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SYSTEM DESCRIPTION

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram

INFOID:0000000009161885 Remote keyless Door Map lamp Interior room lamp entry receiver Lock/unlock signal ON power supply Trunk room lamp Request switch (ALL) Step lamp Door lock/unlock switch BCM Step lamp control signal Door switch (ALL) Trunk room lamp control signal Interior room lamp control signal Trunk room lamp switch Push-button Push-button ignition switch ignition switch illumination power supply illumination Push-button ignition switch illumination ground To combination meter

System Description

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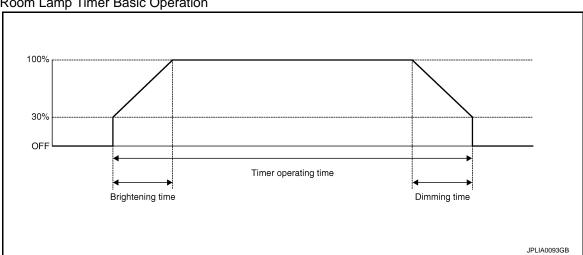
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OUTLINE

- Interior room lamps* are controlled by interior room lamp timer control function of BCM.
 *: Map lamp (when map lamp switch is in DOOR position).
- Trunk room lamp is controlled by trunk room lamp control function of BCM.
- Step lamp is controlled by step lamp control function of BCM.
- Push-button ignition switch illumination is controlled by the push-button ignition switch illumination control function of BCM.

INTERIOR ROOM LAMP TIMER CONTROL

Interior Room Lamp Timer Basic Operation



INTERIOR ROOM LAMP CONTROL SYSTEM

< SYSTEM DESCRIPTION >

- The interior room lamp turns ON and OFF (gradual brightening and dimming) by the interior room timer.
- BCM judges the vehicle condition with the following items. It activates the interior room timer.
- Ignition switch status
- Door switch signal (ALL)
- Door lock/unlock signal (remote keyless entry receiver, each request switch, door lock and unlock switch)

Interior Room Lamp ON Operation

- BCM always turns the interior room lamp ON when any door opens.
- BCM activates the interior room timer in any of the following conditions to turn the interior room lamp ON for a period of time.
- Any door opens before all doors close.
- Ignition switch is turned ON → OFF.
- Any door unlock signal is detected when all doors close with ignition switch OFF.

NOTE:

Restart the timer if new condition is input during the timer operating time.

Interior Room Lamp OFF Operation

BCM stops the timer in any of the following conditions to turns the interior room lamp OFF.

- The timer operating time is expired.
- Ignition switch position is other than OFF with all doors close.
- Any door lock operation is detected with all doors close.

TRUNK ROOM LAMP CONTROL

BCM controls the trunk room lamp (ground-side) to turn ON with the trunk room lamp switch ON.

STEP LAMP CONTROL

BCM controls the step lamp (ground-side) to turn ON with any door switch ON.

PUSH-BUTTON IGNITION SWITCH ILLUMINATION CONTROL

Push-button Ignition Switch Illumination Basic Operation

- BCM provides the power supply and the ground to turn the push-button ignition switch illumination ON.
- BCM cuts the ground supply while the each illumination (tail lamp) ON. BCM switches to the ground control with the meter illumination control function.

Push-button Ignition Switch Illumination ON Operation

BCM turns the push-button ignition switch illumination ON in the following conditions.

- Ignition switch ON
- Each illumination (tail lamp) ON
- Any of the following conditions with ignition switch OFF
- Engine start permission is entered.
- Intelligent Key inserted into the key slot.
- Driver door is LOCK → UNLOCK.
- Driver door is open.

Push-button Ignition Switch Illumination OFF Operation

BCM turns the push-button ignition switch illumination OFF in any of the following conditions.

