# SECTION INTERIOR LIGHTING SYSTEM

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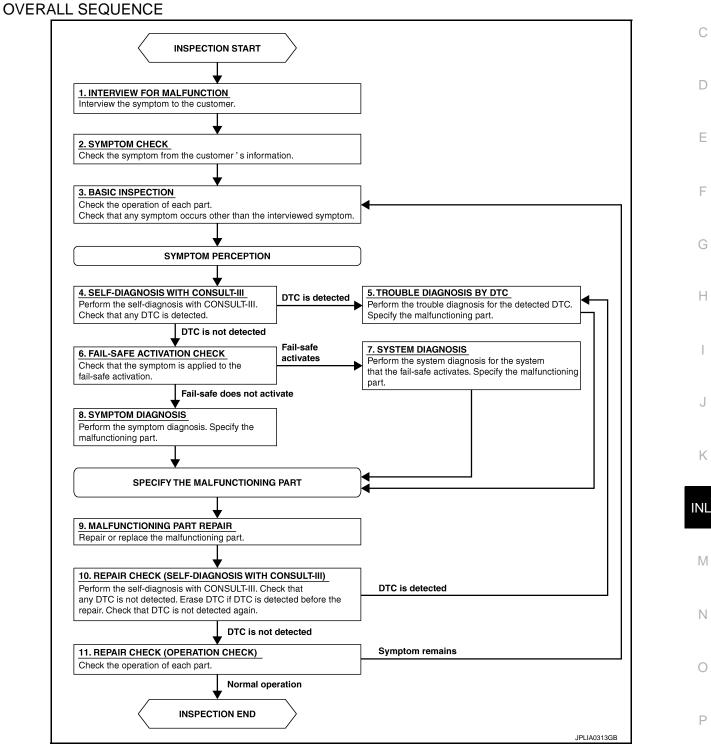
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# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

# Work Flow

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# DETAILED FLOW **1**.INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

## >> GO TO 2. 2.SYMPTOM CHECK

Check the symptom from the customer's information.

#### >> GO TO 3.

# **3.**BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4.

**4.**SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

**5.**TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9. 6.FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7. NO >> GO TO 8.

7.SYSTEM DIAGNOSIS

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

#### >> GO TO 9.

# 8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

#### >> GO TO 9.

**9.**MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

#### >> GO TO 10.

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

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5. NO >> GO TO 11.

**11.**REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

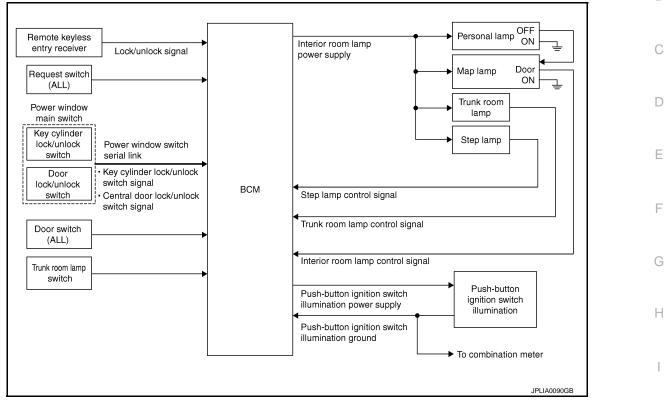
Does it operate normally?

YES >> INSPECTION END NO >> GO TO 3.

#### < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION INTERIOR ROOM LAMP CONTROL SYSTEM

# System Diagram



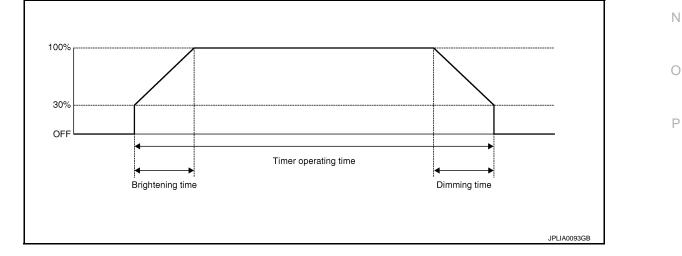
# System Description

#### OUTLINE

- Interior room lamps\* are controlled by interior room lamp timer control function of BCM.
   \*: Map lamp and personal 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



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#### < 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, key cylinder lock/unlock switch, door lock/unlock switch)

#### NOTE:

Each function of interior room lamp timer can be set by CONSULT-III. Refer to <u>INL-16, "INT LAMP : CON-</u> <u>SULT-III Function (BCM - INT LAMP)"</u>.

#### Interior Room Lamp ON Operation

- BCM always turns the interior room lamp ON when any door opens.
- BCM activates the interior room lamp 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  $ON \rightarrow OFF$ .
- 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  $\rightarrow$  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.

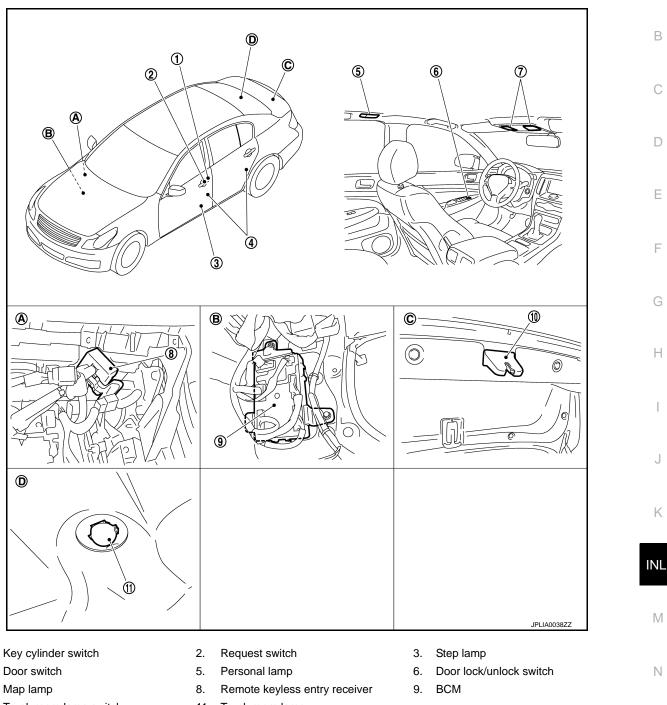
- The push-button ignition switch illumination ON conditions do not satisfy.
- All of the following conditions with ignition switch OFF.
- Each illumination (tail lamp) OFF
- The push-button ignition switch illumination ON conditions do not change (15 seconds after the ignition switch OFF) or the driver door is UNLOCK  $\rightarrow$  LOCK

## < SYSTEM DESCRIPTION >

# **Component Parts Location**

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- 10. Trunk room lamp switch
- A. Behind the glove box

1.

4.

7.

- D. Trunk room upward
- 11. Trunk room lamp
- B. Dash side lower (passenger side)
- C. Trunk lid lock assembly

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< SYSTEM DESCRIPTION >

# Component Description

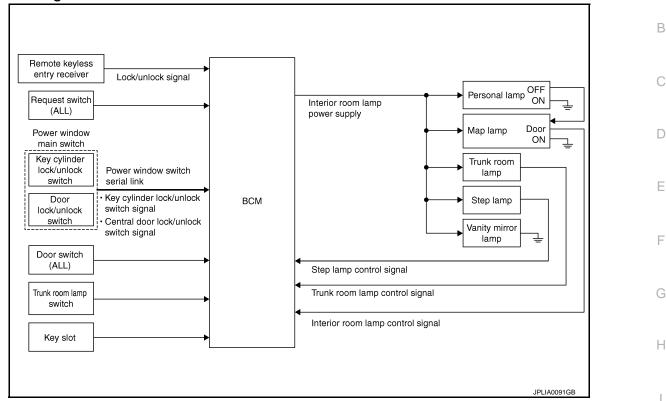
| Part   | Description   |  |  |  |
|--|---|--|--|--|
| ВСМ  | <ul> <li>Activates the interior room lamp timer depending on the vehicle condition to turn the interior room lamp ON/OFF.</li> <li>Turns the trunk room lamp ON /OFF according to the trunk room lamp switch status.</li> <li>Turns the step lamp ON /OFF according to any door switch status.</li> </ul> |  |  |  |
| Remote keyless entry receiver  | Transmits the lock/unlock signal to BCM.  |  |  |  |
| <ul><li>Door lock/unlock switch</li><li>Key cylinder lock/unlock switch</li></ul>      | Transmits a switch signal by power window switch serial link.   |  |  |  |
| <ul><li> Request switch</li><li> Door switch</li><li> Trunk room lamp switch</li></ul> | Inputs a switch signal to BCM.  |  |  |  |

# INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

#### < SYSTEM DESCRIPTION >

# INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

# System Diagram



# System Description

#### 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
- Personal 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, key cylinder lock/unlock switch, door lock/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.

#### NOTE:

Each function of interior room lamp battery saver can be set by CONSULT-III. Refer to <u>INL-17, "BATTERY</u> <u>SAVER : CONSULT-III Function (BCM - BATTERY SAVER)"</u>.

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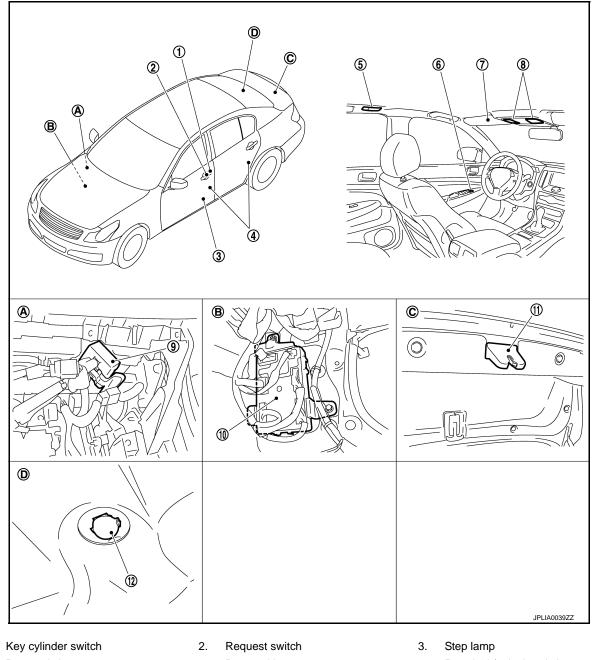
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# INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

#### < SYSTEM DESCRIPTION >

# **Component Parts Location**

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- 4. Door switch
- 7. Vanity mirror lamp
- 10. BCM

1.

- A. Behind the glove box
- D. Trunk room upward

# **Component Description**

- 5. Personal lamp
- 8. Map lamp
- 11. Trunk room lamp switch
- B. Dash side lower (passenger side)
- 6. Door lock/unlock switch
- 9. Remote keyless entry receiver
- 12. Trunk room lamp
- C. Trunk lid lock assembly

| 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 | Transmits the lock/unlock signal to BCM.   |  |  |

# INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

#### < SYSTEM DESCRIPTION >

| Part  | Description   |   |
|---|---|---|
| <ul><li>Door lock/unlock switch</li><li>Key cylinder lock/unlock switch</li></ul>   | Transmits a switch signal by power window switch serial link. | A |
| <ul><li>Request switch</li><li>Door switch</li><li>Trunk room lamp switch</li></ul> | Inputs a switch signal to BCM.                                | В |
| Key slot  | Inputs the key switch status to BCM.                          |   |
|   |   | С |

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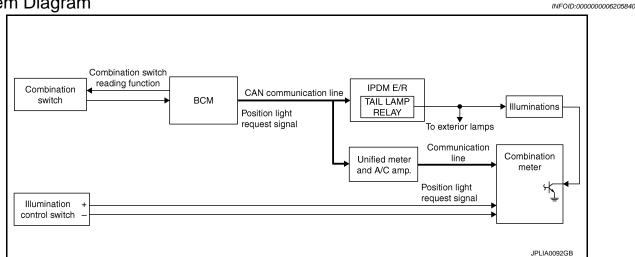
Revision: 2011 November

# **ILLUMINATION CONTROL SYSTEM**

## < SYSTEM DESCRIPTION >

# ILLUMINATION CONTROL SYSTEM

# System Diagram



# System Description

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#### 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-25, "METER ILLUMINATION CONTROL : System Dia-</u> gram".)

#### 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 (through the unified meter and A/C amp.) according to tail lamp ON condition.

Tail lamp ON condition

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment (With auto light system)
- 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).

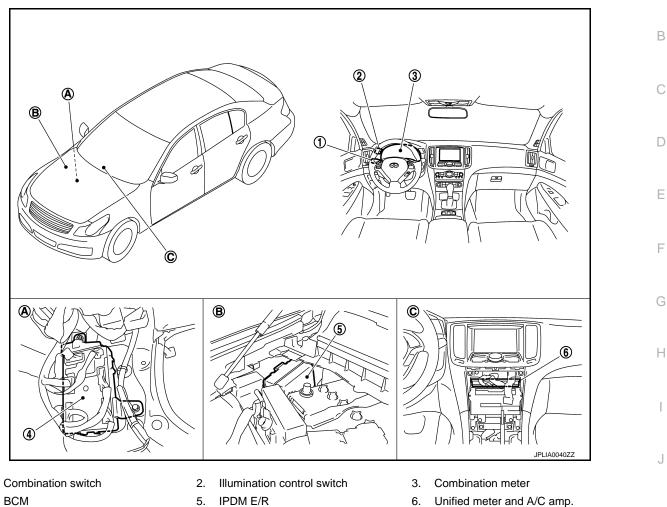
# **ILLUMINATION CONTROL SYSTEM**

## < SYSTEM DESCRIPTION >

# **Component Parts Location**

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6.

C.

Behind the cluster lid C

4. BCM

1.

Dash side lower (passenger side) А

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# **Component Description**

| Part  | Description  |  |  |
|---|--|--|--|
| BCM   | <ul> <li>Detects each switch condition by the combination switch reading function.</li> <li>Judges the illumination lamp ON/OFF status depending on the vehicle condition.<br/>And then it transmits position light request signal to IPDM E/R and combination<br/>meter [with CAN communication (through the unified meter and A/C amp.)].</li> </ul> |  |  |
| IPDM E/R  | Controls the integrated relay according to the request from BCM (with CAN communi-<br>cation).   |  |  |
| <ul> <li>Enters in nighttime mode according to the request from BCM (with CAN cation).</li> <li>Controls the each illumination in the nighttime mode.<br/>Refer to <u>MWI-25</u>, "METER ILLUMINATION CONTROL : System Diagram</li> </ul> |  |  |  |
| Combination switch<br>(Lighting & turn signal switch)   | Refer to <u>BCS-7, "System Diagram"</u> .  |  |  |

B. Engine room dash panel (RH)

# DIAGNOSIS SYSTEM (BCM) COMMON ITEM

# COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000006205844

# APPLICATION ITEM

CONSULT-III 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. Refer to CONSULT-III opera-<br>tion manual. |  |  |
| 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            | This function is not used even though it is displayed.  |  |  |

#### 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.

| System   | Out another a lastice item  | Diagnosis mode |              |             |
|--|-----------------------------|----------------|--------------|-------------|
| System   | Sub system selection item   | 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 CONDITONER*             |                |              |             |
| <ul><li>Intelligent Key system</li><li>Engine start system</li></ul> | INTELLIGENT KEY             | ×              | ×            | ×           |
| Combination switch   | COMB SW                     |                | ×            |             |
| Body control system  | BCM                         | ×              |              |             |
| IVIS - NATS  | IMMU                        |                | ×            | ×           |
| Interior room lamp battery saver                                     | BATTERY SAVER               | ×              | ×            | ×           |
| Trunk lid open   | TRUNK                       |                | ×            | ×           |
| Vehicle security system  | THEFT ALM                   | ×              | ×            | ×           |
| RAP system   | RETAINED PWR                |                | ×            |             |
| Signal buffer system   | SIGNAL BUFFER               |                | ×            | ×           |
| TPMS   | TPMS (AIR PRESSURE MONITOR) | ×              | ×            | х           |

#### NOTE:

\*: This item is displayed, but 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-III.

## < SYSTEM DESCRIPTION >

| 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  |  |   |  |
|                     | SLEEP>LOCK      | -  | While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")              |   |  |
|                     | SLEEP>OFF       |  |  | While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".) |  |
|                     | LOCK>ACC        |  | While turning power supply position from "LOCK" to "ACC"   |   |  |
|                     | ACC>ON          |  | While turning power supply position from "ACC" to "IGN"  |   |  |
|                     | RUN>ACC         |  | While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.) |   |  |
|                     | CRANK>RUN       |  | While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)                   |   |  |
|                     | RUN>URGENT      |  | While turning power supply position from "RUN" to "ACC" (Emer-<br>gency stop operation)                                |   |  |
|                     | ACC>OFF         |  | While turning power supply position from "ACC" to "OFF"  |   |  |
|                     | OFF>LOCK        | Power position status of<br>the moment a particular<br>DTC is detected   | While turning power supply position from "OFF" to "LOCK"   |   |  |
| Vehicle Condition   | OFF>ACC         |  | While turning power supply position from "OFF" to "ACC"  |   |  |
|                     | ON>CRANK        |  | While turning power supply position from "IGN" to "CRANKING"   |   |  |
|                     | OFF>SLEEP       |  | While turning BCM status from normal mode (Power supply posi-<br>tion is "OFF".) to low power consumption mode         |   |  |
|                     | LOCK>SLEEP      |  | While turning BCM status from normal mode (Power supply posi-<br>tion is "LOCK".) to low power consumption mode        |   |  |
|                     | LOCK            |  | Power supply position is "LOCK" (Ignition switch OFF with steer-<br>ing is locked.)                                    |   |  |
|                     | OFF             |  | Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)  |   |  |
|                     | ACC             |  | Power supply position is "ACC" (Ignition switch ACC)   |   |  |
|                     | ON              |  | Power supply position is "IGN" (Ignition switch ON with engine stopped)  |   |  |
|                     | ENGINE RUN      |  | Power supply position is "RUN" (Ignition switch ON with engine running)  |   |  |
|                     | CRANKING        |  | Power supply position is "CRANKING" (At engine cranking)   |   |  |
| IGN Counter         | 0 - 39          | <ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul> |  |   |  |

# INT LAMP

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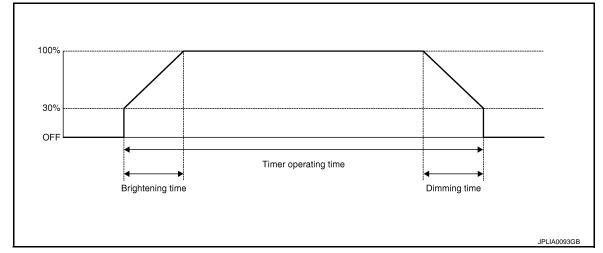
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# < SYSTEM DESCRIPTION >

