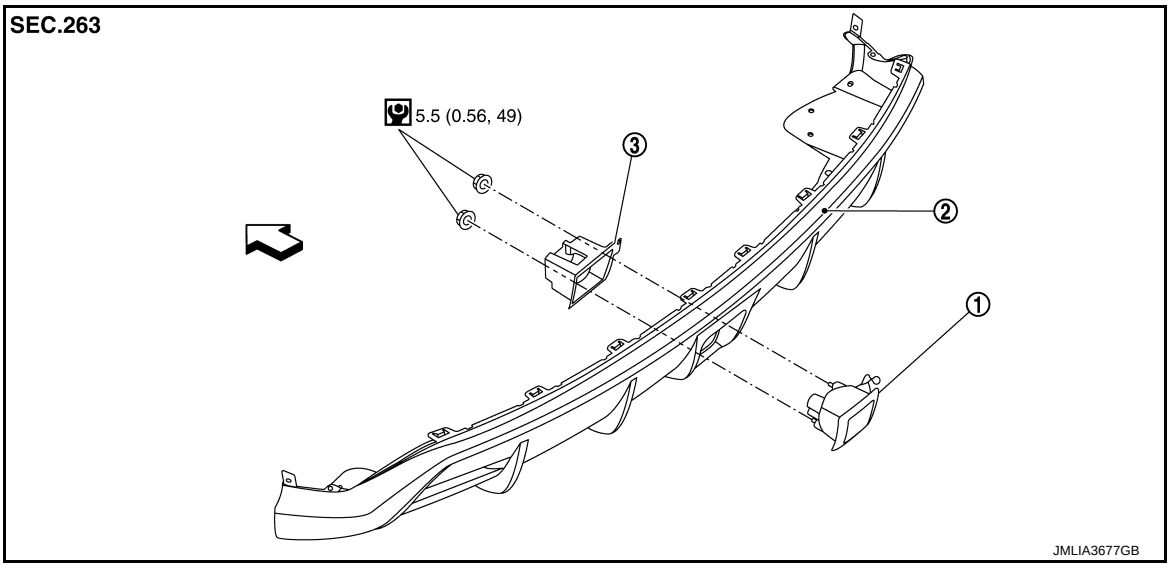
3. Remove the bulb from the socket.

REAR FOG LAMP

Exploded View

INFOID:0000000011733322

REMOVAL



1. Rear fog lamp housing
2. Rear bumper fascia lower
3. Rear fog lamp housing bracket

N·m (kg-m, in-lb)

: Vehicle front

Removal and Installation

INFOID:0000000011733323

REMOVAL

1. Remove rear bumper fascia lower. Refer to EXT-23, "Removal and Installation".
2. Remove rear fog lamp housing mounting nuts.
3. Remove rear fog lamp housing from the rear bumper fascia lower.
4. Remove rear fog lamp housing bracket from rear bumper fascia lower.

INSTALLATION

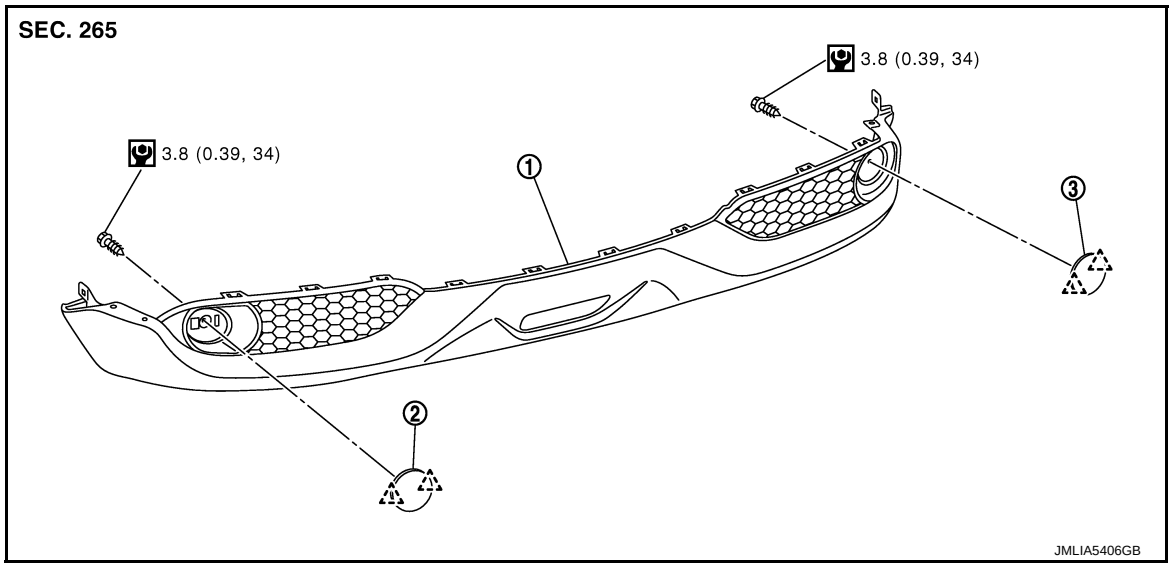
Installation is the reverse order of removal.