- The push-button ignition switch illumination ON conditions do not satisfy.
- All of the following conditions with ignition switch OFF
- Each illumination (tail lamp) OFF

- The push-button ignition switch illumination ON conditions do not change (15 seconds after the ignition switch OFF) or the driver door is UNLOCK \rightarrow LOCK.

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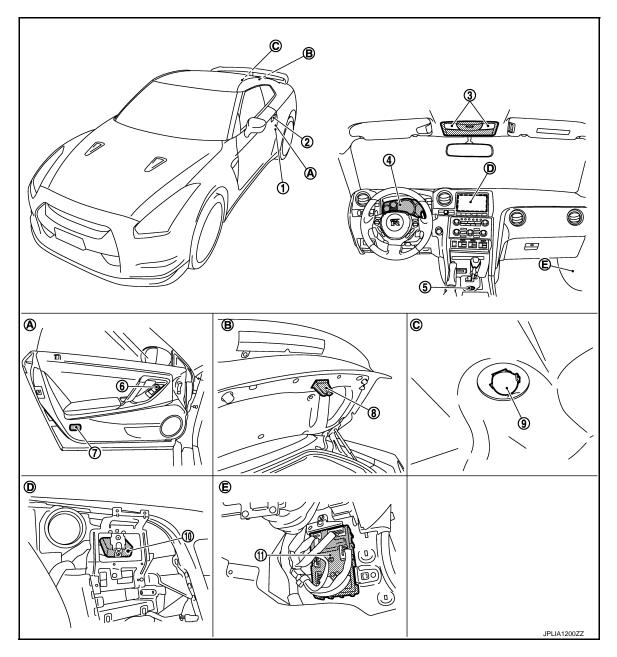
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Component Parts Location

INFOID:0000000009161887



- 1. Door switch
- 4. Combination meter
- 7. Step lamp
- 10. Remote keyless entry receiver
- A. Front door
- D. Behind the display

- 2. Request switch
- Push-button ignition switch (Push-button ignition switch illumination)
- 8. Trunk room lamp switch
- 11. BCM
- B. Trunk lid lock assembly
- E. Dash side lower (passenger side)
- 3. Map lamp
- 6. Door lock and unlock switch
- 9. Trunk room lamp
- C. Trunk room upward

INTERIOR ROOM LAMP CONTROL SYSTEM

< SYSTEM DESCRIPTION >

Component Description

INFOID:0000000009161888

Part	Description		
BCM	 Activates the interior room lamp timer depending on the vehicle condition to turn the interior room lamp ON/OFF. Turns the trunk room lamp ON /OFF according to the trunk room lamp switch status. Turns the step lamp ON /OFF according to any door switch status. 		
Remote keyless entry receiverDoor lock and unlock switch	Transmits the lock/unlock signal to BCM.		
Request switchDoor switch	Inputs a switch signal to BCM.		

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INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

System Diagram

INFOID:0000000009161889 Remote keyless entry receiver Lock/unlock signal Door Map lamp Interior room lamp power supply Request switch (ALL) Trunk room lamp Door lock/unlock Step lamp **BCM** Vanity mirror Door switch (ALL) Step lamp control signal Trunk room lamp switch Trunk room lamp control signal Interior room lamp control signal Key slot

System Description

INFOID:0000000009161890

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OUTLINE

- Interior room lamp battery saver is controlled by BCM.
- BCM turns applicable lamps OFF depending on the vehicle condition. This function prevents the battery from over-discharging if the driver neglect turning OFF the any lamps.

Applicable lamps

- Map lamp
- Step lamp
- Trunk room lamp
- Vanity mirror lamp

INTERIOR ROOM LAMP BATTERY SAVER FUNCTION

- When the ignition switch is turned OFF, BCM operates the timer for a period of time to cut the interior room lamp power supply.
- BCM restart the timer when any of the following signals changes while operating the timer.
- Ignition switch status
- Door switch signal (ALL)
- Door lock/unlock signal (remote keyless entry receiver, each request switch, door lock and unlock switch)
- Trunk loom lamp switch signal
- Key switch signal (key slot)
- BCM provides the interior room lamp power supply continuously when the ignition switch position is other than OFF.

INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

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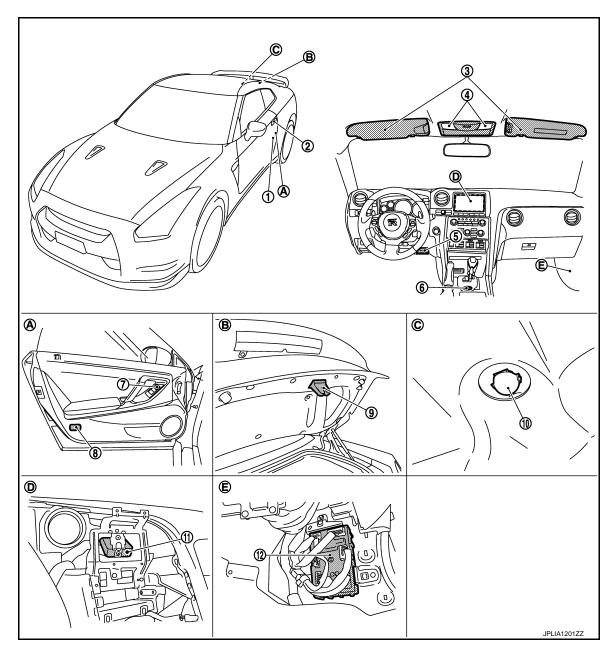
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- 1. Door switch
- 4. Map lamp
- 7. Door lock and unlock switch
- 10. Trunk room lamp
- A. Front door
- D. Behind the display

- 2. Request switch
- 5. Key slot
- 8. Step lamp
- 11. Remote keyless entry receiver
- B. Trunk lid lock assembly
- E. Dash side lower (passenger side)
- 3. Vanity mirror lamp
- 6. Push-button ignition switch
- 9. Trunk room lamp switch
- 12. BCM
- C. Trunk room upward

Component Description

INFOID:0000000009161892

Part	Description		
BCM	Operates the interior room lamp battery saver depending on the vehicle condition to cut the interior room lamp power supply.		
Remote keyless entry receiver Door Lock and unlock switch	Transmits the lock/unlock signal to BCM.		

INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

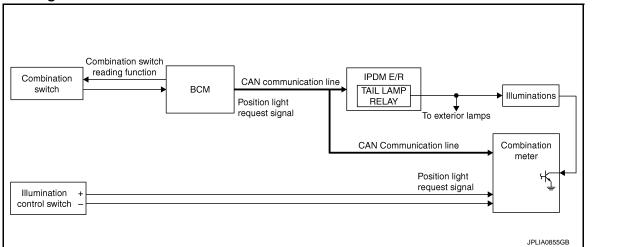
Part	Description	
Request switchDoor switch	Inputs a switch signal to BCM.	
Key slot	Input the Intelligent key in status to BCM.	

ILLUMINATION CONTROL SYSTEM

< SYSTEM DESCRIPTION >

ILLUMINATION CONTROL SYSTEM

System Diagram



System Description

INFOID:0000000009161894

INFOID:0000000009161893

OUTLINE

Each illumination lamp is controlled by each function of BCM, IPDM E/R and combination meter.

Control by BCM

- Combination switch reading function
- · Headlamp control function

Control by IPDM E/R

Relay control function

Control by combination meter

Meter illumination control function (Refer to <u>MWI-24, "METER ILLUMINATION CONTROL: System Description".</u>)

ILLUMINATION CONTROL

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits position light request signal to IPDM E/R and combination meter according to tail lamp ON condition.

Tail lamp ON condition

- Lighting switch 1ST
- Lighting switch 2ND
- IPDM E/R turns the integrated tail lamp relay ON according to position light request signal. It provides the power supply to each illumination lamp.
- Combination meter enters in the nighttime mode according to position light request signal. Under the nighttime mode the combination meter controls the illuminance by controlling the each illumination lamp (ground side).