# INT LAMP : CONSULT-III Function (BCM - INT LAMP)

INFOID:000000006205845

## WORK SUPPORT



| Service item                  | Setting item | Setting  |   |  |
|-------------------------------|--------------|--|---|--|
| SET I/L D-UNLCK INTCON        | ON*          | With the interior room lamp timer function                       |   |  |
| SET I/E D-UNLER INTCOM        | OFF          | Without the interior room lamp timer function                    |   |  |
|                               | MODE 2       | 7.5 sec.   |   |  |
| ROOM LAMP TIMER SET           | MODE 3*      | 15 sec.  | Sets the interior room lamp ON time. (Timer operating time) |  |
|                               | MODE 4       | 30 sec.  |   |  |
|                               | MODE 1       | 0.5 sec.   |   |  |
|                               | MODE 2*      | 1 sec.   |   |  |
| ROOM LAMP ON TIME SET         | MODE 3       | 2 sec.   | Sets the interior room lamp gradual brightening time.       |  |
|                               | MODE 4       | 3 sec.   |   |  |
|                               | MODE 5       | 0 sec.   |   |  |
|                               | MODE 1       | 0.5 sec.   |   |  |
| ROOM LAMP OFF TIME SET        | MODE 2       | 1 sec.   | Sate the interior room lamp gradual dimming time            |  |
| ROOM LAMP OFF TIME SET        | MODE 3       | 2 sec.   | Sets the interior room lamp gradual dimming time.           |  |
|                               | MODE 4*      | 3 sec.   |   |  |
|                               | MODE 1*      | Interior room lamp timer activates with synchronizing all doors. |   |  |
| R LAMP TIMER LOGIC SET MODE 2 |              | Interior ro<br>only.   | om lamp timer activates with synchronizing the driver door  |  |

\*: Factory setting

## DATA MONITOR

| Monitor item<br>[Unit]  | Description  |
|-------------------------|--|
| REQ SW-DR<br>[On/Off]   | The switch status input from request switch (driver side)    |
| REQ SW-AS<br>[On/Off]   | The switch status input from request switch (passenger side) |
| PUSH SW<br>[On/Off]     | The switch status input from push-button ignition switch     |
| ACC RLY-F/B             | NOTE:  |
| [On/Off]                | The item is indicated, but not monitored.                    |
| KEY SW-SLOT<br>[On/Off] | Key switch status input from key slot                        |

#### < SYSTEM DESCRIPTION >

| Monitor item<br>[Unit]    | Description   |
|---------------------------|---|
| DOOR SW-DR<br>[On/Off]    | The switch status input from front door switch (driver side)                                  |
| DOOR SW-AS<br>[On/Off]    | The switch status input from front door switch (passenger side)                               |
| DOOR SW-RR<br>[On/Off]    | The switch status input from rear door switch RH  |
| DOOR SW- RL<br>[On/Off]   | The switch status input from rear door switch LH  |
| DOOR SW-BK<br>[On/Off]    | NOTE:<br>The item is indicated, but not monitored.  |
| CDL LOCK SW<br>[On/Off]   | Lock switch status received from door lock/unlock switch by power window switch serial link   |
| CDL UNLOCK SW<br>[On/Off] | Unlock switch status received from door lock/unlock switch by power window switch serial link |
| KEY CYL LK-SW<br>[On/Off] | Lock switch status received from key cylinder switch by power window switch serial link       |
| KEY CYL UN-SW<br>[On/Off] | Unlock switch status received from key cylinder switch by power window switch serial link     |
| TRNK/HAT MNTR<br>[On/Off] | The switch status input from trunk room lamp switch   |
| RKE-LOCK<br>[On/Off]      | Lock signal status received from remote keyless entry receiver                                |
| RKE-UNLOCK<br>[On/Off]    | Unlock signal status received from remote keyless entry receiver                              |

## ACTIVE TEST

| Test item         | Operation | Description  |
|-------------------|-----------|--|
| INT LAMP          | On        | Outputs the interior room lamp control signal to turn map lamp and personal lamp ON (Map lamp switch is in DOOR position). |
|                   | Off       | Stops the interior room lamp control signal to turn map lamp and personal lamp OFF.  |
| STEP LAMP TEST    | On        | Outputs the step lamp control signal to turn step lamp ON.   |
| STEP LAIVIP TEST  | Off       | Stops the step lamp control signal to turn step lamp OFF.  |
|                   | On        | Outputs the trunk room lamp control signal to turn trunk room lamp ON.   |
| LUGGAGE LAMP TEST | Off       | Stops the trunk room lamp control signal to turn trunk room lamp OFF.  |

# **BATTERY SAVER**

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

#### WORK SUPPORT

| Service item          | Setting item |   | Setting   | С |  |
|-----------------------|--------------|---|---|---|--|
| BATTERY SAVER SET     | On*          | With the e  | Vith the exterior lamp battery saver function                   |   |  |
| BATTERT SAVER SET     | Off          | Without th  | Without the exterior lamp battery saver function                |   |  |
| ROOM LAMP BAT SAV SET | On*          | With the interior room lamp battery saver function    |   | P |  |
| ROOM LAMP BAT SAV SET | Off          | Without the interior room lamp battery saver function |   |   |  |
|                       | MODE 1       | 30 min.   |   |   |  |
| ROOM LAMP TIMER SET   | MODE 2       | 60 min.   | Sets the interior room lamp battery saver timer operating time. |   |  |
|                       | MODE 3*      | 15 min.   |   |   |  |

\*: Factory setting

Revision: 2011 November

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< SYSTEM DESCRIPTION >

# DATA MONITOR

| Monitor item<br>[Unit]    | Description  |
|---------------------------|--|
| REQ SW-DR<br>[On/Off]     | The switch status input from request switch (driver side)  |
| REQ SW-AS<br>[On/Off]     | The switch status input from request switch (passenger side)                                     |
| REQ SW-RR<br>[On/Off]     | NOTE:  |
| REQ SW-RL<br>[On/Off]     | The item is indicated, but not monitored.  |
| PUSH SW<br>[On/Off]       | The switch status input from push-button ignition switch   |
| ACC RLY-F/B<br>[On/Off]   | NOTE:<br>The item is indicated, but not monitored.   |
| KEY SW-SLOT<br>[On/Off]   | Key switch status input from key slot  |
| UNLK SEN-DR<br>[On/Off]   | Driver door unlock status input from unlock sensor   |
| DOOR SW-DR<br>[On/Off]    | The switch status input from front door switch (driver side)                                     |
| DOOR SW-AS<br>[On/Off]    | The switch status input from front door switch (passenger side)                                  |
| DOOR SW-RR<br>[On/Off]    | The switch status input from rear door switch RH   |
| DOOR SW- RL<br>[On/Off]   | The switch status input from rear door switch LH   |
| DOOR SW-BK<br>[On/Off]    | NOTE:<br>The item is indicated, but not monitored.   |
| CDL LOCK SW<br>[On/Off]   | Lock switch status received from door lock/unlock switch by power window switch se-<br>rial link |
| CDL UNLOCK SW<br>[On/Off] | Unlock switch status received from door lock/unlock switch by power window switch serial link    |
| KEY CYL LK-SW<br>[On/Off] | Lock switch status received from key cylinder switch by power window switch serial link          |
| KEY CYL UN-SW<br>[On/Off] | Unlock switch status received from key cylinder switch by power window switch serial link        |
| TRNK/HAT MNTR<br>[On/Off] | The switch status input from trunk room lamp switch  |
| RKE-LOCK<br>[On/Off]      | Lock signal status received from remote keyless entry receiver                                   |
| RKE-UNLOCK<br>[On/Off]    | Unlock signal status received from remote keyless entry receiver                                 |

# ACTIVE TEST

| Test item Operation |     | Description   |
|---------------------|-----|---|
| BATTERY SAVER       | Off | Cuts the interior room lamp power supply to turn interior room lamp OFF.    |
|                     | On  | Outputs the interior room lamp power supply to turn interior room lamp ON.* |

\*: Each lamp switch is in ON position.

| POWER SUPPLY AND GROUND CIRCUIT        |                        |
|--|------------------------|
| < DTC/CIRCUIT DIAGNOSIS >              |                        |
| DTC/CIRCUIT DIAGNOSIS                  |                        |
| POWER SUPPLY AND GROUND CIRCUIT<br>BCM |                        |
| BCM : Diagnosis Procedure              | INFOID:000000006205847 |
| 1. CHECK FUSE AND FUSIBLE LINK         |                        |

Check that the following fuse and fusible link are not blown.

| Signal name          | Fuse and fusible link No. | D |
|----------------------|---------------------------|---|
| Battery power supply | К                         |   |
| Dattery power supply | 10                        | Е |

Is the fuse fusing?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

|           | Terminals |        |                 |
|-----------|-----------|--------|-----------------|
| (+        | ·)        | (-)    | Voltage         |
| BC        | M         |        | (Approx.)       |
| Connector | Terminal  | Ground | Detter veltere  |
| M118      | 1         | Ground |                 |
| M119      | 11        | _      | Battery voltage |

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

**3.**CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

| BC        | CM       |        | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal | Ground | Continuity |
| M119      | 13       |        | Existed    |

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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# INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

# INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT

# Description

Provides the interior room lamp power supply. Also cuts the power supply when the interior room lamp battery saver activating.

# **Component Function Check**

**1.**CHECK INTERIOR ROOM LAMP POWER SUPPLY FUNCTION

# CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch ON.
- 2. Turn each interior room lamp ON.
- Map lamp
- Personal lamp
- Step lamp
- Vanity mirror lamp
- Trunk room lamp
- 3. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
- 4. With operating the test items, check that each interior room lamp turns ON/OFF.

# Off : Interior room lamp OFF

# On : Interior room lamp ON

Does the interior room lamp turn ON/OFF?

- YES >> Interior room lamp power supply circuit is normal.
- NO >> Refer to INL-20, "Diagnosis Procedure".

# Diagnosis Procedure

**1.**CHECK INTERIOR ROOM LAMP POWER SUPPLY OUTPUT

CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch ON.
- 2. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
- 3. With operating the test item, check voltage between BCM harness connector and the ground.

| Terminals |          |        | Test item |                 |
|-----------|----------|--------|-----------|-----------------|
| (+)       |          | ()     | iest item | Voltage         |
| B         | BCM      |        | BATTERY   | (Approx.)       |
| Connector | Terminal |        | SAVER     |                 |
|           |          | Ground | Off       | 0 V             |
| M119      | 4        |        | On        | Battery voltage |

Is the measurement value normal?

YES >> GO TO 2.

NO >> Replace BCM.

2.CHECK INTERIOR ROOM LAMP POWER SUPPLY OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the following connectors.
- Map lamp
- Personal lamp
- Vanity mirror lamp (LH)
- Vanity mirror lamp (RH)
- Trunk room lamp
- Step lamp (driver side)
- Step lamp (passenger side)

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# INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

| 3. Check continuity between BCM harness connector and each interior room lamp harness connect | 3. | Check continuity | between BCM harness | connector and each | interior room lamp | harness connecto |
|---|----|------------------|---------------------|--------------------|--------------------|------------------|
|---|----|------------------|---------------------|--------------------|--------------------|------------------|

|  | BCM Each interior room lamp           |                                |          |                     | Orationity                |  |
|--|---------------------------------------|--------------------------------|----------|---------------------|---------------------------|--|
| Connector  | Terminal                              | Connector                      | r        | Terminal            | Continuity                |  |
|  |                                       | Map lamp                       | R15      | 1                   |                           |  |
|  |                                       | Personal lamp                  | R14      | 1                   |                           |  |
|  |                                       | Vanity mirror lamp<br>(LH)     | R12      | 2                   |                           |  |
| M119   | 4                                     | Vanity mirror lamp<br>(RH)     | R13      | 2                   | Existed                   |  |
|  |                                       | Trunk room lamp                | B47      | 1                   |                           |  |
|  |                                       | Step lamp<br>(driver side)     | D12      | 1                   |                           |  |
|  |                                       | Step lamp<br>(passenger side)  | D42      | 1                   |                           |  |
| Does conti   | nuity exis                            | <u>t?</u>                      |          |                     |                           |  |
|  | > GO TO                               |                                |          |                     |                           |  |
| ~  | -                                     | he harnesses or o              |          |                     |                           |  |
| <b>J.</b> CHECK                                      | INTERIC                               | OR ROOM LAMP                   | POWER    | SUPPLY              | SHORIC                    |  |
|  |                                       |                                |          |                     |                           |  |
|  | tinuity bet                           | ween BCM harne                 | ess conn | ector and           |                           |  |
|  |                                       | ween BCM harne                 | ess conn | ector and           |                           |  |
| Check con  | BCM                                   |                                |          | ector and           | the groun                 |  |
| Check con  | BCM                                   | Terminal Gr                    | round    | Continu             | the groun                 |  |
| Check con<br>Connecto<br>M119                        | BCM<br>or                             | Terminal Gr<br>4               |          |                     | the groun                 |  |
| Check con<br>Connect<br>M119<br>Does conti           | BCM<br>or<br>nuity exis               | Terminal Gr<br>4<br>t <u>?</u> | round    | Continu<br>Not exis | the groun                 |  |
| Check con<br>Connect<br>M119<br>Does conti<br>YES >> | BCM<br>or<br>nuity exis<br>> Repair t | Terminal Gr<br>4               | round    | Continu<br>Not exis | the groun<br>uity<br>sted |  |

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# INTERIOR ROOM LAMP CONTROL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

# INTERIOR ROOM LAMP CONTROL CIRCUIT

# Description

Controls each interior room lamp (ground side) by PWM signal. **NOTE:** 

PWM signal control period is approximately 250 Hz (in the gradual brightening/dimming).

# **Component Function Check**

#### CAUTION:

Before performing the diagnosis, check that the following is normal.

- Interior room lamp power supply
- Map lamp bulb
- Personal lamp bulb

**1.**CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

#### CONSULT-III ACTIVE TEST

- 1. Switch the map lamp switch to DOOR.
- 2. Turn the ignition switch ON.
- 3. Select "INT LAMP" of BCM (INT LAMP) active test item.
- 4. With operating the test items, check that each interior room lamp turns ON/OFF (gradual brightening/dimming).

#### On : Interior room lamp gradual brightening

#### Off : Interior room lamp gradual dimming

#### Does the interior room lamp turns ON/OFF (gradual brightening/dimming)?

- YES >> Interior room lamp control circuit is normal.
- NO >> Refer to INL-22, "Diagnosis Procedure".

## **Diagnosis** Procedure

#### 1. CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

#### (E)CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Remove all the bulbs of map lamp and personal lamp.
- 3. Select "INT LAMP" of BCM (INT LAMP) active test item.
- 4. With operating the test item, check continuity between BCM harness connector and the ground.

| BCM       |          |        | Test item | Continuity  |
|-----------|----------|--------|-----------|-------------|
| Connector | Terminal | Ground | INT LAMP  | Continuity  |
| M119      | 10       | 19     |           | Existed     |
| 101119    | 19       |        | Off       | Not existed |

Is the measurement value normal?

YES >> GO TO 2.

Fixed ON>>GO TO 3.

Fixed OFF>>Replace BCM.

 $2. \mathsf{CHECK} \text{ INTERIOR ROOM LAMP CONTROL OPEN CIRCUIT}$ 

- 1. Turn the ignition switch OFF.
- 2. Disconnect BCM connector, map lamp connector and personal lamp connector.
- 3. Check continuity between BCM harness connector, map lamp harness connector, and personal lamp harness connector.

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# INTERIOR ROOM LAMP CONTROL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

| BCI   | M  | Map la                                   | amp/persona                   | al lamp                               | Continuity  |  |
|---|--|--|-------------------------------|---------------------------------------|---|--|
| Connector   | Terminal                                 | Conn                                     | ector                         | Terminal                              | Continuity  |  |
|   |  | Map lamp                                 | R15                           | 2                                     |   |  |
| M119  | 19                                       | Personal<br>lamp                         | R14                           | 3                                     | Existed   |  |
| Does contin   | uity exist?                              | 2  |                               |                                       |   |  |
|   |  | the map lar                              |                               |                                       | amp.  |  |
|   | •  | e harnesse                               |                               |                                       |   |  |
| <b>3.</b> CHECK   | INTERIO                                  | R ROOM L                                 | AMP CON                       | NTROL SH                              | IORT CIRCUIT  |  |
|   |  |  |                               |                                       |   |  |
|   |  | switch OFF                               |                               |                                       |   |  |
| 2. Disconr  | nect BCM                                 | connector,                               | :<br>map lam                  | p connecto                            | or and personal lamp connector.                         |  |
| 2. Disconr  | nect BCM                                 | connector,                               | :<br>map lam                  | p connecto                            |   |  |
| 2. Disconr  | nect BCM<br>continuity                   | connector,                               | :<br>map lam                  | p connecto                            | or and personal lamp connector.                         |  |
| 2. Disconr  | nect BCM                                 | connector,                               | :<br>map lam                  | p connecto<br>ess connec              | or and personal lamp connector.<br>ctor and the ground. |  |
| 2. Disconr  | BCM                                      | connector,                               | :<br>map lam                  | p connecto<br>ess connec              | or and personal lamp connector.                         |  |
| 2. Disconr<br>3. Check o  | BCM                                      | connector,<br>between B                  | :<br>map lam<br>CM harne      | p connecto<br>ess connec<br>Co        | or and personal lamp connector.<br>ctor and the ground. |  |
| 2. Disconr<br>3. Check (<br>Connector<br>M119                           | BCM                                      | connector,<br>between B<br>erminal<br>19 | :<br>map lam<br>CM harne      | p connecto<br>ess connec<br>Co        | or and personal lamp connector.<br>otor and the ground. |  |
| 2. Disconr<br>3. Check of<br>Connector<br>M119<br>Does contin           | BCM<br>r Te<br>nuity exist?              | connector,<br>between B<br>erminal<br>19 | map lam<br>CM harne<br>Ground | p connecto<br>ess connec<br>Co<br>Not | or and personal lamp connector.<br>otor and the ground. |  |
| 2. Disconr<br>3. Check of<br>Connector<br>M119<br>Does contin<br>YES >> | BCM<br>r Te<br>nuity exist?<br>Repair th | connector,<br>between B                  | map lam<br>CM harne<br>Ground | p connecto<br>ess connec<br>Co<br>Not | or and personal lamp connector.<br>otor and the ground. |  |
| 2. Disconr<br>3. Check of<br>Connector<br>M119<br>Does contin<br>YES >> | BCM<br>r Te<br>nuity exist?              | connector,<br>between B                  | map lam<br>CM harne<br>Ground | p connecto<br>ess connec<br>Co<br>Not | or and personal lamp connector.<br>otor and the ground. |  |
| 2. Disconr<br>3. Check of<br>Connector<br>M119<br>Does contin<br>YES >> | BCM<br>r Te<br>nuity exist?<br>Repair th | connector,<br>between B                  | map lam<br>CM harne<br>Ground | p connecto<br>ess connec<br>Co<br>Not | or and personal lamp connector.<br>otor and the ground. |  |
| 2. Disconr<br>3. Check of<br>Connector<br>M119<br>Does contin<br>YES >> | BCM<br>r Te<br>nuity exist?<br>Repair th | connector,<br>between B                  | map lam<br>CM harne<br>Ground | p connecto<br>ess connec<br>Co<br>Not | or and personal lamp connector.<br>otor and the ground. |  |
| 2. Disconr<br>3. Check of<br>Connector<br>M119<br>Does contin<br>YES >> | BCM<br>r Te<br>nuity exist?<br>Repair th | connector,<br>between B                  | map lam<br>CM harne<br>Ground | p connecto<br>ess connec<br>Co<br>Not | or and personal lamp connector.<br>otor and the ground. |  |

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#### < DTC/CIRCUIT DIAGNOSIS >

# STEP LAMP CIRCUIT

# Description

Controls the step lamp (ground side) to turn the step lamp ON and OFF.

Component Function Check

# CAUTION:

Before performing the diagnosis, check that the following is normal.

- Interior room lamp power supply
- Step lamp bulb

**1.**CHECK STEP LAMP OPERATION

#### CONSULT-III ACTIVE TEST

- T. Turn the ignition switch ON.
- 2. Select "STEP LAMP TEST" of BCM (INT LAMP) active test item.
- 3. With operating the test items, check that step lamp turns ON/OFF.

#### On : Step lamp ON

# Off : Step lamp OFF

Does the step lamp turn ON/OFF?