REAR REFLEX REFLECTOR

Exploded View

INFOID:0000000011733324

EXCEPT FOR NISMO AND NISMO RS

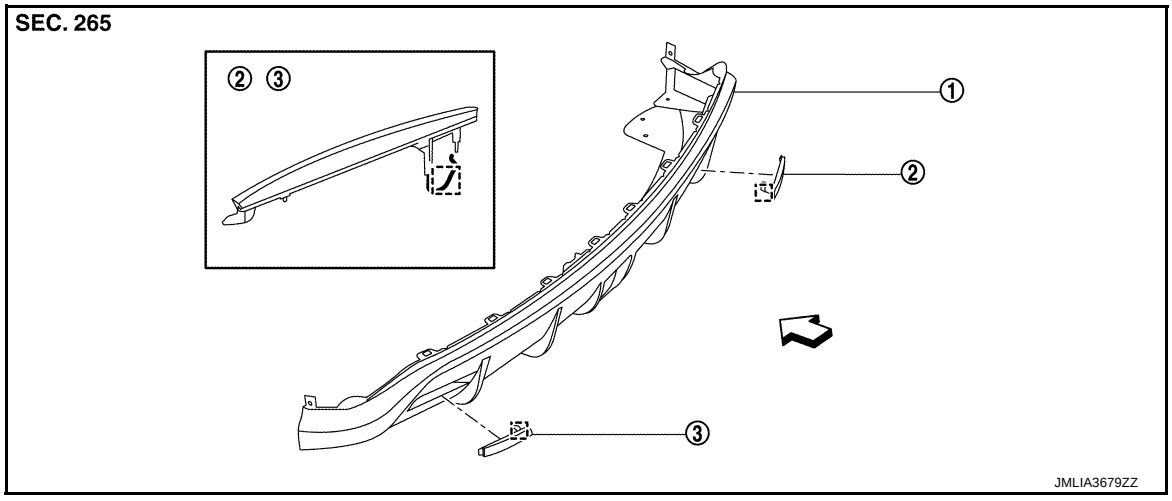


1. Rear bumper fascia lower
2. Rear reflex reflector LH
3. Rear reflex reflector RH

: Pawl

: N·m (kg-m, in-lb)

NISMO AND NISMO RS



1. Rear bumper fascia lower
2. Rear reflex reflector RH
3. Rear reflex reflector LH

: Metal clip

: Vehicle front

Removal and Installation

INFOID:0000000011733325

REMOVAL

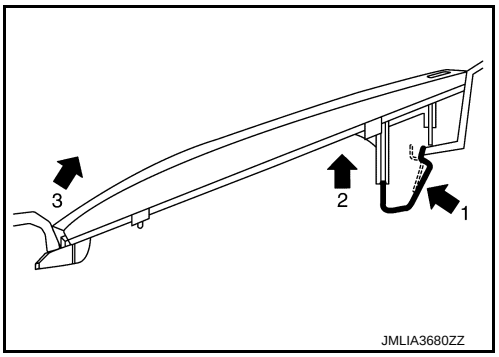
Except for NISMO and NISMO RS

1. Remove rear bumper fascia lower. Refer to EXT-23, "Removal and Installation".

2. Remove rear reflex reflector fixing screw.
3. Disengage rear reflex reflector fixing pawls, and then remove rear reflex reflector.

NISMO and NISMO RS

1. Remove rear bumper fascia lower. Refer to EXT-23, "Removal and Installation".
2. Disengage rear reflex reflector fixing metal clip, and then remove rear reflex reflector according to numerical order 1→3 indicated by arrows as shown in the figure.



INSTALLATION

Install in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000011732848

EXCEPT FOR NISMO AND NISMO RS

Item		Type	Wattage (W)
Headlamp	High Beam	HB3	60
	Low Beam	H11	55
Front combination lamp	Front turn signal lamp	WY21W (Amber)	21
	Front side marker lamp	W5W	5
	Parking lamp	LED	—
Front fog lamp		H11	55
Side turn signal lamp		LED	—
Rear combination lamp	Tail lamp (LED)	LED	—
	Stop lamp/Tail lamp (Rear side marker)	W21/5W	21/5
	Rear turn signal lamp	WY21W (Amber)	21
	Back-up lamp	W16W	16
High-mounted stop lamp		LED	—
License plate lamp		W5W	5

NISMO AND NISMO RS

Item		Type	Wattage (W)
Headlamp	High Beam	HB3	60
	Low Beam	H11	55
Front combination lamp	Front turn signal lamp	WY21W (Amber)	21
	Front side marker lamp	W5W	5
	Parking lamp	LED	—
Daytime running light		LED	—
Side turn signal lamp		LED	—
Rear combination lamp	Tail lamp (LED)	LED	—
	Stop lamp/Tail lamp (Rear side marker)	W21/5W	21/5
	Rear turn signal lamp	WY21W (Amber)	21
	Back-up lamp	W16W	16
High-mounted stop lamp		LED	—
License plate lamp		W5W	5