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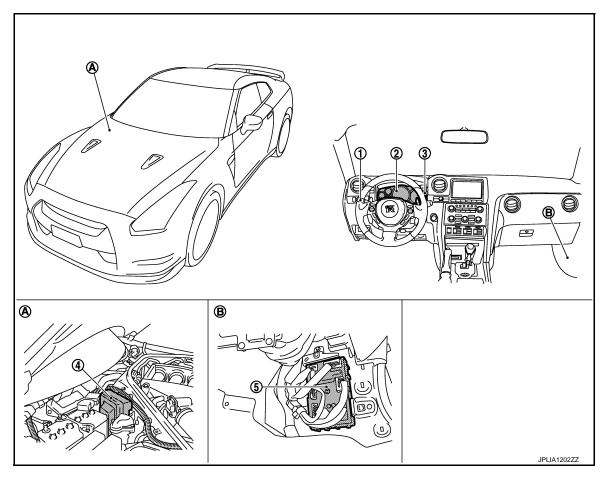
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Component Parts Location

INFOID:0000000009161895



- 1. Combination switch
- 4. IPDM E/R
- A Engine room dash panel (RH)
- 2. Illumination control switch
- 5. BCM
- B. Dash side lower (passenger side)

3. Combination meter

Component Description

INFOID:0000000009161896

Part	Description	
BCM	 Detects each switch condition by the combination switch reading function. Judges the illumination lamp ON/OFF status depending on the vehicle condition. And then it transmits position light request signal to IPDM E/R and combination meter (with CAN communication). 	
IPDM E/R	Controls the integrated relay according to the request from BCM (with CAN communication).	
Combination meter	 Enters in nighttime mode according to the request from BCM (with CAN communication). Controls the each illumination in the nighttime mode. Refer to MWI-24, "METER ILLUMINATION CONTROL: System Description". 	
Combination switch (Lighting and turn signal switch)	Refer to BCS-5, "System Diagram".	

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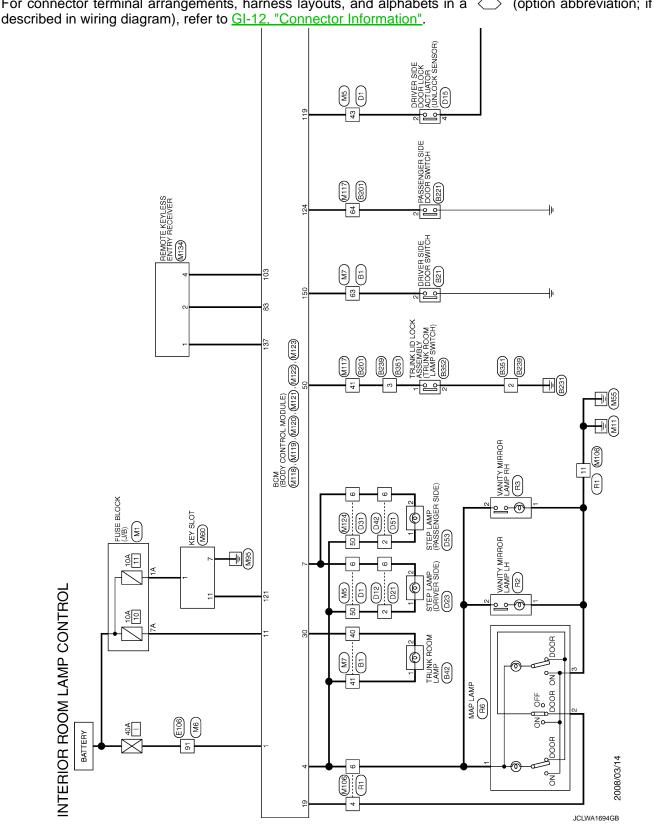
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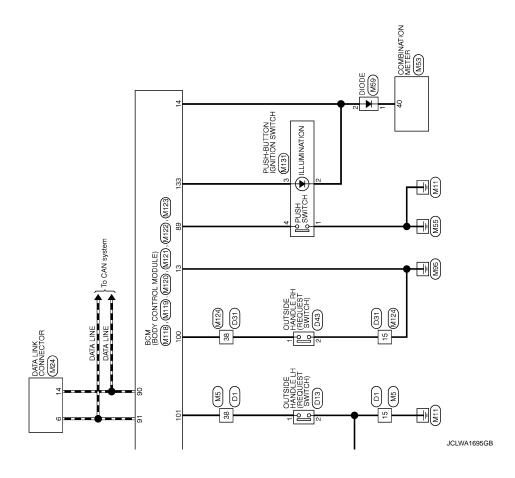
DTC/CIRCUIT DIAGNOSIS