YES >> Step lamp circuit is normal. NO >> Refer to INL-24, "Diagnosis Procedure".

# Diagnosis Procedure

# **1.**CHECK STEP LAMP OUTPUT

CONSULT-III ACTIVE TEST

- Turn the ignition switch OFF.
- 2. Remove the step lamp bulbs (driver side and passenger side).
- 3. Turn ignition switch ON.
- 4. Select "STEP LAMP TEST" of BCM (INT LAMP) active test item.
- 5. With operating the test item, check continuity between BCM harness connector and the ground.

| BCM       |          |        | Test item         |             |
|-----------|----------|--------|-------------------|-------------|
| Connector | Terminal | Ground | STEP LAMP<br>TEST | Continuity  |
| M119      | 7        |        | On                | Existed     |
| 101113    | 7        |        | Off               | Not existed |

Is the measurement value normal?

YES >> GO TO 2. Fixed ON>>GO TO 3.

Fixed OFF>>Replace BCM.

# 2. CHECK STEP LAMP OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect BCM connector, and step lamp connector.
- 3. Check continuity between BCM harness connector and step lamp harness connector.

| BC        | M        |                     | Continuity |          |            |
|-----------|----------|---------------------|------------|----------|------------|
| Connector | Terminal | Conr                | nector     | Terminal | Continuity |
| M119      | 7        | Driver<br>side      | D12        | 2        | Existed    |
| WIT9      | I        | Passen-<br>ger side | D42        | 2        | LAISted    |

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# **STEP LAMP CIRCUIT**

| < DTC/CIRCU           | IT DIAGNOSIS                   |                               |              |             |  |     |
|-----------------------|--------------------------------|-------------------------------|--------------|-------------|--|-----|
| Does continuity       |                                |                               |              |             |  |     |
| YES >> Re<br>NO >> Re | place the step land            | amp.<br>ses or connecto       | rs           |             |  | A   |
| 3.CHECK STE           | EP LAMP SHOP                   | SES OF CONNECTO<br>RT CIRCUIT | 10.          |             |  |     |
|                       | nition switch OF               |                               |              |             |  | Β   |
| 2. Check con          | tinuity between                | BCM harness o                 | onnector and | the ground. |  |     |
| B                     | СМ                             |                               |              | _           |  | С   |
| Connector             | Terminal                       | Ground                        | Continuity   |             |  |     |
| M119                  | 7                              | -                             | Not existed  |             |  | D   |
| Does continuity       |                                |                               |              |             |  |     |
| YES >> Re<br>NO >> Re | pair the harness<br>place BCM. | ses or connecto               | rs.          |             |  | E   |
|                       |                                |                               |              |             |  | F   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  | G   |
|                       |                                |                               |              |             |  | G   |
|                       |                                |                               |              |             |  | Н   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  | I   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  | J   |
|                       |                                |                               |              |             |  | К   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  | INL |
|                       |                                |                               |              |             |  | M   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  | Ν   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  | 0   |
|                       |                                |                               |              |             |  | 5   |
|                       |                                |                               |              |             |  | Р   |
|                       |                                |                               |              |             |  |     |
|                       |                                |                               |              |             |  |     |

#### < DTC/CIRCUIT DIAGNOSIS >

# TRUNK ROOM LAMP CIRCUIT

# Description

Controls the trunk room lamp (ground side) to turn the trunk room lamp ON and OFF.

Component Function Check

#### CAUTION:

Before performing the diagnosis, check that the following is normal.

- Interior room lamp power supply
- Trunk room lamp bulb

1.CHECK TRUNK ROOM LAMP OPERATION

#### CONSULT-III ACTIVE TEST

- Turn the ignition switch ON.
- 2. Select "LUGGAGE LAMP TEST" of BCM (INT LAMP) active test item.
- 3. With operating the test items, check that trunk room lamp turns ON/OFF.

#### On : Trunk room lamp ON

#### Off : Trunk room lamp OFF

#### Does the trunk room lamp turn ON/OFF?

YES >> Trunk room lamp circuit is normal.

NO >> Refer to INL-26, "Diagnosis Procedure".

#### Diagnosis Procedure

## **1.**CHECK TRUNK ROOM LAMP OUTPUT

CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Remove the trunk room lamp bulb.
- 3. Turn the ignition switch ON.
- 4. Select "LÜGGAGE LAMP TEST" of BCM (INT LAMP) active test item.
- 5. With operating the test item, check continuity between BCM harness connector and the ground.

| BC        | BCM      |        | Test item            |             |
|-----------|----------|--------|----------------------|-------------|
| Connector | Terminal | Ground | LUGGAGE<br>LAMP TEST | Continuity  |
| M120 30   |          |        | On                   | Existed     |
| 101120    | 50       |        | Off                  | Not existed |

Is the measurement value normal?

YES >> GO TO 2.

Fixed ON>>GO TO 3.

Fixed OFF>>Replace BCM.

# 2. CHECK TRUNK ROOM LAMP OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect BCM connector and trunk room lamp connector.
- 3. Check continuity between BCM harness connector and trunk room lamp harness connector.

| BCM       |          | Trunk ro  | Continuity |            |
|-----------|----------|-----------|------------|------------|
| Connector | Terminal | Connector | Terminal   | Continuity |
| M120      | 30       | B47       | 2          | Existed    |

Does continuity exist?

YES >> Replace trunk room lamp.

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# TRUNK ROOM LAMP CIRCUIT

| < DTC/CIRCUI    |   |  |                        |                      |     |
|-----------------|---|--|------------------------|----------------------|-----|
|                 | pair harnesses                                      |  |                        |                      | A   |
| 3.CHECK TRU     |   |  | RCUIT                  |                      | ~   |
| 2. Disconnect   | nition switch OF<br>BCM connecto<br>tinuity between | F.<br>or and trunk rooi<br>BCM harness c | m lamp connector and t | ctor.<br>the ground. | В   |
| BC              | CM  |  | 0                      | -                    | С   |
| Connector       | Terminal  | Ground                                   | Continuity             |                      | C   |
| M120            | 30  |  | Not existed            | _                    |     |
| Does continuity | <u>exist?</u>                                       |  |                        | -                    | D   |
|                 | pair the harness<br>place BCM.                      | ses or connecto                          | rs.                    |                      | F   |
|                 |   |  |                        |                      | E   |
|                 |   |  |                        |                      | F   |
|                 |   |  |                        |                      | G   |
|                 |   |  |                        |                      | Н   |
|                 |   |  |                        |                      | I   |
|                 |   |  |                        |                      | J   |
|                 |   |  |                        |                      | K   |
|                 |   |  |                        |                      | INL |
|                 |   |  |                        |                      | Μ   |
|                 |   |  |                        |                      | Ν   |
|                 |   |  |                        |                      | 0   |

# **PUSH-BUTTON IGNITION SWITCH ILLUMINATION CIRCUIT**

## < DTC/CIRCUIT DIAGNOSIS >

# PUSH-BUTTON IGNITION SWITCH ILLUMINATION CIRCUIT

# Description

Provides the power supply and the ground to control the push-button ignition switch illumination.

## **Component Function Check**

1.CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION OPERATION

#### CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch ON.
- 2. Select "ENGINE SW ILLUMI" of BCM (INTELLIGENT KEY) active test item.
- 3. With operating the test items, check that the push-button ignition switch illumination turns ON/OFF.

#### On : Push-button ignition switch illumination ON

#### Off : Push-button ignition switch illumination OFF

#### Does the push-button ignition switch illumination turn ON/OFF?

- YES >> Push-button ignition switch illumination circuit is normal.
- NO >> Refer to INL-28, "Diagnosis Procedure".

# Diagnosis Procedure

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# 1. CHECK ILLUMINATION CONTROL SWITCHING OPERATION

- 1. Turn the ignition switch ON.
- 2. With operating the lighting switch, check that the push-button ignition switch illumination turns ON/OFF.

| Condition  | Push-button ignition switch illumination |
|--|--|
| <ul><li> Ignition switch ON</li><li>Lighting switch 1ST</li></ul>                          | ON                                       |
| <ul><li>Ignition switch OFF</li><li>Lighting switch OFF</li><li>Driver door LOCK</li></ul> | OFF                                      |
| Does the push-button ignition :  | switch illumination turn ON/OFF?         |

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION GROUND CIRCUIT

1. Turn the ignition switch OFF.

- 2. Disconnect BCM connector and the push-button ignition switch connector.
- 3. Check continuity between BCM harness connector and the push-button ignition switch harness connector.

| B         | CM       | Push-button | Continuity |            |
|-----------|----------|-------------|------------|------------|
| Connector | Terminal | Connector   | Terminal   | Continuity |
| M119      | 14       | M50         | 2          | Existed    |

Does the continuity exist?

YES >> Replace BCM.

NO >> Repair the harness or the connector.

# ${ m 3.}$ CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION POWER SUPPLY OUTPUT

# CONSULT-III ACTIVE TEST

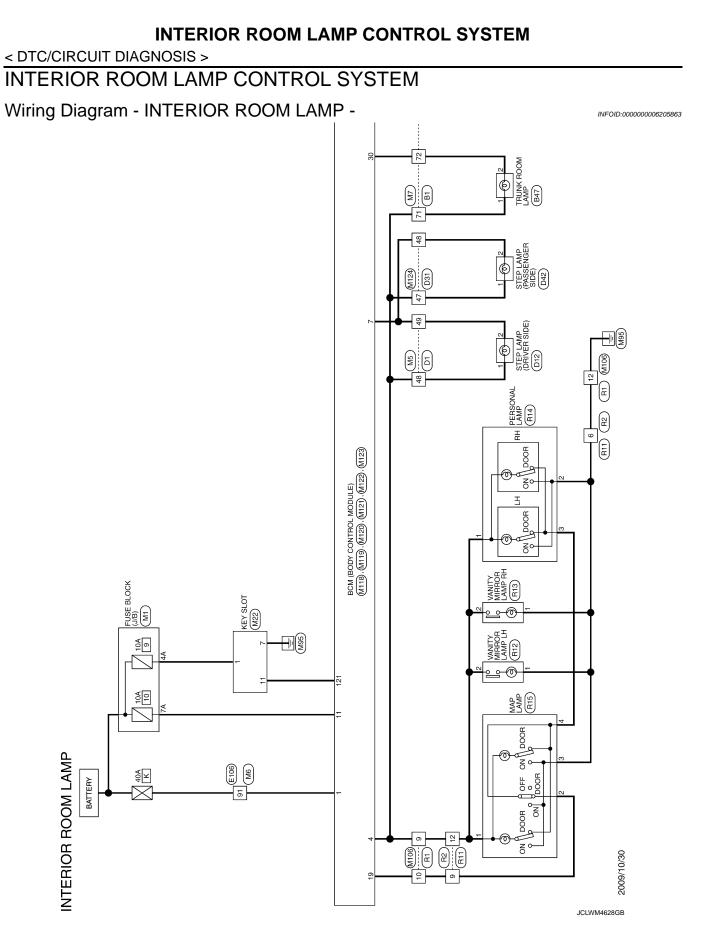
- 1. Turn the ignition switch ON.
- 2. Select "ENGINE SW ILLUMI" of BCM (INTELLIGENT KEY) active test item.
- 3. With operating the test item, check voltage between BCM harness connector and the ground.

INFOID:000000006205860

# **PUSH-BUTTON IGNITION SWITCH ILLUMINATION CIRCUIT**

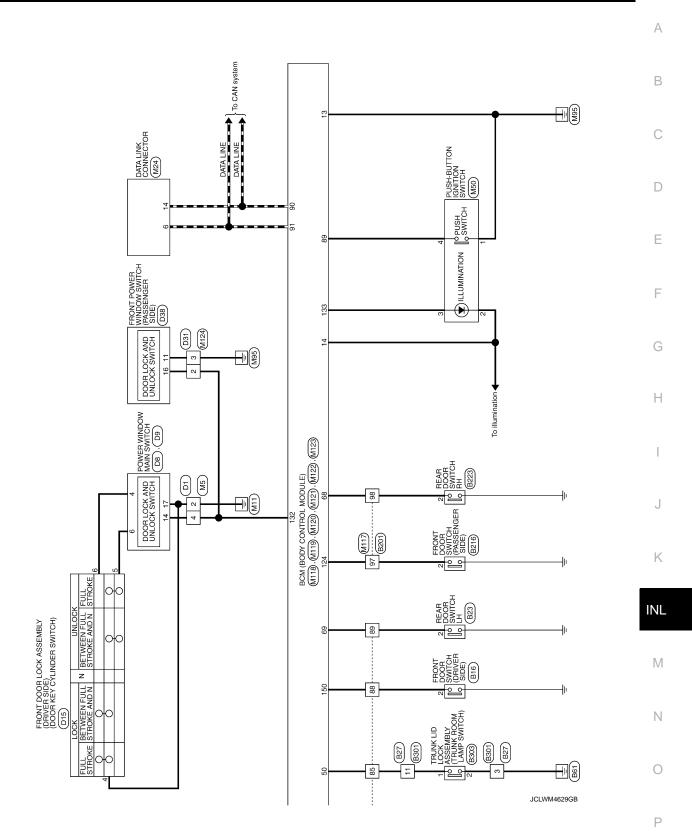
## < DTC/CIRCUIT DIAGNOSIS >

|                 | Terminals                  |                     | <b>-</b>                      |               |   |
|-----------------|----------------------------|---------------------|-------------------------------|---------------|---|
| (+              | +)                         | ()                  | <ul> <li>Test item</li> </ul> | Voltage       |   |
| BC              | CM<br>Terminal             | _                   | ENGINESW (A                   |               |   |
|                 |                            | Ground              | ON                            | 5 V           | -   |
| M123            | 133                        |                     | OFF                           | 0 V           |   |
|                 | irement valu               | ue normal?          |                               |               |   |
|                 | GO TO 4.<br>GO TO 5.       |                     |                               |               |   |
| A               |                            |                     |                               | ΠΙΙΙΜΙΝΙΔΤΙ   | ON POWER SUPPLY OPEN CIRCUIT                      |
|                 |                            |                     |                               |               |   |
|                 | ignition swi               |                     | the push-but                  | tton ignition | switch connector.                                 |
|                 |                            |                     |                               |               | ne push-button ignition switch harness connector. |
|                 |                            | 1                   |                               |               |   |
| BC              |                            |                     | ignition switch               | Continuity    |   |
| Connector       | Terminal                   | Connector           | Terminal                      |               | -   |
| M123            | 133                        | M50                 | 3                             | Existed       |   |
| Does the cor    | -                          |                     | - 1141 - 14                   | - 1-          |   |
|                 |                            |                     | n ignition swither connector. |               |   |
| _               |                            |                     |                               |               | ON POWER SUPPLY SHORT CIRCUIT                     |
|                 | ignition swi               |                     |                               |               |   |
| 2. Disconn      | ect BCM co                 | nnector and         | the push-but                  | tton ignition | switch connector.                                 |
| 3. Check c      | ontinuity be               | tween BCM           | harness con                   | nector and t  | he ground.  |
|                 |                            |                     |                               |               |   |
|                 | BCM                        |                     | - ·                           | Continuity    |   |
| Connector       | Term                       |                     | Ground                        |               | -   |
| M123            | 133                        |                     |                               | Not existed   |   |
| Does the cor    | •                          |                     |                               |               |   |
| YES >><br>NO >> | Repair the r<br>Replace BC | narness or tr<br>:M | ne connector.                 |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |
|                 |                            |                     |                               |               |   |