INTERIOR ROOM LAMP CONTROL SYSTEM

Wiring Diagram - INTERIOR ROOM LAMP -

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not

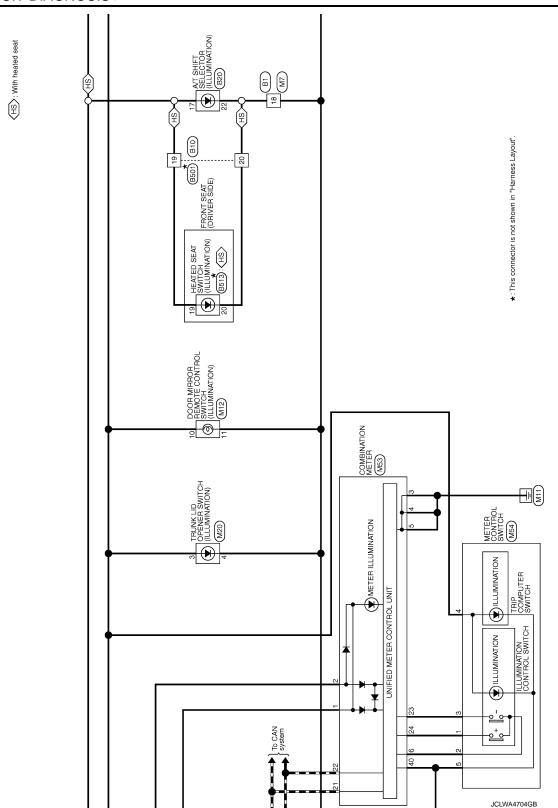


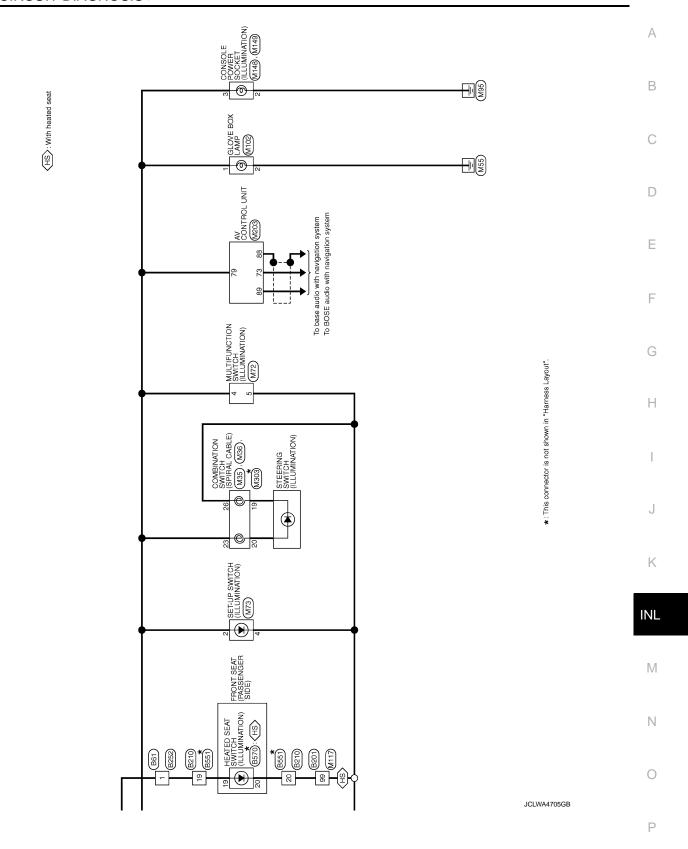


ILLUMINATION

Α Wiring Diagram - ILLUMINATION -INFOID:0000000009161918 For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not В described in wiring diagram), refer to GI-12, "Connector Information". C (88) (E103), MSS T D FUSE BLOCK (J/B)
(M1), (M2), (M3), DATA LINE PUSH-BUTTON IGNITION SWITCH [M131] Е F ILLUMINATION IGNITION SWITCH ON or START (A) ₹ [1] PUSH SWITCH Н KEY SLOT OUTSIDE HANDLE RH (REQUEST SWITCH) (D43) (D31) 10A J BCM (BODY CONTROL MODULE) (M118), (M119), (M122), (M123) K INL DRIVER SIDE DOOR SWITCH (B21) M (B) 15A 50 CPU Ν [B] 15A 51 COMBINATION SWITCH 0 ILLUMINATION Р 2010/11/04 BATTERY

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PRECAUTION

PRECAUTIONS

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

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

INFOID:0000000009161930

CAUTION:

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

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

- Turn the ignition switch to ACC position. (At this time, the steering lock will be released.)
- Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.

PRECAUTIONS

< PRECAUTION >

- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
- 6. Perform self-diagnosis check of all control units using CONSULT.

Precaution for Battery Service

INFOID:0000000009161931

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

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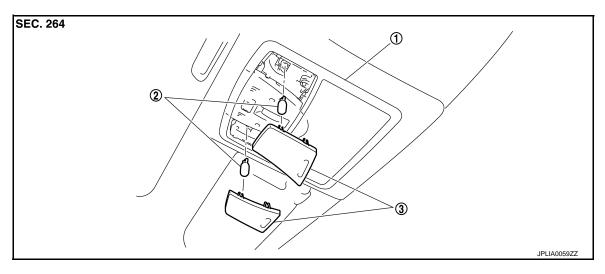
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REMOVAL AND INSTALLATION

MAP LAMP

Exploded View



1. Map lamp assembly

2. Bulb

3. Lens

INFOID:0000000009161933

Removal and Installation

Refer to INT-24, "Exploded View" for the map lamp assembly installation/removal.

Replacement INFOID:000000009161934

CAUTION:

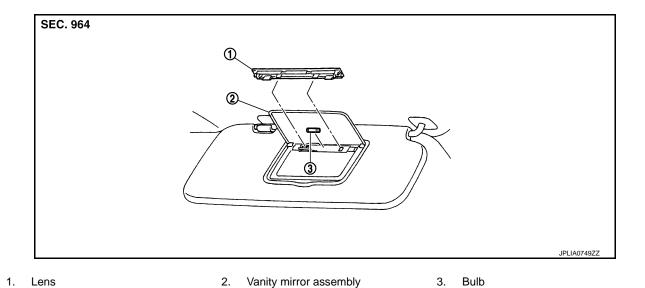
- Disconnect the battery negative terminal or remove the fuse.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned off.
- Never leave bulb out of lamp reflector for a long time because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

MAP LAMP BULB

- 1. Insert any appropriate tool into the gap between the lens. Remove the lens.
- 2. Remove the bulb.

VANITY MIRROR LAMP

Exploded View



Replacement

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

VANITY MIRROR LAMP BULB

- 1. Insert any appropriate tool into the gap between the lens. Remove the lens.
- 2. Remove the bulb.