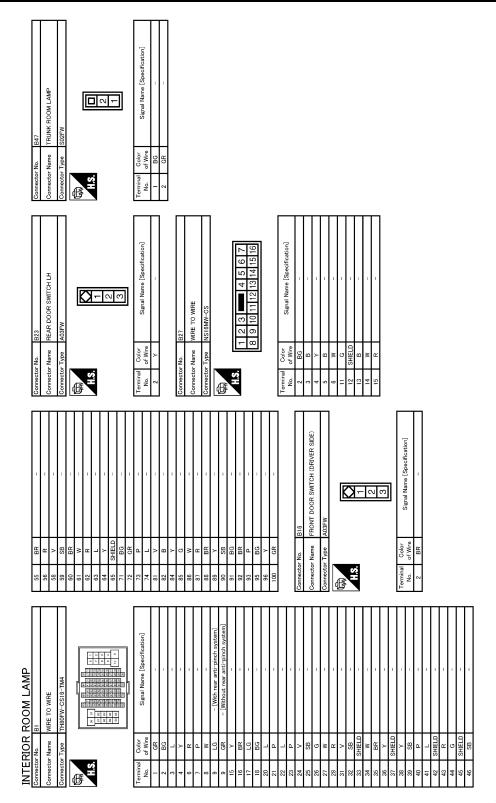
#### Revision: 2011 November

## < DTC/CIRCUIT DIAGNOSIS >

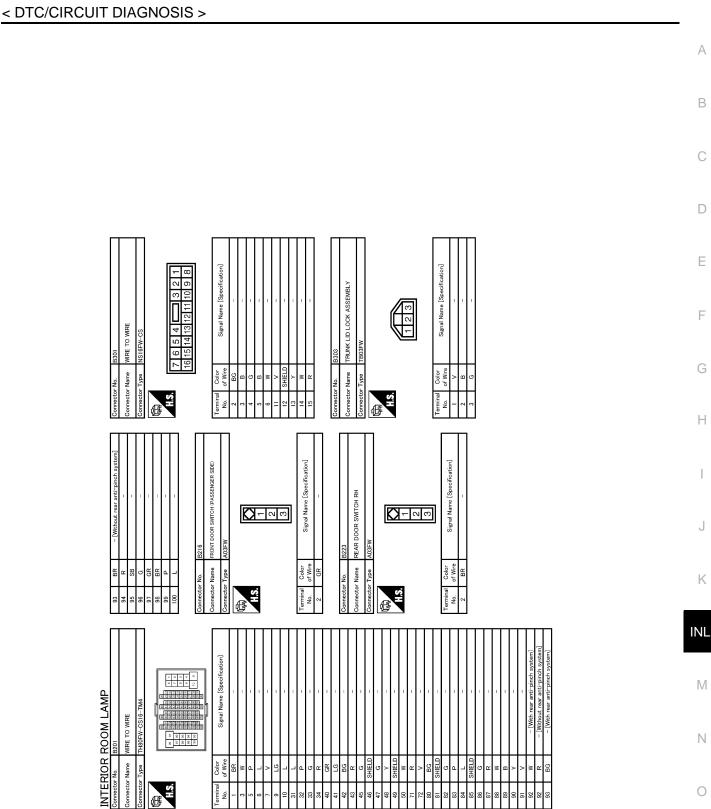


Revision: 2011 November

#### < DTC/CIRCUIT DIAGNOSIS >



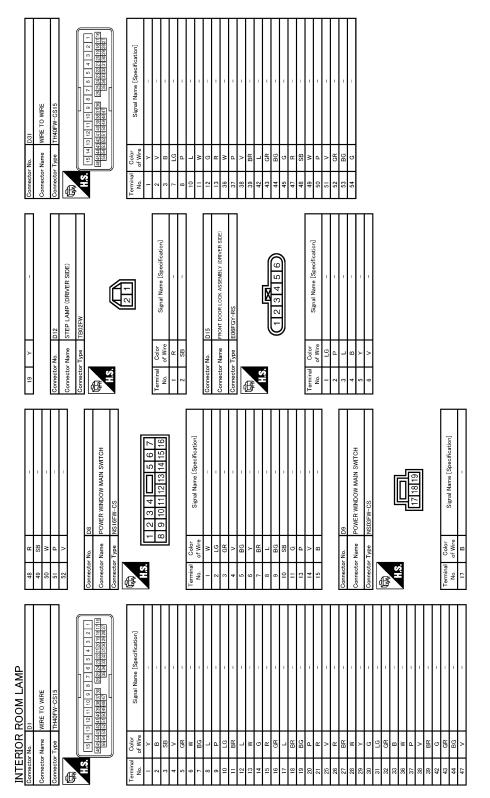
JCLWM5975GB



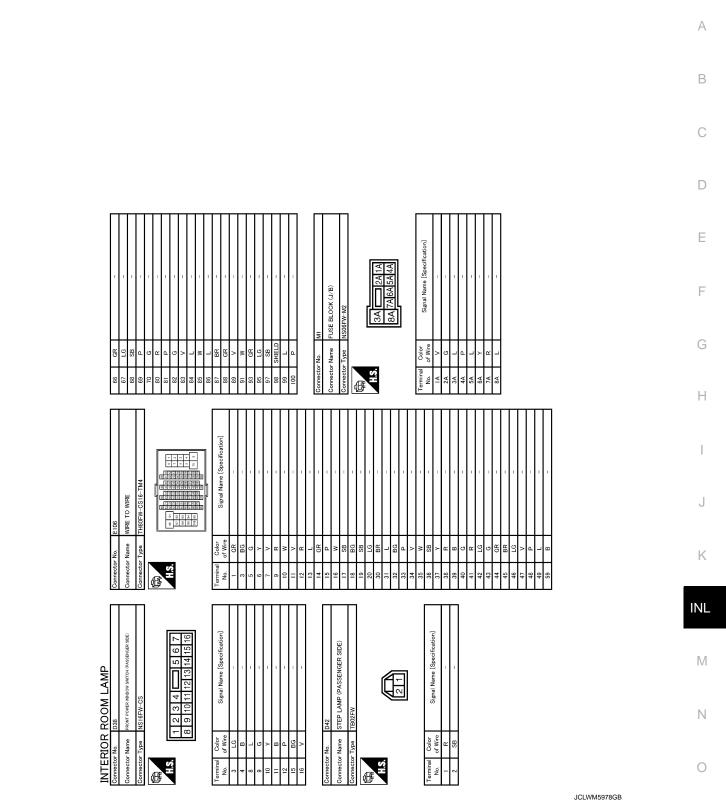
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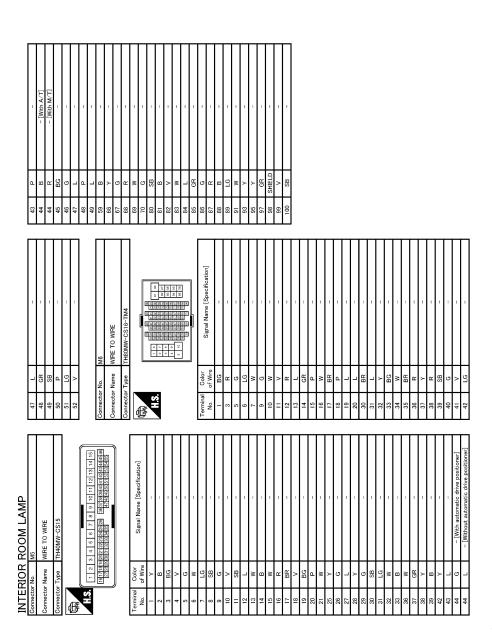


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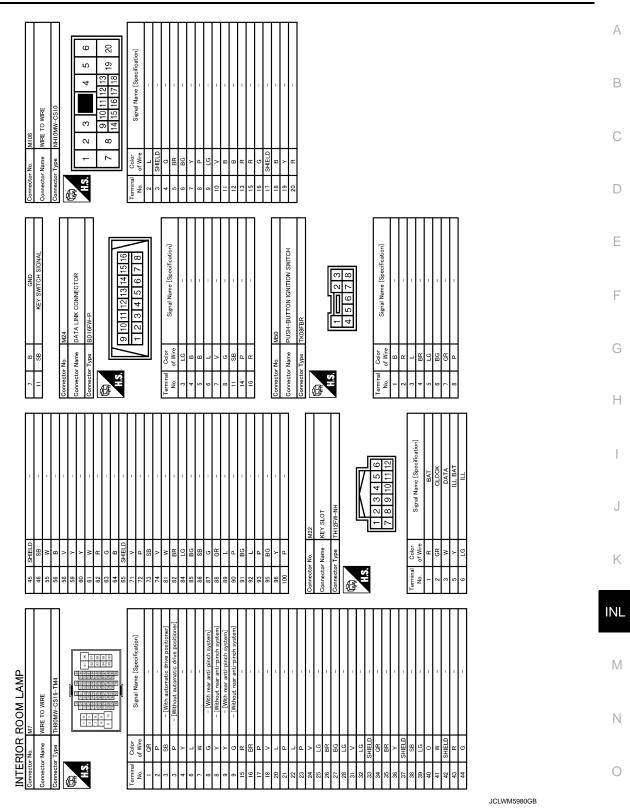
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### INTERIOR ROOM LAMP CONTROL SYSTEM

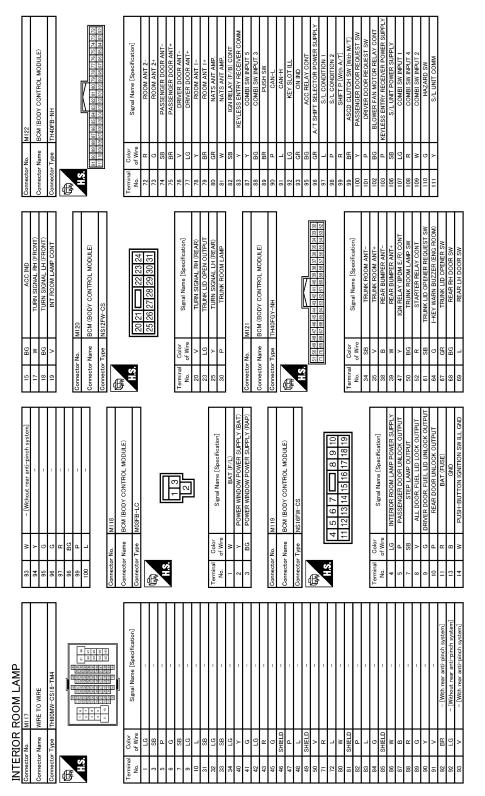
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### INTERIOR ROOM LAMP CONTROL SYSTEM

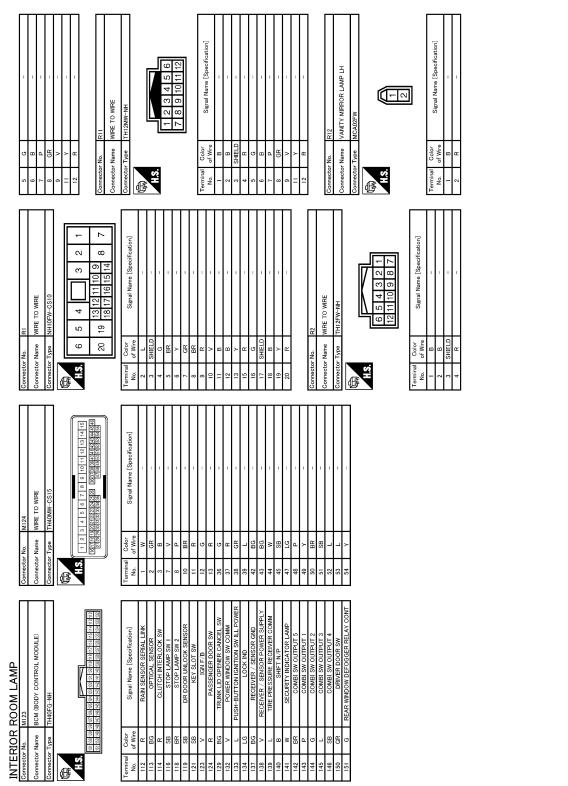
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## INTERIOR ROOM LAMP CONTROL SYSTEM

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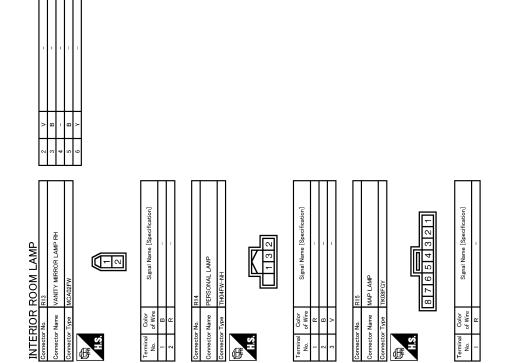
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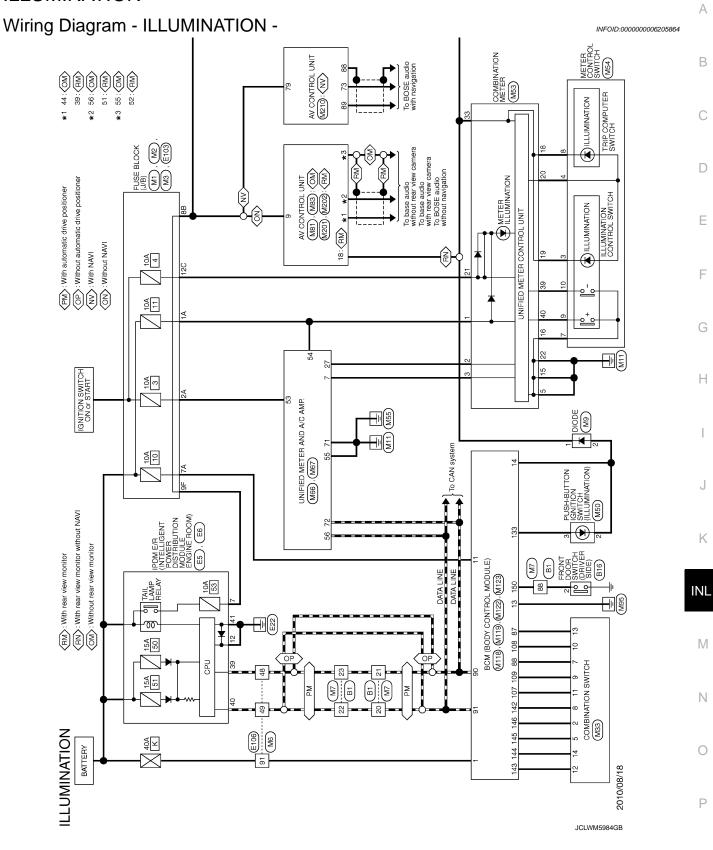
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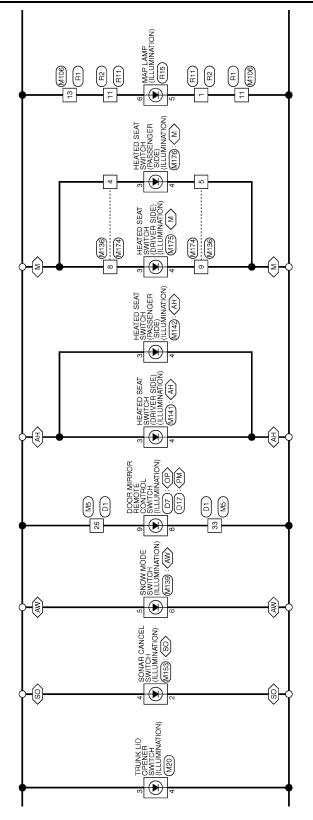
JCLWM5983GB





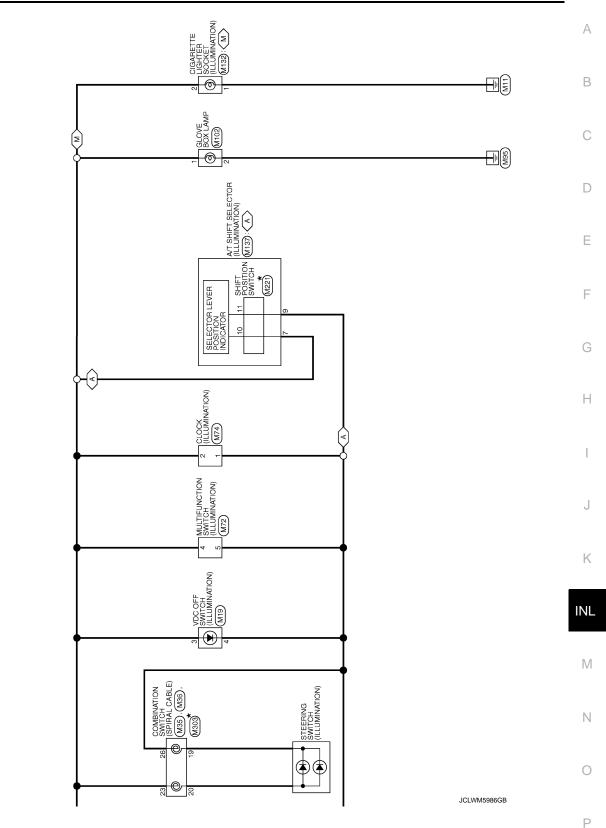
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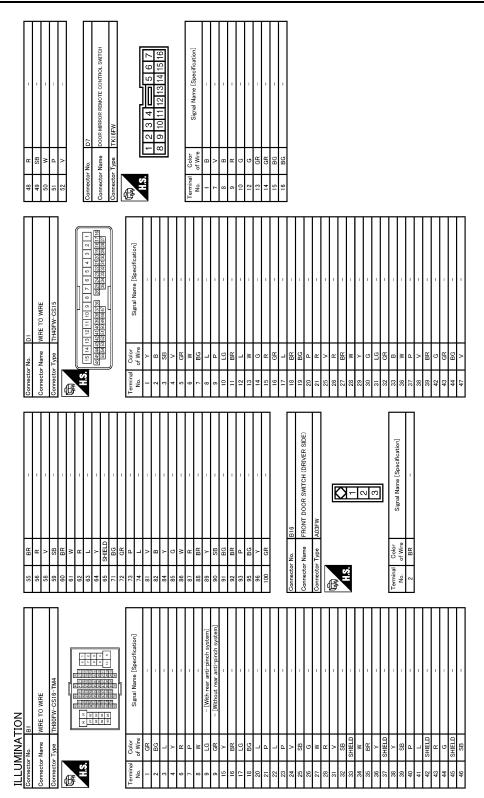


With A/T
 With M/T
 With M/T
 \* : This connector is not shown in "Harness Layout".

Revision: 2011 November

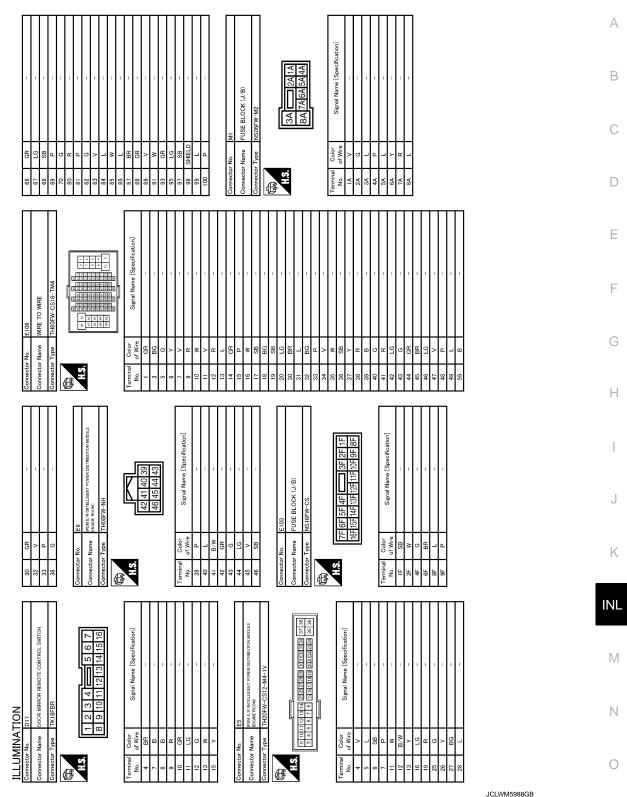
2011 G Sedan

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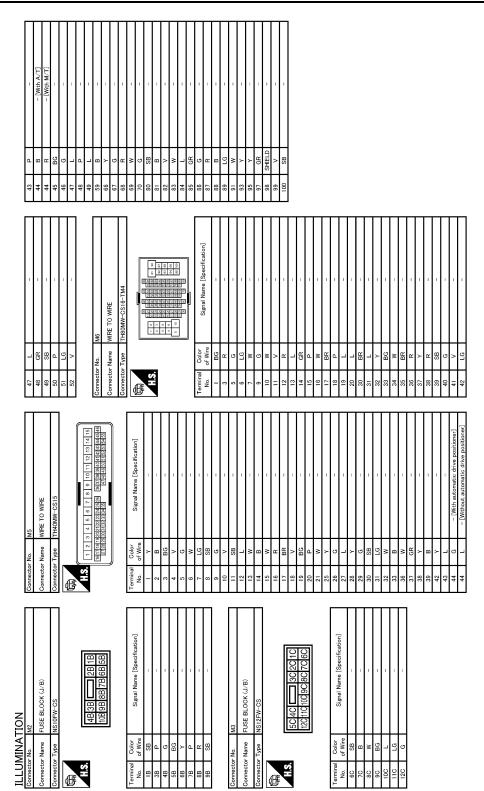
JCLWM5987GB

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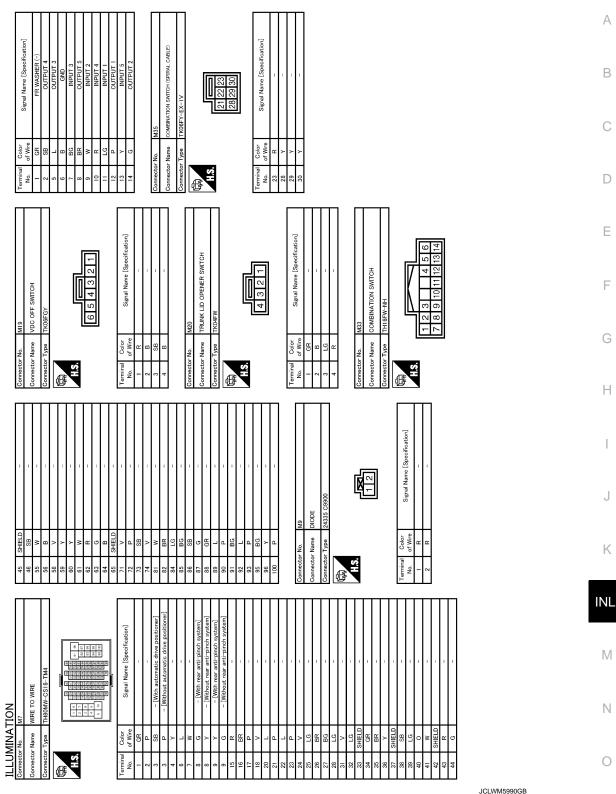
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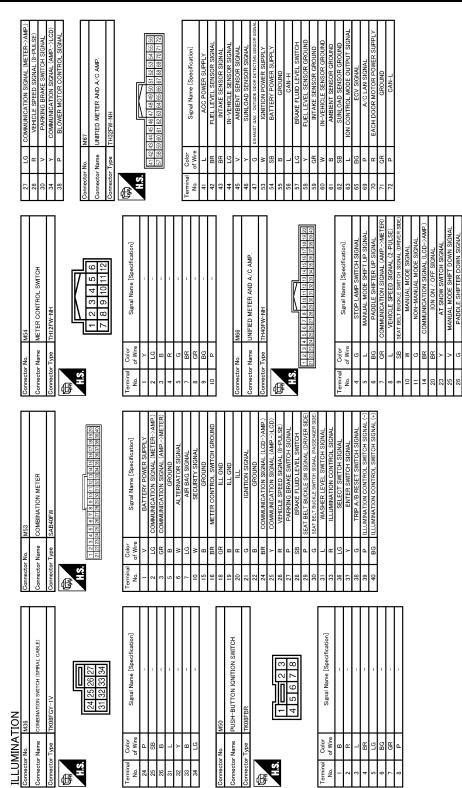


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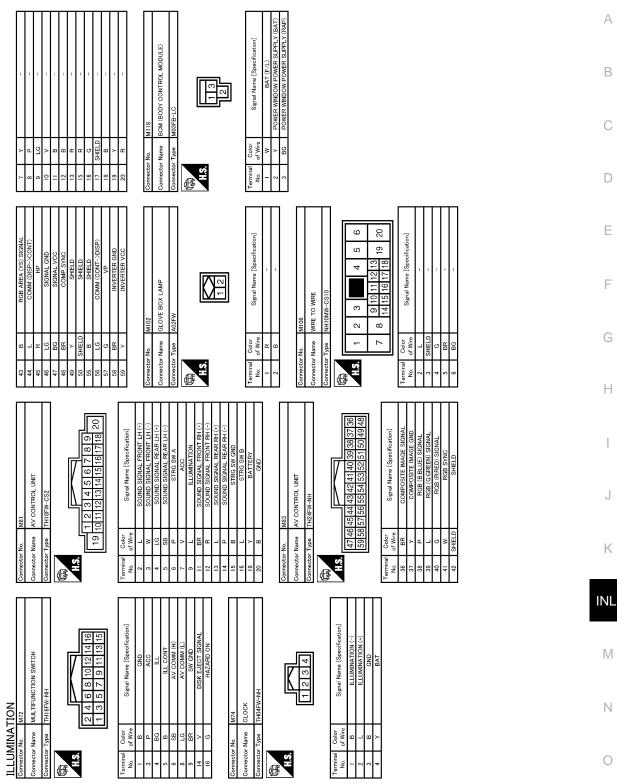
#### JCLWM5991GB

# ILLUMINATION

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### < DTC/CIRCUIT DIAGNOSIS >



JCLWM5992GB

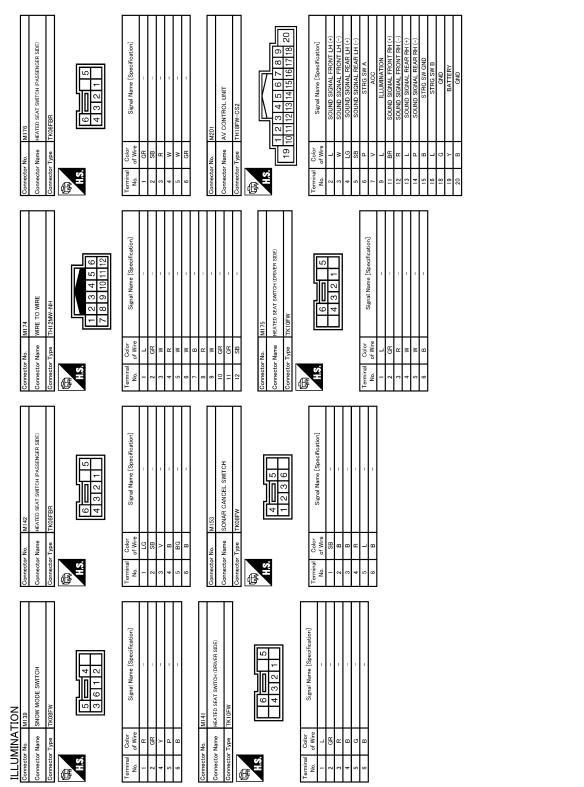
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#### < DTC/CIRCUIT DIAGNOSIS >

| 3     G       4     V       6     B       7     B       7     B       8     B       9     B       9     B       10     L       11     B       12     SB       13     S   | Connector No.         M137           Connector Name         AT SHIFT SELECTOR           Art SHIFT SELECTOR         Art SHIFT SELECTOR           Connector Type         Th12FW-HH           Connector Type         Signal Name [Specification]           2         V         Signal Name [Specification]           3         E         -         -           6         B         -         -           9         C         -         -           10         R         -         -  |  |
|--|--|--|
| 132         V         POWER WINDOW SW COMM           133         L         PUSH-BUTTON IGNITION SWILL POWER           134         L         PUSH-BUTTON IGNITION SWILL POWER           134         L         LOCK INIO           137         EG         RECEIVER / SENSOR GUID           138         V         RECEIVER / SENSOR GUID           138         V         RECEIVER / SENSOR FOR ENDLY           138         V         TIRE PRESSURE RECEIVER ODMM           140         B         SHIT NIP           143         P         COMBI SW OUTPUT 5           144         P         COMBI SW OUTPUT 5           143         P         COMBI SW OUTPUT 7 | L         L           G         G         REAR WIN           G         A         REAR WIN           Color         B         B           P         P         NS03PW-Ci           Color         B         B           P         R         M135           Color         B         B           P         P         M136           Color         NS03PW-Ci         SI           Color         M136         SI           Of Wine         M136         SI           Of Wine         M136         SI   |  |
| 81         W         NATS ANT AMP.           82         SB         ICIR ELAY (F:B) CONT.           82         SB         ICIR ELAY (F:B) CONT.           87         Y         KEVLESS ENTERY RECENTER COMM.           87         Y         COMELSW INPUT.3           88         BG         COMELSW INPUT.3           90         P         PUSH SW.           91         L         CAN-L.           92         LG         KEY SLOTT.           93         BG         ON LOTT.   | GR         A/T SHIFT           P         P <tr tr="">          P</tr>  |  |
|  |  |  |
| ILLUMINATION<br>Gennetor Name<br>Connector Name<br>BCM (BODY CONTROL MOULE)<br>Connector Type<br>MSI6FW-CS<br>(112) 13] 14] 15] 16] 17] 18] 19]  | Terminal<br>No.         Color<br>NWere<br>No.         Signal Name (Specification)           No.         0         INTERIORE RODOR LMADP FOWER SUPPLY<br>PASSINGER DOOR LMADP FOWER SUPPLY<br>3         Description           7         8         V         ALL BOOR FULL LID LOOK OUTPUT<br>10         DESCRIPTION CONTENT           19         P         ALL BOOR FUEL LID LOOK OUTPUT<br>13         BE         ALL BOOR FUEL LID LOOK OUTPUT<br>13         BE           19         P         PUSH-BUTTON IGNITION SW ILL GND<br>13         UNN         CONTENT           19         BG         TUBN SIGNAL HI FIFONT)<br>13         BG         ALD           19         BG         TUBN SIGNAL HI FIFONT)<br>13         DESCRIPTION         DESCRIPTION           10         NID         VIDEN SIGNAL HI FIFONT)<br>13         DESCRIPTION         DESCRIPTION           11         R         FLORD LANP CONT         DONT         DESCRIPTION           11         R         POINTON         NID         DESCRIPTION           11         R         POINTON         DESCRIPTION         DESCRIPTION           11         R         POINTON         DESCRIPTION         DESCRIPTION           11         NID         TUBN SIGNAL HI FIFONT)         DESCRIPTION         DESCRIPTION           11         POI |  |

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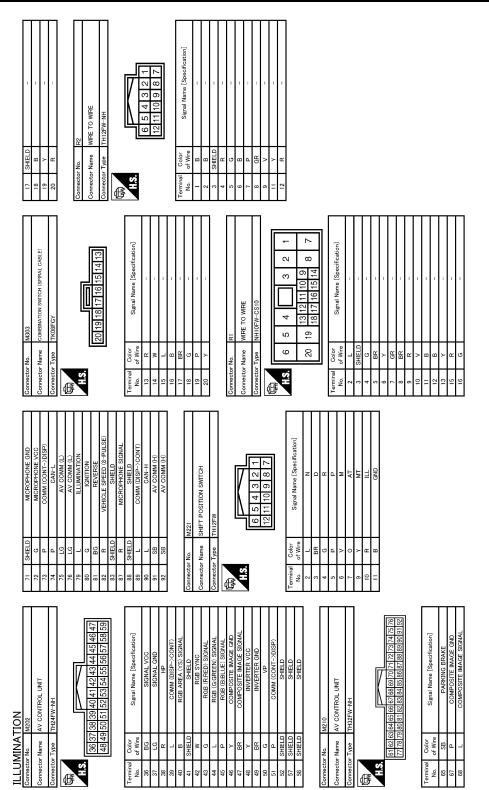
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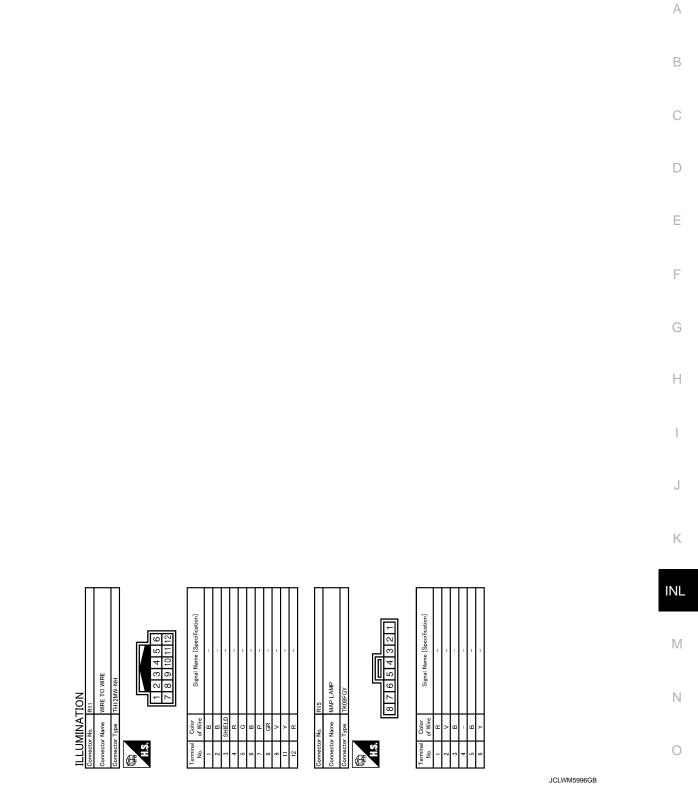
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# ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

## **Reference Value**

INFOID:000000006857883

### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III MONITOR ITEM

| Monitor Item   | Condition  | Value/Status                    |
|----------------|--|---------------------------------|
| FR WIPER HI    | Other than front wiper switch HI   | Off                             |
|                | Front wiper switch HI  | On                              |
| FR WIPER LOW   | Other than front wiper switch LO   | Off                             |
| FR WIFER LOW   | Front wiper switch LO  | On                              |
| FR WASHER SW   | Front washer switch OFF  | Off                             |
| FR WASHER SW   | Front washer switch ON   | On                              |
|                | Other than front wiper switch INT/AUTO   | Off                             |
| FR WIPER INT   | Front wiper switch INT/AUTO  | On                              |
|                | Front wiper is not in STOP position  | Off                             |
| FR WIPER STOP  | Front wiper is in STOP position  | On                              |
| INT VOLUME     | Wiper volume dial is in a dial position 1 - 7  | Wiper volume dial posi-<br>tion |
|                | Other than turn signal switch RH   | Off                             |
| TURN SIGNAL R  | Turn signal switch RH  | On                              |
|                | Other than turn signal switch LH   | Off                             |
| TURN SIGNAL L  | Turn signal switch LH  | On                              |
|                | Other than lighting switch 1ST and 2ND   | Off                             |
| TAIL LAMP SW   | Lighting switch 1ST or 2ND   | On                              |
|                | Front wiper switch INT/AUTOTOPFront wiper is not in STOP positionFront wiper is in STOP positionEWiper volume dial is in a dial position 1 - 7AL ROther than turn signal switch RHTurn signal switch RHAL LOther than turn signal switch LHTurn signal switch LHTurn signal switch 1ST and 2NDSWOther than lighting switch 1ST and 2ND/Other than lighting switch HI/Lighting switch 1ST or 2ND/Other than lighting switch 2NDSW 1Other than lighting switch 2NDSW 2Other than lighting switch 2NDSW 2Other than lighting switch PASSLighting switch PASSSWLighting switch AUTOSWLighting switch AUTOFront fog lamp switch OFF | Off                             |
| HI BEAM SW     | Lighting switch HI   | On                              |
|                | Other than lighting switch 2ND   | Off                             |
| HEAD LAMP SW 1 | Lighting switch 2ND  | On                              |
|                | Other than lighting switch 2ND   | Off                             |
| HEAD LAMP SW 2 | Lighting switch 2ND  | On                              |
|                | Other than lighting switch PASS  | Off                             |
| PASSING SW     | Lighting switch PASS   | On                              |
| AUTO LIGHT SW  | Other than lighting switch AUTO  | Off                             |
| AUTO LIGHT SW  | Lighting switch AUTO   | On                              |
| FR FOG SW      | Front fog lamp switch OFF  | Off                             |
| FR FUG SW      | Front fog lamp switch ON   | On                              |
| RR FOG SW      | NOTE:<br>The item is indicated, but not monitored.   | Off                             |
|                | Driver door closed   | Off                             |
| DOOR SW-DR     | Driver door opened   | On                              |
|                | Passenger door closed  | Off                             |
| DOOR SW-AS     | Passenger door opened  | On                              |
|                | Rear RH door closed  | Off                             |
| DOOR SW-RR     | Rear LH door opened  | On                              |

| Monitor Item  | Condition   | Value/Status |   |
|---|---|--------------|---|
| DOOR SW-RL  | Rear LH door closed   | Off          |   |
| DOOR SW-RL  | Rear LH door opened   | On           |   |
| DOOR SW-BK  | NOTE:<br>The item is indicated, but not monitored.  | Off          |   |
|   | Rear LH door closed     Of       Rear LH door opened     Or       NOTE:     Of       The item is indicated, but not monitored.     Of       Other than power door lock switch LOCK     Of       Power door lock switch LOCK     Of       Power door lock switch UNLOCK     Of       Power door key cylinder LOCK     Of       Other than driver door key cylinder UNLOCK     Of       Driver door key cylinder LOCK     Of       Driver door key cylinder LOCK     Of       Pare door key cylinder LOCK     Of       Priver door key cylinder LOCK     Of       Priver door key cylinder LOCK     Of       Priver door key cylinder LOCK     Of       Paread switch is OFF     Of       Hazard switch is OFF     Of       Hazard switch is OFF     Of       NOTE:     Of       Trunk lid opener cancel switch OFF     Of       Trunk lid opener cancel switch OFF     Of       Trunk lid opener switch OFF     Of       Trunk lid opener switch OFF     Of       Trunk lid opener switch Struned ON     Or       Trunk lid opener switch Struned ON     Or       Trunk l | Off          |   |
| CDL LOCK SW   | Power door lock switch LOCK   | On           | _ |
|   | Other than power door lock switch UNLOCK  | Off          | _ |
| CDL UNLOCK SW   | Power door lock switch UNLOCK   | On           |   |
|   | Other than driver door key cylinder LOCK  | Off          |   |
| KET GTL LK-SVV  | Driver door key cylinder LOCK   | On           |   |
|   | Other than driver door key cylinder UNLOCK  | Off          |   |
| KEY CYL UN-SW   | Driver door key cylinder LOCK   | On           | _ |
| KEY CYL SW-TR   |   | Off          |   |
|   | Hazard switch is OFF  | Off          |   |
| IIALANU OVV   | Hazard switch is ON   | On           |   |
| REAR DEF SW   |   | Off          |   |
| H/L WASH SW   |   | Off          | _ |
| FR CANCEL SW  | Trunk lid opener cancel switch OFF  | Off          |   |
| IN CANCEL SW  | Trunk lid opener cancel switch ON   | On           | _ |
|   | Trunk lid opener switch OFF   | Off          |   |
| TR/BD OFEN 3W   | While the trunk lid opener switch is turned ON  | On           | _ |
|   | Trunk lid closed  | Off          |   |
|   | Trunk lid opened  | On           |   |
| PKELOCK   | LOCK button of the Intelligent Key is not pressed   | Off          |   |
|   | LOCK button of the Intelligent Key is pressed   | On           |   |
| XEY CYL UN-SW<br>XEY CYL SW-TR<br>HAZARD SW<br>REAR DEF SW<br>H/L WASH SW<br>RCANCEL SW<br>RCANCEL SW<br>R/BD OPEN SW<br>RKE-DOCK<br>RKE-LOCK<br>RKE-LOCK<br>RKE-UNLOCK<br>RKE-UNLOCK<br>RKE-TR/BD<br>RKE-PANIC<br>RKE-PANIC<br>RKE-P/W OPEN<br>RKE-MODE CHG  | UNLOCK button of the Intelligent Key is not pressed   | Off          | _ |
|   | UNLOCK button of the Intelligent Key is pressed   | On           | _ |
| KEY CYL LK-SW<br>KEY CYL UN-SW<br>KEY CYL SW-TR<br>HAZARD SW<br>REAR DEF SW<br>H/L WASH SW<br>TR CANCEL SW<br>TR/BD OPEN SW<br>TR/BD OPEN SW<br>TRNK/HAT MNTR<br>RKE-LOCK<br>RKE-LOCK<br>RKE-UNLOCK<br>RKE-TR/BD<br>RKE-PANIC<br>RKE-P/W OPEN   | TRUNK OPEN button of the Intelligent Key is not pressed   | Off          | _ |
|   | TRUNK OPEN button of the Intelligent Key is pressed   | On           | _ |
|   | PANIC button of the Intelligent Key is not pressed  | Off          |   |
| DL LOCK SW         Power door lock switch LOCK           Du UNLOCK SW         Other than power door lock switch UNLOCK           Power door lock switch UNLOCK         Power door lock switch UNLOCK           Power door lock switch UNLOCK         Other than driver door key cylinder LOCK           Driver door key cylinder LOCK         Other than driver door key cylinder UNLOCK           CY CYL UN-SW         Other than driver door key cylinder UNLOCK           EY CYL SW-TR         NOTE:           The item is indicated, but not monitored.         Hazard switch is ON           KZARD SW         Hazard switch is ON           EAR DEF SW         NOTE:           The item is indicated, but not monitored.         NOTE:           Trunk lid opener cancel switch OFF         Trunk lid opener cancel switch ON           VBD OPEN SW         Trunk lid opener switch OFF           VBD OPEN SW         Trunk lid opened           LOCK button of the Intelligent Key is not pressed         LOCK button of the Intelligent Key is not pressed           LOCK button of the Intelligent Key is not pressed         UNLOCK button of the Intelligent Key is not pressed           TRUNK OPEN button of the Intelligent Key is not pressed         PANIC button of the Intelligent Key is not pressed           CE-PANIC         PANIC button of the Intelligent Key is not pressed         PANIC button of the Intelligent Key is not pressed <td>On</td> <td></td> | On  |              |   |
|   | UNLOCK button of the Intelligent Key is not pressed   | Off          | _ |
|   | UNLOCK button of the Intelligent Key is pressed and held  | On           | _ |
| RKE-MODE CHG  | LOCK/UNLOCK button of the Intelligent Key is not pressed and held simulta-<br>neously   | Off          | _ |
|   | LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously  | On           | _ |
|   | Bright outside of the vehicle   | Close to 5 V | _ |
| OF HUAL SEINSUK   | Dark outside of the vehicle   | Close to 0 V |   |
|   | Driver door request switch is not pressed   | Off          |   |
| REQ SW -DR  | Driver door request switch is pressed   | On           |   |
|   | Passenger door request switch is not pressed  | Off          | _ |
| REQ SW -AS  | Passenger door request switch is pressed  | On           | - |