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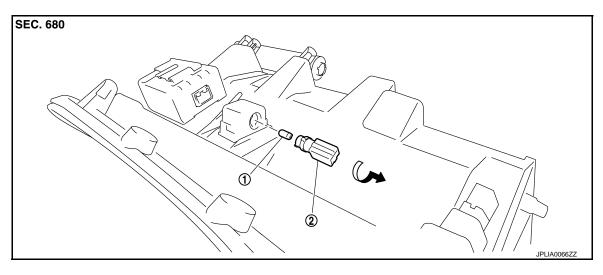
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GLOVE BOX LAMP

Exploded View



1. Bulb 2. Bulb socket

Replacement

CAUTION:

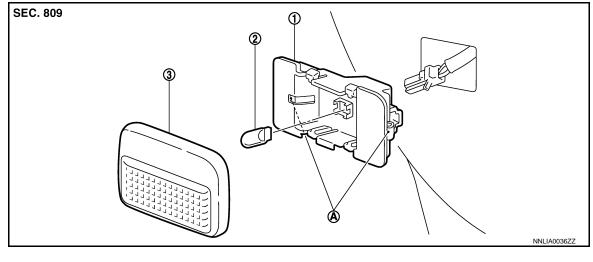
Disconnect the battery negative terminal or remove the fuse.

GLOVE BOX LAMP BULB

- 1. Remove the instrument assist lower panel. Refer to IP-12, "Exploded View".
- 2. Rotate the bulb socket counterclockwise and unlock it.
- 3. Remove the bulb.

STEP LAMP

Exploded View



- Step lamp case
- A Metal clip

2. Bulb

3. Lens

Removal and Installation

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

- 1. Insert any appropriate tool into the gap between the step lamp and the door trim. Remove the step lamp.
- 2. Disconnect the connector.

INSTALLATION

Install in the reverse order of removal.

Replacement INFOID:000000009161941

CAUTION:

- Disconnect the battery negative terminal or remove the fuse.
- 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.

STEP LAMP BULB

- 1. Remove the step lamp.
- Remove the lens.
- 3. Remove the bulb.

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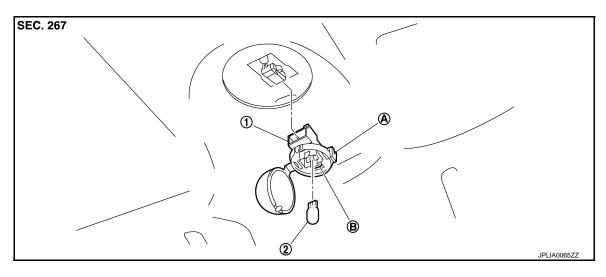
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TRUNK ROOM LAMP

Exploded View



- 1. Trunk room lamp
- A Pawl (for lens fixing)
- 2. Bulb
- Pawl (for case installation)

Removal and Installation

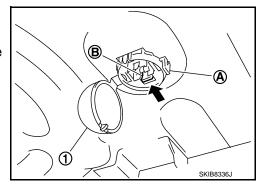
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CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

- 1. Widen the pawl (A). Open the lens (1).
- 2. Remove the bulb.
- 3. Pressing the pawl (B) to the arrow direction (←). Pull out the trunk room lamp.
- 4. Disconnect the connector.
- 5. Remove the trunk room lamp.



INSTALLATION

Install in the reverse order of removal.

Replacement INFOID:000000009161944

CAUTION:

- Disconnect the battery negative terminal or remove the fuse.
- 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.

TRUNK ROOM LAMP BULB

- 1. Widen the lens pawl. Open the lens.
- Remove the bulb.

SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

Item	Туре	Wattage (W)
Push-button ignition switch illumination	LED	_
Map lamp	Wedge	8
Vanity mirror lamp	_	1.8
Glove box lamp	_	1.4
Step lamp	Wedge	2.7
Trunk room lamp	Wedge	3.4

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