### < ECU DIAGNOSIS INFORMATION >

| Monitor Item  | Condition  | Value/Status |
|---------------|--|--------------|
| REQ SW -RR    | NOTE:<br>The item is indicated, but not monitored.   | Off          |
| REQ SW -RL    | <b>NOTE:</b><br>The item is indicated, but not monitored.  | Off          |
|               | Trunk lid opener request switch is not pressed   | Off          |
| REQ SW -BD/TR | The item is indicated, but not monitored.         NOTE:         The item is indicated, but not monitored.         Trunk lid opener request switch is not pressed         Trunk lid opener request switch is pressed         Push-button ignition switch (push switch) is not pressed         Push-button ignition switch (push switch) is pressed         Ignition switch in OFF or ACC position         Ignition switch in ON position         NOTE:         The item is indicated, but not monitored.         The clutch pedal is not depressed         The clutch pedal is depressed         The brake pedal is depressed when No. 7 fuse is blown         The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal         The brake pedal is not depressed (M/T models)         • The clutch pedal is depressed         • Selector lever in P position (Except M/T models)         • The clutch pedal is depressed (M/T models)         • The clutch pedal is not depressed (M/T models)         • Selector lever in any position other than P (Except M/T models)         • The clutch pedal is not depressed (M/T models)         • Selector lever in P on N position         Selector lever in P or N position         Selector lever in P or N position         Selector lever in P or N position         Steering is unlocked  | On           |
| PUSH SW       | NOTE:<br>The item is indicated, but not monitored.           NOTE:<br>The item is indicated, but not monitored.           NOTE:<br>The item is indicated, but not monitored.           Trunk lid opener request switch is not pressed           Push-button ignition switch (push switch) is not pressed           Push-button ignition switch (push switch) is pressed           Ignition switch in OFF or ACC position           Ignition switch in ON position           NOTE:<br>The item is indicated, but not monitored.           The clutch pedal is depressed           The of the pedal is not depressed           The brake pedal is not depressed when No. 7 fuse is blown.           The brake pedal is not depressed           The brake pedal is depressed when No. 7 fuse is blown, or No. 7 fuse is not mal           The brake pedal is not depressed           The brake pedal is not depressed           The dutch pedal is depressed (M/T models)           The clutch pedal is depressed (M/T models)           Selector lever in P position other than P (Except M/T models)           Selector lever in any position other than P and N           Selector lever in P or N position           Steering is locked           Steering is locked           Steering is locked           Steering is locked           Driver door is unlocked           Driver door is unlocked </td <td>Off</td>  | Off          |
| -USH 3W       | Push-button ignition switch (push switch) is pressed   | On           |
|               | Ignition switch in OFF or ACC position   | Off          |
| GN RLY2 -F/B  | Ignition switch in ON position   | On           |
| CC RLY -F/B   |  | Off          |
|               | The clutch pedal is not depressed  | Off          |
| LUCH SW       | The item is indicated, but not monitored.         NOTE:         The item is indicated, but not monitored.         Trunk lid opener request switch is not pressed         Push-button ignition switch (push switch) is not pressed         Push-button ignition switch (push switch) is not pressed         Ignition switch in OFF or ACC position         Ignition switch in ON position         NOTE:         The item is indicated, but not monitored.         The item is indicated, but not monitored.         The lottch pedal is not depressed         The clutch pedal is not depressed         The brake pedal is not depressed when No. 7 fuse is blown         The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal         The brake pedal is not depressed (M/T models)         • Selector lever in any position other than P (Except M/T models)         • The clutch pedal is depressed (M/T models)         • Selector lever in any position other than P and N         Selector lever in any position         Selector lever in any position         Steering is locked         Push-button ignition switch (push-switch) is not pressed         Push-button ignition switch (push-switch) is not press  | On           |
|               | The brake pedal is depressed when No. 7 fuse is blown  | Off          |
| RAKE SW 1     |  | On           |
|               | The brake pedal is not depressed   | Off          |
| RAKE SW 2     | The brake pedal is depressed   | On           |
|               |  | Off          |
| DETE/CANCL SW |  | On           |
|               | Selector lever in any position other than P and N  | Off          |
| FT PN/N SW    | Selector lever in P or N position  | On           |
|               | Steering is unlocked   | Off          |
| /L -LOCK      | Steering is locked   | On           |
|               | Steering is locked   | Off          |
| /L -UNLOCK    | The item is indicated, but not monitored. NOTE: The item is indicated, but not monitored. Trunk lid opener request switch is not pressed Trunk lid opener request switch is pressed Push-button ignition switch (push switch) is pressed Ignition switch in OFF or ACC position Ignition switch in ON position NOTE: The item is indicated, but not monitored. The clutch pedal is not depressed The clutch pedal is not depressed when No. 7 fuse is blown The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal The brake pedal is depressed (M/T models) Selector lever in any position other than P and N Selector lever in P or N position Setering is unlocked Ignition switch in OFF or ACC position Ignition switch in OFF or ACC position The brake pedal is depressed (M/T models) Selector lever in Apposition other than P and N Selector lever in P oposition Driver door is locked Ignition switch in OFF or ACC position Setector lever in P oposition other than P and N Selector lever in P or N position Driver door is locked Setering is unlocked Ignition switch in OFF or ACC position Ignition swi | On           |
|               | The item is indicated, but not monitored.           NOTE:<br>The item is indicated, but not monitored.           Trunk lid opener request switch is not pressed           Trunk lid opener request switch is not pressed           Push-button ignition switch (push switch) is not pressed           Push-button ignition switch (push switch) is pressed           Ignition switch in OFF or ACC position           Ignition switch in ON position           NOTE:<br>The item is indicated, but not monitored.           The clutch pedal is not depressed           The clutch pedal is not depressed           The brake pedal is not depressed when No. 7 fuse is blown           The brake pedal is not depressed (MT models)           The brake pedal is not depressed (MT models)           SW         Selector lever in any position other than P (Except M/T models)           Selector lever in any position other than P (Except M/T models)           Selector lever in any position other than P (Except M/T models)           Selector lever in any position other than P (Except M/T models)           Selector lever in any position other than P (Except M/T models)           Selector lever in any position other than P (Except M/T models)           Selector lever in any position other than P and N           Selector lever in P or N position           Selector lever in any position other than P and N           Selector lever in OFF or ACC  | Off          |
| /L RELAY-F/B  | Ignition switch in ON position   | On           |
|               | Driver door is unlocked  | Off          |
| INLK SEN -DR  | Driver door is locked  | On           |
|               | Push-button ignition switch (push-switch) is not pressed   | Off          |
| USH SW -IPDM  | Push-button ignition switch (push-switch) is pressed   | On           |
|               | Ignition switch in OFF or ACC position   | Off          |
| GN RLY1 -F/B  | Ignition switch in ON position   | On           |
|               | Selector lever in any position other than P  | Off          |
| ETE SW -IPDM  | Selector lever in P position   | On           |
|               |  | Off          |
| FT PN -IPDM   |  | On           |
|               |  | Off          |
| SFT P -MET    |  | On           |
|               | Selector lever in any position other than N  | Off          |
| SFT N -MET    | Selector lever in N position   | On           |

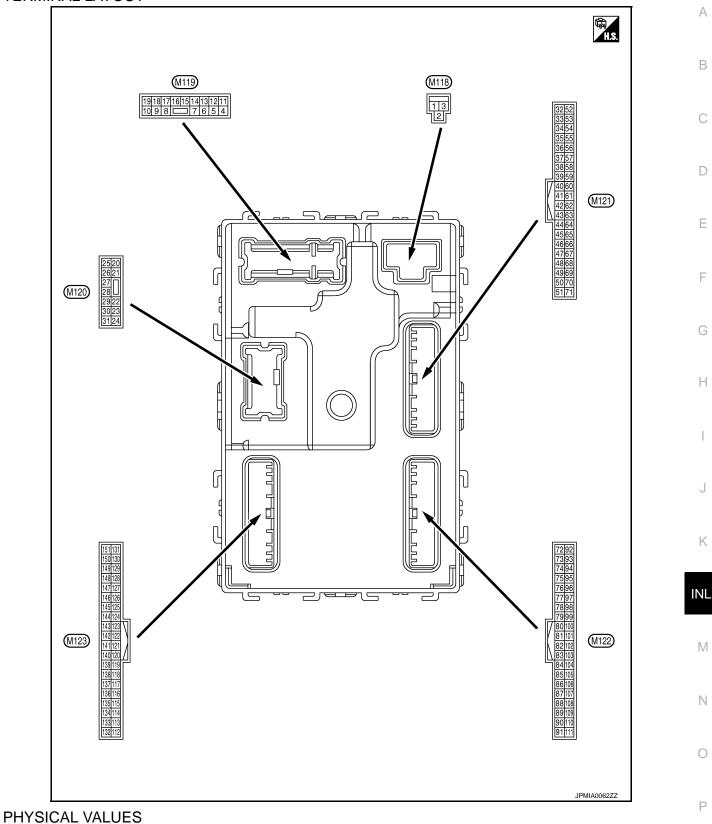
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| Monitor Item  | Condition   | Value/Status   |
|---|---|--|
|   | Engine stopped  | Stop   |
| ENGINE STATE<br>S/L LOCK-IPDM<br>S/L UNLK-IPDM<br>S/L RELAY-REQ<br>/EH SPEED 1<br>/EH SPEED 2<br>DOOR STAT-DR<br>DOOR STAT-DR<br>DOOR STAT-AS<br>D OK FLAG<br>PRMT ENG STRT<br>PRMT RKE STRT<br>CEY SW -SLOT<br>RKE OPE COUN1 | While the engine stalls   | Stall  |
|   | At engine cranking  | Crank  |
|   | Engine running  | Stop           Stall           Crank           Run           Off           On           Off           On           Equivalent to speed-<br>ometer reading           Equivalent to speed-<br>ometer reading           LOCK           READY           UNLOCK           READY           UNLOCK           Reset           Set           Reset           Set           Reset           Off           On           Operation frequency of<br>the Intelligent Key           Interved           Yet           ned to <tr tr=""></tr> |
|   |   |  |
|   | Steering is unlocked  | Off  |
| 3/L LOCK-IP DIVI  | Steering is locked  | On   |
|   | Steering is locked  | Off  |
| 3/L UNLK-IF DIVI  | Steering is unlocked  | On   |
|   | Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK   | Off  |
| S/L RELAT-REQ   | Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK        | On   |
| VEH SPEED 1   | While driving   |  |
| VEH SPEED 2   | While driving   |  |
|   | Driver door is locked   | LOCK   |
| DOOR STAT-DR  | Wait with selective UNLOCK operation (60 seconds)   | READY  |
|   | Driver door is unlocked   | UNLOCK   |
| DOOR STAT-AS  | Passenger door is locked  | LOCK   |
|   | Wait with selective UNLOCK operation (60 seconds)   | READY  |
|   | Passenger door is unlocked  | UNLOCK   |
| D OK FLAG   | Steering is locked  | Reset  |
|   | Steering is unlocked  | Set  |
|   | The engine start is prohibited  | Reset  |
|   | The engine start is permitted   | Set  |
| PRMT RKE STRT   | NOTE:<br>The item is indicated, but not monitored.  | Reset  |
|   | The Intelligent Key is not inserted into key slot   | Off  |
|   | The Intelligent Key is inserted into key slot   | On   |
| RKE OPE COUN1   | During the operation of the Intelligent Key   |  |
| RKE OPE COUN2   | NOTE:<br>The item is indicated, but not monitored.  | _  |
|   | The key ID that the key slot receives is not recognized by any key ID registered to BCM.        | Yet  |
|   | The key ID that the key slot receives is recognized by any key ID registered to BCM.            | Done   |
|   | The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM. | Yet  |
| CONFIRM ID4   | The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.     | Done   |
|   | The key ID that the key slot receives is not recognized by the third key ID registered to BCM.  | Yet  |
| CONFIRM ID3   | The key ID that the key slot receives is recognized by the third key ID registered to BCM.      | Done   |

| Monitor Item  | Condition   | Value/Status                     |
|---|---|----------------------------------|
|   | The key ID that the key slot receives is not recognized by the second key ID reg-<br>istered to BCM.  | Yet                              |
| CONFIRMIDZ  | ONFIRM ID2         The key ID that the key slot receives is not recognized by the second key ID registered to BCM.           The key ID that the key slot receives is recognized by the second key ID registered to BCM.         The key ID that the key slot receives is not recognized by the first key ID registered to BCM.           ONFIRM ID1         The key ID that the key slot receives is not recognized by the first key ID registered to BCM.           The key ID that the key slot receives is recognized by the first key ID registered to BCM.         The ID of fourth Intelligent Key is not registered to BCM           P4         The ID of fourth Intelligent Key is not registered to BCM         The ID of third Intelligent Key is not registered to BCM           P3         The ID of second Intelligent Key is not registered to BCM         The ID of first Intelligent Key is not registered to BCM           P4         The ID of first Intelligent Key is not registered to BCM         The ID of first Intelligent Key is registered to BCM           P4         The ID of first Intelligent Key is not registered to BCM         The ID of first Intelligent Key is registered to BCM           P4         The ID of first Intelligent Key is not registered to BCM         The ID of first Intelligent Key is not registered to BCM           P4         The ID of first Intelligent Key is not registered to BCM         The ID of first Intelligent Key is not registered to BCM           P4         ID of first Intelligent Key is not registered to BCM         ID of first Intelligent Key is not registered to BCM <td>Done</td> | Done                             |
|   |   | Yet                              |
| The key ID that the key slot receives<br>istered to BCM.The key ID that the key slot receives<br>tered to BCM.The key ID that the key slot receives<br>tered to BCM.The key ID that the key slot receives<br> |   | Done                             |
|   | The ID of fourth Intelligent Key is not registered to BCM   | Yet                              |
| 1P 4  | The ID of fourth Intelligent Key is registered to BCM   | Done                             |
|   | The ID of third Intelligent Key is not registered to BCM  | Yet                              |
| IFJ   | The ID of third Intelligent Key is registered to BCM  | Done                             |
|   | The ID of second Intelligent Key is not registered to BCM   | Yet                              |
| 1 1 2   | The ID of second Intelligent Key is registered to BCM   | Done                             |
| TD 1  | The ID of first Intelligent Key is not registered to BCM  | Yet                              |
|   | The ID of first Intelligent Key is registered to BCM  | Done                             |
| AIR PRESS FL  | Ignition switch ON (Only when the signal from the transmitter is received)  | Air pressure of front LH<br>tire |
| AIR PRESS FR  | Ignition switch ON (Only when the signal from the transmitter is received)  | Air pressure of front RH<br>tire |
| AIR PRESS RR  | Ignition switch ON (Only when the signal from the transmitter is received)  | Air pressure of rear RH<br>tire  |
| AIR PRESS RL  | Ignition switch ON (Only when the signal from the transmitter is received)  | Air pressure of rear LH<br>tire  |
|   | ID of front LH tire transmitter is registered   | Done                             |
| ID REGST FLT  | ID of front LH tire transmitter is not registered   | Yet                              |
| IP 1<br>IR PRESS FL<br>IR PRESS FR<br>IR PRESS RR<br>IR PRESS RL<br>D REGST FL1<br>D REGST FR1  | ID of front RH tire transmitter is registered   | Done                             |
| ID REGST I RT   | ID of front RH tire transmitter is not registered   | Yet                              |
|   | ID of rear RH tire transmitter is registered  | Done                             |
|   | ID of rear RH tire transmitter is not registered  | Yet                              |
|   | ID of rear LH tire transmitter is registered  | Done                             |
|   | ID of rear LH tire transmitter is not registered  | Yet                              |
|   | Tire pressure indicator OFF   | Off                              |
|   | Tire pressure indicator ON  | On                               |
| BUZZER  | Tire pressure warning alarm is not sounding   | Off                              |
|   | Tire pressure warning alarm is sounding   | On                               |

< ECU DIAGNOSIS INFORMATION >

**TERMINAL LAYOUT** 



|            | nal No.<br>color) | Description                           |                  |  | <b>.</b>  | Value   |      |
|------------|-------------------|---------------------------------------|------------------|--|---|---|------|
| +          | -                 | Signal name                           | Input/<br>Output |  | Condition   | (Approx.)   |      |
| 1<br>(W)   | Ground            | Battery power supply                  | Input            | Ignition switch (  | DFF   | Battery voltage   |      |
| 2<br>(Y)   | Ground            | P/W power supply<br>(BAT)             | Output           | Ignition switch (  | DFF   | 12 V  |      |
| 3<br>(BG)  | Ground            | P/W power supply (RAP)                | Output           | Ignition switch (  | NC  | 12 V  |      |
|            |                   |                                       |                  | Interior room lamp battery saver is activated.<br>(Cuts the interior room lamp power supply) |   | 0 V   |      |
| 4<br>(LG)  | Ground            | Interior room lamp<br>power supply    | Output           | vated.   | mp battery saver is not acti-<br>erior room lamp power sup- | 12 V  |      |
| 5          | Ground            | Passenger door UN-                    | Output           | Passenger  | UNLOCK (Actuator is activated)                              | 12 V  |      |
| (P)        | Ground            | LOCK                                  | Output door      |  | Other than UNLOCK) Ac-<br>tuator is not activated           | 0 V   |      |
| 7          | Ground            | Step lamp                             | Output           | Step lamp  | ON  | 0 V   |      |
| (SB)       | Giouna            |                                       | Output           | Step lamp  | OFF   | 12 V  |      |
| 8          | Ground            | All doors, fuel lid                   | Output           | All doors, fuel  | LOCK<br>(Actuator is activated)                             | 12 V  |      |
| (V)        | LOCK              | Output                                | lid              | Other than LOCK<br>(Actuator is not activated)   | 0 V   |   |      |
| 9          | Ground            | Driver door, fuel lid                 | d Output Driver  | Driver deer (Actuato   | UNLOCK<br>(Actuator is activated)                           | 12 V  |      |
| (G)        | Cround            | UNLOCK                                | Output           | fuel lid   | Other than UNLOCK<br>(Actuator is not activated)            | 0 V   |      |
| 10         | Ground            | Rear RH door and rear LH door UN-     |                  | Output   | Rear RH door<br>and rear LH                                 | UNLOCK<br>(Actuator is activated)   | 12 V |
| (P)        | Croana            | LOCK                                  | oupu             | door   | Other than UNLOCK<br>(Actuator is not activated)            | 0 V   |      |
| 11<br>(R)  | Ground            | Battery power supply                  | Input            | Ignition switch (  | DFF   | Battery voltage   |      |
| 13<br>(B)  | Ground            | Ground                                |                  | Ignition switch (  | NC  | 0 V   |      |
|            |                   |                                       |                  |  | OFF   | 0 V   |      |
| 14         |                   | Push-button ignition                  |                  |  |   | NOTE:<br>When the illumination brighten<br>ing/dimming level is in the neutra<br>position |      |
| (W)        | Ground            | switch illumination<br>ground         | Output Tail lamp | ON   |   |   |      |
| 15<br>(BG) | Ground            | ACC indicator lamp                    | Output           | Ignition switch  | OFF (LOCK indicator is not illuminated)                     | Battery voltage   |      |
| (D(2))     |                   | · · · · · · · · · · · · · · · · · · · |                  | 5  | ACC   | 0 V   |      |

|            | nal No.<br>color) | Description               | -  |  |   | Value   |
|------------|-------------------|---------------------------|--|--|---|---|
| +          | -                 | Signal name               | Input/<br>Output                               |  | Condition   | (Approx.)   |
|            |                   |                           |  |  | Turn signal switch OFF                              | 0 V   |
| 17<br>(W)  | Ground            | Turn signal RH<br>(Front) | Output   | lgnition switch<br>ON  | Turn signal switch RH                               | (V)<br>15<br>10<br>5<br>0<br>1 s<br>FKID0926E<br>6.5 V                          |
|            |                   |                           |  |  | Turn signal switch OFF                              | 0 V   |
| 18<br>(BG) | Ground            | Turn signal LH (Front)    | Output   | Ignition switch<br>ON  | Turn signal switch LH                               | (V)<br>15<br>10<br>5<br>0<br>1 s<br>PKID0926E                                   |
| 19         |                   | Room lamp timer           |  | Interior room  | OFF   | 6.5 V<br>12 V   |
| (V)        | Ground            | control                   | Output   | lamp   | ON  | 0 V   |
|            |                   |                           |  |  | Turn signal switch OFF                              | 0 V   |
| 20<br>(V)  | Ground            | Turn signal RH (Rear)     | Output   | lgnition switch<br>ON  | Turn signal switch RH                               | (V)<br>15<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| 23         |                   | Truck Kilova              | 0.1.1  | Taugh 11 1   | OPEN<br>(Trunk lid opener actuator<br>is activated) | 12 V  |
| (LG)       | Ground            | Trunk lid open            | en Output Trunk lid Other than<br>(Trunk lid o | Other than OPEN<br>(Trunk lid opener actuator<br>is not activated) | 0 V   |   |
|            |                   |                           |  |  | Turn signal switch OFF                              | 0 V   |
| 25<br>(Y)  | Ground            | Turn signal LH (Rear)     | Output   | lgnition switch<br>ON  | Turn signal switch LH                               | (V)<br>15<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| 30         | 0                 | Taughasan la              | 0  | Trunk room   | ON  | 0 V   |
| (P)        | Ground            | Trunk room lamp           | Output   | lamp   | OFF   | 12 V  |

|            | nal No.     | Description  | Description   |   |  | Value  |   |
|------------|-------------|--|---|---|--|--|---|
| (Wire<br>+ | color)<br>– | Signal name  | Input/<br>Output  |   | Condition  | (Approx.)  |   |
| 34         | Ground      | Trunk room antenna   | Output  | Ignition switch                                 | When Intelligent Key is in the passenger compart-<br>ment        | (V)<br>15<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  |   |
| (SB)       |             | ()   | When Intelligent Key is no  | When Intelligent Key is<br>in the passenger com |  | When Intelligent Key is not<br>in the passenger compart-<br>ment   | (V)<br>15<br>0<br>0<br>1 s<br>JMKIA0063GB |
| 35         | Ground      | Trunk room antenna   | runk room antenna<br>-) Output Ignition switch OFF When Intelligent I | Output Ignition switch<br>OFF                   | When Intelligent Key is in the passenger compart-<br>ment        | (V)<br>15<br>0<br>0<br>1 s<br>JMKIA0062GB  |   |
| (V)        |             | (+)  |   |   | When Intelligent Key is not<br>in the passenger compart-<br>ment | (V)<br>15<br>0<br>0<br>1 s<br>JMKIA0063GB  |   |
| 38         | Ground      | Rear bumper anten-   | Output  | When the trunk<br>lid opener re-                | When Intelligent Key is in the antenna detection area            | (V)<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>15<br>15<br>15<br>15<br>15<br>15<br>15<br>15<br>15 |   |
| (B)        | Ground      | Ground na (-)<br>Output quest switch is<br>operated with<br>ignition switch<br>OFF | When Intelligent Key is not<br>in the antenna detection<br>area       | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0063GB |  |  |   |

|            | nal No. | Description                          |                  |   |   | Value   |   |        |        |        |        |        |        |                                 |                                    |   |     |
|------------|---------|--------------------------------------|------------------|---|---|---|---|--------|--------|--------|--------|--------|--------|---------------------------------|------------------------------------|---|-----|
| (wire<br>+ | color)  | Signal name                          | Input/<br>Output |   | Condition   | (Approx.)   |   |        |        |        |        |        |        |                                 |                                    |   |     |
| 39         | Ground  | Rear bumper anten-                   | 0.454            | When the trunk<br>lid opener re-        | When Intelligent Key is in the antenna detection area | (V)<br>15<br>0<br>1 s<br>JMKIA0062GB                            |   |        |        |        |        |        |        |                                 |                                    |   |     |
| (W)        | Ground  | na (+)                               |                  | operated with<br>ignition switch<br>OFF | ignition switch                                       | When Intelligent Key is not<br>in the antenna detection<br>area | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0063GB |        |        |        |        |        |        |                                 |                                    |   |     |
| 47         |         | Ignition relay (IPDM                 |                  |   | OFF or ACC  | 12 V  |   |        |        |        |        |        |        |                                 |                                    |   |     |
| (Y)        | Ground  | E/R) control                         | Output           | Ignition switch                         | ON  | 0 V   |   |        |        |        |        |        |        |                                 |                                    |   |     |
| 50<br>(BG) | Ground  | Trunk room lamp<br>switch            | Input            | Trunk room<br>lamp switch               | OFF (Trunk lid is closed)                             | (V)<br>15<br>10<br>50<br>10 ms<br>JPMIA0011GB<br>11.8 V         |   |        |        |        |        |        |        |                                 |                                    |   |     |
|            |         |                                      |                  |   | ON (Trunk lid is opened)                              | 0 V   |   |        |        |        |        |        |        |                                 |                                    |   |     |
|            |         |                                      | ol Output -      | Ignition switch<br>ON (A/T mod-         | When selector lever is in P or N position             | 12 V  |   |        |        |        |        |        |        |                                 |                                    |   |     |
| 52         | Crownd  | Charter valou control                |                  | Output                                  | Output  | Output -  | Output -  | Output | Output | Output | Output | Output | Output |                                 | els)                               | When selector lever is not in P or N position | 0 V |
| (R)        | Ground  | Starter relay control                |                  |   |   |   |   |        |        |        |        |        |        | Ignition switch<br>ON (M/T mod- | When the clutch pedal is depressed | Battery voltage                               |     |
|            |         |                                      |                  | els)                                    | When the clutch pedal is not depressed                | 0 V   |   |        |        |        |        |        |        |                                 |                                    |   |     |
|            |         |                                      |                  |   | ON (Pressed)  | 0 V   |   |        |        |        |        |        |        |                                 |                                    |   |     |
| 61<br>(SB) | Ground  | Trunk lid opener re-<br>quest switch | Input            | Trunk lid open-<br>er request<br>switch | OFF (Not pressed)                                     | (V)<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 |   |        |        |        |        |        |        |                                 |                                    |   |     |
|            |         | Intelligent Key warn-                |                  | Intelligent Key<br>warning buzzer       | Sounding  | 0 V   |   |        |        |        |        |        |        |                                 |                                    |   |     |
| 64         | Ground  | ing buzzer (Engine                   | Output           |   |   |   |   |        |        |        |        |        |        |                                 |                                    |   |     |

|            | nal No. | Description                |                  |  |  | Value   |   |   |
|------------|---------|----------------------------|------------------|--|--|---|---|---|
| (Wire<br>+ | color)  | Signal name                | Input/<br>Output |  | Condition  | (Approx.)   |   |   |
| 67<br>(GR) | Ground  | Trunk lid opener<br>switch | Input            | Trunk lid open-<br>er switch                                     | Pressed<br>Not pressed   | 0 V<br>(V)<br>15<br>0<br>10 ms<br>JPMIA0011GB<br>11.8 V |   |   |
| 68<br>(BG) | Ground  | Rear RH door switch        | Input            | Rear RH door<br>switch   | OFF (When rear RH door<br>closes)<br>ON (When rear RH door<br>opens) | (V)<br>10<br>10<br>10<br>10<br>11.8<br>V<br>0<br>V      |   |   |
| 69<br>(L)  | Ground  | Rear LH door switch        | Input            | Rear LH door<br>switch   | OFF (When rear LH door<br>closes)<br>ON (When rear LH door<br>opens) | (V)<br>15<br>10<br>10<br>10<br>11.8<br>V<br>0<br>V      |   |   |
| 72<br>(R)  | Ground  | Room antenna 2 (-)         | Quitout          | Quitout  | Output   | Ignition switch   | When Intelligent Key is in the passenger compart-<br>ment | (V)<br>15<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| (K)        |         | (Center console)           | OFF              | When Intelligent Key is not<br>in the passenger compart-<br>ment | (V)<br>15<br>0<br>1 s<br>JMKIA0063GB                                 |   |   |   |

|             | nal No. | Description                     |  |   |  | Value   | Δ   |  |   |        |
|-------------|---------|---------------------------------|--|---|--|---|---|--|---|--------|
| (VVire<br>+ | color)  | Signal name                     | Input/<br>Output   |   | Condition  | (Approx.)   | A   |  |   |        |
| 73          | 0       | Room antenna 2 (+)              | 0.444  | Ignition switch   | When Intelligent Key is in the passenger compart-<br>ment  | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0062GB         | B<br>C<br>D   |  |   |        |
| (G)         | Ground  | (Center console)                |  |   |  | Output  | OFF   | When Intelligent Key is not<br>in the passenger compart-<br>ment | (V)<br>15<br>0<br>0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | E<br>F |
| 74          | Ground  | Passenger door an-<br>tenna (–) |  |   | When the pas-<br>senger door re-   | When Intelligent Key is in the antenna detection area   | (V)<br>15<br>0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1 | G<br>H<br>I  |   |        |
| (SB)        | Ground  |                                 | tenna (–)<br>Output quest switch is<br>operated with<br>ignition switch<br>OFF | When Intelligent Key is not<br>in the antenna detection<br>area | (V)<br>15<br>0<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>0<br>15<br>10<br>10<br>15<br>10<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>15<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | J<br>K  |   |  |   |        |
| 75          | Ground  | Passenger door an-              | Output   | When the pas-<br>senger door re-                                | When Intelligent Key is in the antenna detection area  | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0062GB         | M   |  |   |        |
| (BR)        | Ground  | tenna (+)                       | Jouput   |   | When Intelligent Key is not<br>in the antenna detection<br>area  | (V)<br>15<br>10<br>5<br>0<br><i>I I I I I I I I I I</i> | P   |  |   |        |

| Terminal No.<br>(Wire color) |        | Description                              |                  |   |  | Value   |  |
|------------------------------|--------|--|------------------|---|--|---|--|
| (Wire                        | color) | Signal name                              | Input/<br>Output | Condition   |  | (Approx.)   |  |
| 76                           | Ground | Driver door antenna<br>(–)               | Output           | When the driv-<br>er door request<br>switch is oper-<br>ated with igni-<br>tion switch<br>OFF | When Intelligent Key is in the antenna detection area            | (V)<br>15<br>0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1 |  |
| (V)                          |        |  |                  |   | When Intelligent Key is not<br>in the antenna detection<br>area  | (V)<br>15<br>0<br>0<br>1 s<br>0<br>1 s<br>JMKIA0063GB                                       |  |
| 77                           | Ground | Driver door antenna<br>(+)               | Output           | When the driv-<br>er door request<br>switch is oper-<br>ated with igni-<br>tion switch<br>OFF | When Intelligent Key is in the antenna detection area            | (V)<br>15<br>10<br>0<br>1 s<br>JMKIA0062GB  |  |
| (LG)                         |        |  |                  |   | When Intelligent Key is not<br>in the antenna detection<br>area  | (V)<br>15<br>0<br>0<br>1 s<br>JMKIA0063GB   |  |
| 78                           | Ground | Room antenna 1 (–)<br>(Instrument panel) | Output           | Ignition switch   | When Intelligent Key is in the passenger compart-<br>ment        | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0062GB   |  |
| (Y)                          |        |  |                  | OFF   | When Intelligent Key is not<br>in the passenger compart-<br>ment | (V)<br>15<br>10<br>5<br>0<br>1 s<br>1 s<br>JMKIA0063GB                                      |  |

### < ECU DIAGNOSIS INFORMATION >

| Terminal No.<br>(Wire color) |        | Description   |                  |                         |   | Value  |  |
|------------------------------|--------|---|------------------|-------------------------|---|--|--|
| (vvire<br>+                  | -      | Signal name   | Input/<br>Output |                         | Condition   | (Approx.)  |  |
| 79<br>(BR)                   | Ground | Room antenna 1 (+)<br>(Instrument panel)            | Output           | lgnition switch<br>OFF  | When Intelligent Key is in the passenger compart-<br>ment                                 | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0062GB                                      |  |
|                              |        |   |                  |                         | When Intelligent Key is not<br>in the passenger compart-<br>ment                          | (V)<br>15<br>10<br>5<br>0<br>1 s<br>JMKIA0063GB                                      |  |
| 80<br>(GR)                   | Ground | NATS antenna amp.                                   | Input/<br>Output | During waiting          | Ignition switch is pressed<br>while inserting the Intelli-<br>gent Key into the key slot. | Just after pressing ignition<br>switch. Pointer of tester should<br>move.            |  |
| 81<br>(W)                    | Ground | NATS antenna amp.                                   | Input/<br>Output | During waiting          | Ignition switch is pressed<br>while inserting the Intelli-<br>gent Key into the key slot. | Just after pressing ignition<br>switch. Pointer of tester should<br>move.            |  |
| 82<br>(SB)                   | Ground | Ignition relay [Fuse<br>block (J/B)] control        | Output           | Ignition switch         | OFF or ACC<br>ON  | 0 V<br>12 V  |  |
| 83<br>(Y)                    | Ground | Remote keyless entry<br>receiver communica-<br>tion | Input/<br>Output | During waiting          |   | (V)<br>10<br>5<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |  |
|                              |        |   |                  | When operating gent Key | g either button on the Intelli-   | (V)<br>15<br>10<br>50<br>1 ms<br>JMKIA0065GB   |  |
|                              |        |   |                  |                         |   |  |  |

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|            | nal No.     | Description                   |                   |                                       |  | Value   |  |
|------------|-------------|-------------------------------|-------------------|---------------------------------------|--|---|--|
| (Wire<br>+ | color)<br>– | Signal name                   | Input/<br>Output  | Condition                             |  | (Approx.)   |  |
|            |             | Combination switch<br>INPUT 5 | tion switch Input |                                       | All switches OFF<br>(Wiper volume dial 4)  | (V)<br>15<br>10<br>5<br>0<br>2 ms<br>JPMIA0041GB<br>1.4 V |  |
| 87<br>(Y)  |             |                               |                   | Combination<br>switch                 | Front fog lamp switch ON<br>(Wiper volume dial 4)  | (V)<br>15<br>10<br>5<br>0<br>2 ms<br>JPMIA0037GB<br>1.3 V |  |
|            |             |                               |                   | low wit<br>• Wipe<br>• Wipe<br>• Wipe | Any of the conditions be-<br>low with all switches OFF<br>• Wiper volume dial 1<br>• Wiper volume dial 2<br>• Wiper volume dial 6<br>• Wiper volume dial 7 | (V)<br>15<br>10<br>5<br>0<br>2 ms<br>JPMIA0040GB<br>1.3 V |  |

#### Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + \_ Output В (V 15 10 All switches OFF ٢ С (Wiper volume dial 4) 2 ms JPMIA0041GB D 1.4 V $( \setminus$ 15 10 Ε Lighting switch HI ſ (Wiper volume dial 4) F 2 ms JPMIA0036GB 1.3 V Combination 88 Combination switch Ground Input (BG) **INPUT 3** switch 15 10 Н Lighting switch 2ND n (Wiper volume dial 4) 2 ms JPMIA0037GB 1.3 V J 15 Any of the conditions be-10 low with all switches OFF 0 · Wiper volume dial 1 Κ · Wiper volume dial 2 · Wiper volume dial 3 2 ms JPMIA0040GB INL 1.3 V Push-button ig-0 V Pressed 89 Push-button ignition Ground Input nition switch (BR) switch (Push switch) Not pressed Battery voltage (push switch) Μ 90 Input/ Ground CAN-L (P) Output 91 Input/ Ν CAN-H Ground (L) Output OFF 0 V 0 (V 15 10 Ρ 92 Key slot illumi-Ground Key slot illumination Output Blinking (LG) nation 1 s JPMIA0015GB 6.5 V ON 12 V

# BCM (BODY CONTROL MODULE)

| Termir                                  | al No  | Description  |        |                                     |  |  |
|---|--------|--|--------|-------------------------------------|--|--|
| Terminal No.<br>(Wire color)            |        |  |        | Condition                           |  | Value  |
| +                                       | _      | Signal name  | Output |                                     |  | (Approx.)  |
| 93<br>(GR)                              | Ground | ON indicator lamp  | Output | Ignition switch                     | OFF (LOCK indicator is<br>not illuminated)<br>ON | Battery voltage  |
| 95                                      | Ground |  | Output | Ignition switch                     | OFF  | 0 V  |
| (BG)                                    | Ground | ACC relay control  | Output | Ignition switch                     | ACC or ON  | 12 V   |
| 96<br>(GR)                              | Ground | A/T shift selector (De-<br>tention switch) power<br>supply | Output |                                     | _  | 12 V   |
| 97<br>(L)                               | Ground | Steering lock condi-<br>tion No. 1                         | Input  | Steering lock                       | LOCK status<br>UNLOCK status                     | 0 V<br>12 V  |
|   |        | Ota a sinan ka aka a sa di                                 |        |                                     | LOCK status                                      | 12 V   |
| 98<br>(P)                               | Ground | Steering lock condi-<br>tion No. 2                         | Input  | Steering lock                       | UNLOCK status                                    | 0 V  |
|   |        | Selector lever P posi-                                     |        |                                     | P position                                       | 0 V  |
|   |        | tion switch (A/T mod-<br>els)                              | Input  | Selector lever                      | Any position other than P                        | 12 V   |
| 99                                      |        | ASCD clutch switch   |        | ASCD clutch<br>switch               | OFF (Clutch pedal is de-<br>pressed)             | 0 V  |
| (R)* <sup>1</sup><br>(BR)* <sup>2</sup> | Ground | (M/T models without ICC)                                   |        |                                     | ON (Clutch pedal is not depressed)               | 12 V   |
|   |        | ICC clutch switch (M/<br>T models with ICC)                |        | ICC clutch<br>switch                | OFF (Clutch pedal is de-<br>pressed)             | 0 V  |
|   |        |  |        |                                     | ON (Clutch pedal is not depressed)               | 12 V   |
|   |        |  |        |                                     | ON (Pressed)                                     | 0 V  |
| 100<br>(Y)                              | Ground | Passenger door re-<br>quest switch                         | Input  | Passenger<br>door request<br>switch | OFF (Not pressed)                                | (V)<br>15<br>0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 |
|   |        |  |        |                                     | ON (Pressed)                                     | 0 V  |
| 101<br>(P)                              | Ground | Driver door request<br>switch                              | Input  | Driver door re-<br>quest switch     | OFF (Not pressed)                                | (V)<br>15<br>10<br>5<br>10<br>10<br>ms<br>JPMIA0016GB<br>1.0 V       |
| 102                                     | Ground | Blower fan motor re-                                       | Output | Ignition switch                     | OFF or ACC                                       | 0 V  |
| (BG)                                    |        | lay control  |        |                                     | ON   | 12 V   |
| 103<br>(P)                              | Ground | Remote keyless entry<br>receiver power sup-<br>ply         | Output | Ignition switch OFF                 |  | 12 V   |
| 106<br>(SB) G                           | Ground | und Steering lock unit power supply Ou                     | Output | tput Ignition switch                | OFF or ACC                                       | 12 V   |
|   | Ground |  | Output |                                     | ON   | 0 V  |

#### Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + \_ Output В (V 15 10 Ō All switches OFF С 2 ms JPMIA0041GB D 1.4 V (V) 15 10 Ε 0 Turn signal switch LH F 2 ms JPMIA0037GB 1.3 V G (V 15 10 Combination Н 107 Combination switch switch Ground Turn signal switch RH 0 Input **INPUT 1** (LG) (Wiper volume dial 4) 2 ms JPMIA0036GB 1.3 V J (V 15 10 0 Front wiper switch LO Κ 2 ms JPMIA0038GB INL 1.3 V (V 15 Μ 10 5 0 Front washer switch ON Ν 2 ms JPMIA0039GB 1.3 V Ο

# **BCM (BODY CONTROL MODULE)**

#### < ECU DIAGNOSIS INFORMATION >

Revision: 2011 November

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| Terminal No.<br>(Wire color) |        | Description                         |                  |   |   | Value   |
|------------------------------|--------|-------------------------------------|------------------|---|---|---|
| +                            | -      | Signal name                         | Input/<br>Output | Condition   |   | (Approx.)   |
|                              | Ground | Combination switch<br>INPUT 4 Input | laput            | All switches OFF<br>(Wiper volume dial 4)   |   | (V)<br>15<br>10<br>5<br>0<br>2 ms<br>JPMIA0041GB<br>1.4 V |
| 108                          |        |                                     |                  | Combination   | Lighting switch AUTO<br>(Wiper volume dial 4)   | 10<br>5<br>0<br>2 ms<br>JPMIA0038GB                       |
| (R)                          |        |                                     |                  | Lighting switch 1ST<br>(Wiper volume dial 4)<br>Any of the conditions be-<br>low with all switches OFF<br>• Wiper volume dial 1<br>• Wiper volume dial 5<br>• Wiper volume dial 6 |   | (V)<br>15<br>10<br>2 ms<br>JPMIA0036GB<br>1.3 V           |
|                              |        |                                     |                  |   | (V)<br>15<br>10<br>2 ms<br>JPMIA0039GB<br>1.3 V |   |

#### Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + \_ Output В (V 15 10 ٢ All switches OFF С 2 m s JPMIA0041GB D 1.4 V (V) 15 10 Ε C Lighting switch PASS F 2 ms JPMIA0037GB 1.3 V G (V 15 10 Combination Н 109 switch Combination switch n Ground Input Lighting switch 2ND **INPUT 2** (Wiper volume (W) dial 4) 2 ms JPMIA0036GB 1.3 V J (V 15 10 Front wiper switch INT/ 0 Κ AUTO 2 ms JPMIA0038GB INL 1.3 V (V 15 Μ 10 5 Front wiper switch HI 0 Ν 2 ms JPMIA0040GB 1.3 V Ο ON 0 V Ρ 10 110 Ground Hazard switch Input Hazard switch Ę (G) ò OFF 10 ms JPMIA0012GB 1.1 V

# BCM (BODY CONTROL MODULE)

|             | nal No. | Description  |                  |                            |  |   |  |
|-------------|---------|--|------------------|----------------------------|--|---|--|
| (Wire<br>+  | color)  | Signal name  | Input/<br>Output |                            | Condition  | Value<br>(Approx.)  |  |
|             |         |  |                  |                            | LOCK status  | 12 V  |  |
| 111<br>(Y)  | Ground  | Steering lock unit communication                             | Input/<br>Output |                            | LOCK or UNLOCK   | (V)<br>15<br>0<br>50<br>50<br>ms<br>JMKIA0066GB                                 |  |
|             |         |  |                  |                            | For 15 seconds after UN-<br>LOCK                               | 12 V  |  |
|             |         |  |                  |                            | 15 seconds or later after<br>UNLOCK                            | 0 V   |  |
| 112<br>(R)  | Ground  | Light and rain sensor<br>serial link                         | Input/<br>Output | Ignition switch ON         |  | (V)<br>15<br>10<br>5<br>0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 |  |
| 113<br>(BG) | Ground  | Optical sensor   | Input            | Ignition switch<br>ON      | When bright outside of the vehicle<br>When dark outside of the | Close to 5 V<br>Close to 0 V  |  |
|             |         |  |                  |                            | vehicle<br>OFF (Clutch pedal is not<br>depressed)              | 0 V   |  |
| 114<br>(R)  | Ground  | Clutch interlock<br>switch                                   | Input            | Clutch interlock<br>switch | ON (Clutch pedal is de-<br>pressed)                            | Battery voltage   |  |
| 116<br>(SB) | Ground  | Stop lamp switch 1   | Input            |                            |  | Battery voltage   |  |
|             |         | Stop lamp switch 2   |                  | Stop lamp                  | OFF (Brake pedal is not depressed)                             | 0 V   |  |
| 118         | Ground  | (Without ICC)  | Input            | switch                     | ON (Brake pedal is de-<br>pressed)                             | Battery voltage   |  |
| (BR)        |         | Stop lamp switch 2   |                  | depressed) and             | h OFF (Brake pedal is not<br>ICC brake hold relay OFF          | 0 V   |  |
|             |         | (With ICC)   |                  |                            | h ON (Brake pedal is de-<br>brake hold relay ON                | Battery voltage   |  |
| 119<br>(SB) | Ground  | Front door lock as-<br>sembly driver side<br>(Unlock sensor) | Input            | Driver door                | LOCK status<br>(Unlock sensor switch<br>OFF)                   | (V)<br>15<br>0<br>10<br>10<br>ms<br>JPMIA0012GB<br>1.1 V                        |  |
|             |         |  |                  |                            | UNLOCK status<br>(Unlock switch sensor<br>ON)                  | 0 V   |  |

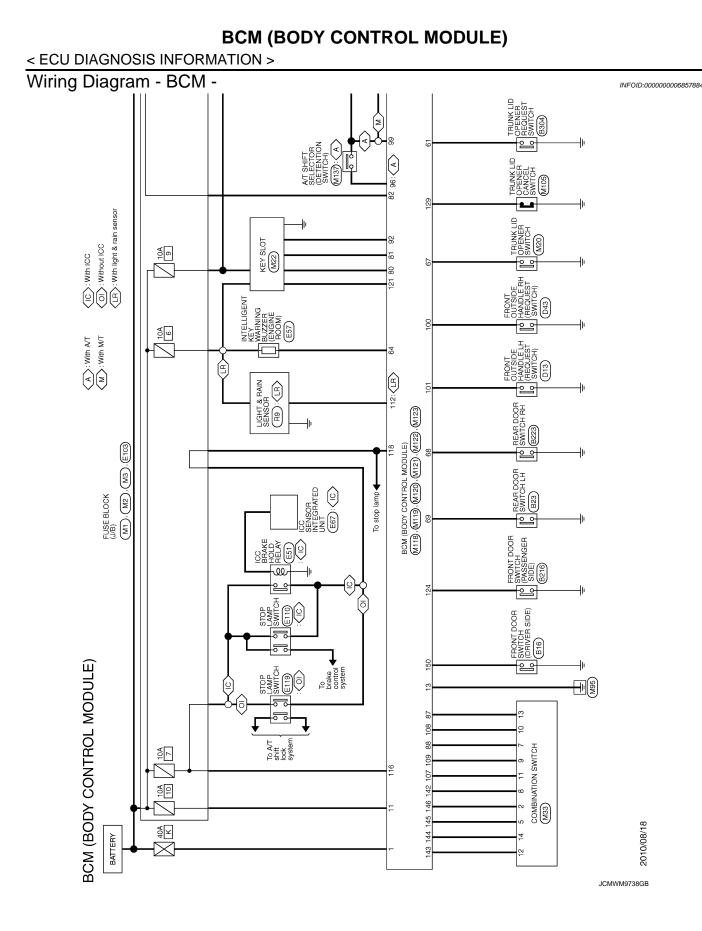
| Terminal No.<br>(Wire color) |        | Description                                 |                  |  |                               | Value  |  |
|------------------------------|--------|---|------------------|--|-------------------------------|--|--|
| (Wire<br>+                   | color) | Signal name                                 | Input/<br>Output |  | Condition                     | (Approx.)  |  |
| 121                          | Ground | Key slot switch                             | Input            | When the Intellig                                  | gent Key is inserted into key | 12 V   |  |
| (SB)                         | Ground | Ney slot switch                             | mput             | When the Intellig key slot                         | gent Key is not inserted into | 0 V  |  |
| 123<br>(V)                   | Ground | IGN feedback                                | Input            | Ignition switch                                    | OFF or ACC<br>ON              | 0 V<br>Battery voltage   |  |
| 124<br>(R)                   | Ground | Passenger door<br>switch                    | Input            | Passenger OFF (Door close)<br>door switch          |                               | (V)<br>15<br>10<br>50<br>10 ms<br>JPMIA0011GB<br>11.8 V  |  |
|                              |        |   |                  |  | ON (Door open)                | 0 V  |  |
| 129<br>(BG)                  | Ground | Trunk lid opener can-<br>cel switch         | Input            | Trunk lid open-<br>er cancel<br>switch             | CANCEL                        | (V)<br>15<br>10<br>5<br>0<br>  |  |
|                              |        |   |                  |  | ON                            | JPMIA0012GB<br>1.1 V<br>0 V  |  |
| 132<br>(V)                   | Ground | Power window switch communication           | Input/<br>Output | Ignition switch C                                  | DN                            | (V)<br>15<br>10<br>5<br>0<br>10 ms<br>JPMIA0013GB  |  |
|                              |        |   |                  |  |                               | 10.2 V   |  |
|                              |        |   |                  | Ignition switch C                                  | 1                             | 12 V   |  |
|                              |        |   |                  |  | ON (Tail lamps OFF)           | 9.5 V<br><b>NOTE:</b><br>The pulse width of this wave is<br>varied by the illumination bright-<br>ening/dimming level. |  |
| 133<br>(L)                   | Ground | Push-button ignition<br>switch illumination | Output           | Push-button ig-<br>nition switch il-<br>lumination | ON (Tail lamps ON)            | (V)<br>15<br>10<br>5<br>0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1                 |  |
|                              |        |   |                  |  | OFF                           | 0 V  |  |
| 134<br>(LG)                  | Ground | LOCK indicator lamp                         | Output           | LOCK indicator lamp                                | OFF<br>ON                     | Battery voltage  |  |
| (20)<br>137<br>(BG)          | Ground | Receiver and sensor ground                  | Input            | Ignition switch C                                  |                               | 0 V  |  |

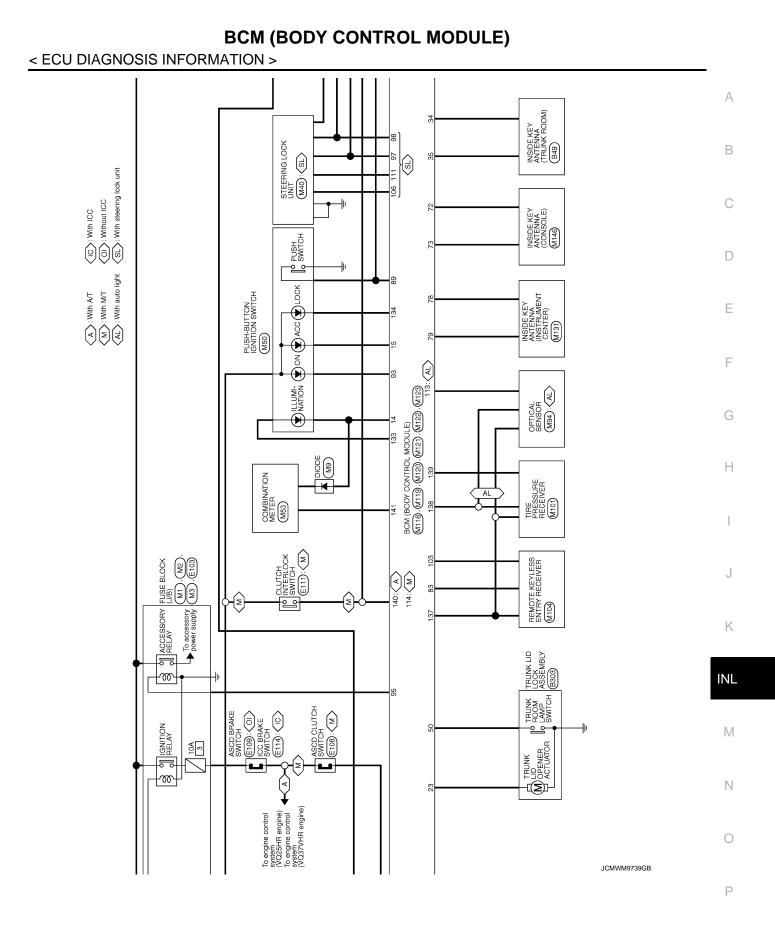
|             | nal No.       | Description                               |                  |   |   | Value  |
|-------------|---------------|---|------------------|---|---|--|
| (Wire<br>+  | e color)<br>— | Signal name                               | Input/<br>Output |   | Condition   | (Approx.)  |
| 138         | <u> </u>      | Receiver and sensor                       | <u> </u>         |   | OFF   | 0 V  |
| (V)         | Ground        | power supply                              | Output           | Ignition switch                                   | ACC or ON   | 5.0 V  |
| 139         | Ground        | Tire pressure receiv-<br>er communication | Input/           | Ignition switch<br>ON                             | Standby state   | (V)<br>6<br>4<br>2<br>0<br>• • 0.2s<br>OCC3881D        |
| (L)         |               | er communication                          | Output           |   | When receiving the signal from the transmitter  | (V)<br>6<br>2<br>0<br>+ 0.2s<br>OCC3880D               |
| 140         | Ground        | Selector lever P/N                        | Input            | Selector lever                                    | P or N position   | 12 V   |
| (B)         | Croana        | position                                  | mput             |   | Except P and N positions  | 0 V  |
|             |               |   |                  |   | ON  | 0 V  |
| 141<br>(W)  | Ground        | Security indicator                        | Output           | Security indica-<br>tor                           | Blinking  | (V)<br>15<br>0<br>1 s<br>JPMIA0014GB<br>11.3 V         |
|             |               |   |                  |   | OFF   | 12 V   |
| 142<br>(BR) | Ground        | Combination switch<br>OUTPUT 5            | Output           | Combination<br>switch<br>(Wiper volume<br>dial 4) | All switches OFF<br>Lighting switch 1ST<br>Lighting switch HI<br>Lighting switch 2ND<br>Turn signal switch RH   | 0 V<br>(V)<br>15<br>0<br>2 ms<br>JPMIA0031GB<br>10.7 V |
|             |               |   |                  |   | All switches OFF<br>(Wiper volume dial 4)<br>Front wiper switch HI  | 0 V  |
| 143<br>(P)  | Ground        | Combination switch<br>OUTPUT 1            | Output           | Combination<br>switch                             | <ul> <li>Front wiper switch Hi<br/>(Wiper volume dial 4)</li> <li>Any of the conditions be-<br/>low with all switches OFF</li> <li>Wiper volume dial 1</li> <li>Wiper volume dial 2</li> <li>Wiper volume dial 3</li> <li>Wiper volume dial 6</li> <li>Wiper volume dial 7</li> </ul> | (V)<br>15<br>0<br>2 ms<br>JPMIA0032GB<br>10.7 V        |

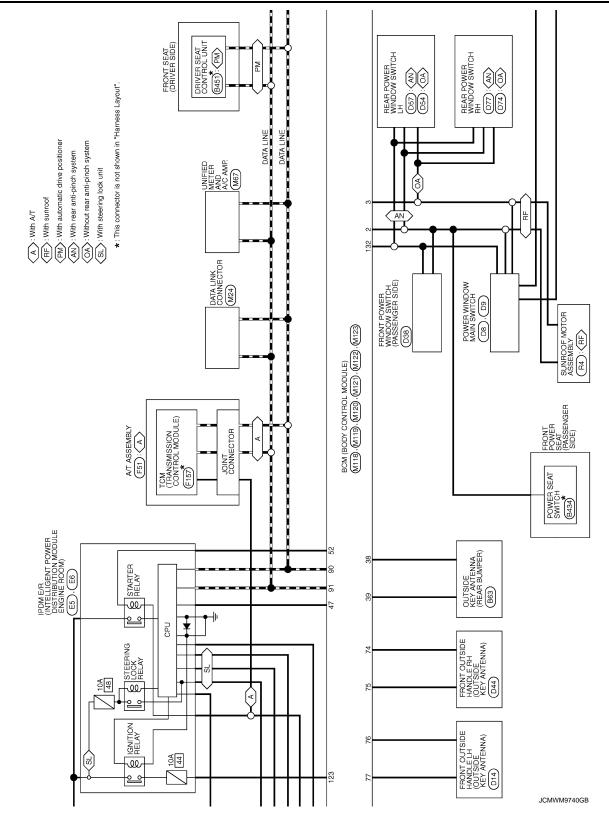
#### < ECU DIAGNOSIS INFORMATION >

| Terminal No.<br>(Wire color)<br>+ – |        | Description<br>Signal name<br>Input/ Output |        | Condition   |   | Value<br>(Approx.)   |  |
|-------------------------------------|--------|---|--------|---|---|--|--|
|                                     |        |   |        |   |   |  |  |
|                                     |        |   |        |   | Front washer switch ON (Wiper volume dial 4)  | ( <u>v)</u>  |  |
| 144<br>(G)                          | Ground | Combination switch<br>OUTPUT 2              | Output | Combination<br>switch                             | Any of the conditions be-<br>low with all switches OFF<br>• Wiper volume dial 1<br>• Wiper volume dial 5<br>• Wiper volume dial 6 | 15<br>10<br>5<br>0<br>2 ms<br>JPMIA0033GB                  |  |
|                                     |        |   |        |   | -   | 10.7 V   |  |
|                                     |        |   |        |   | All switches OFF  | 0 V  |  |
|                                     |        |   |        |   | Front wiper switch INT/<br>AUTO   | (V)  |  |
| 145                                 |        | Combination switch                          |        | Combination<br>switch<br>(Wiper volume<br>dial 4) | Front wiper switch LO   |  |  |
| (L)                                 | Ground | OUTPUT 3                                    | Output |   | Lighting switch AUTO  | 5<br>2 ms<br>JPMIA0034GB                                   |  |
|                                     |        |   |        |   |   | 10.7 V   |  |
|                                     |        | Combination switch                          | Output | Combination switch                                | All switches OFF  | 0 V  |  |
|                                     |        |   |        |   | Front fog lamp switch ON  |  |  |
|                                     |        |   |        |   | Lighting switch 2ND   | (V)<br>15  |  |
| 146                                 | Ground |   |        |   | Lighting switch PASS  |  |  |
| (SB)                                |        | OUTPUT 4                                    | Calpar | (Wiper volume<br>dial 4)                          | Turn signal switch LH   | 0<br>2 ms<br>JPMIA0035GB<br>10.7 V                         |  |
|                                     |        |   |        |   |   |  |  |
| 150<br>(GR)                         | Ground | Driver door switch                          | Input  | Driver door<br>switch                             | OFF (Door close)  | (V)<br>15<br>10<br>5<br>0<br>10 ms<br>JPMA0011GB<br>11 O V |  |
|                                     |        |   |        |   | ON (Door open)  | 11.8 V<br>0 V  |  |
| 454                                 |        |   |        | David I.  | Active  | 0 V  |  |
| 151<br>(G)                          | Ground | Rear window defog-<br>ger relay control     | Output | Rear window<br>defogger                           | Not activated   | Battery voltage  |  |
|                                     | models | <b>, , , , , , , , , ,</b>                  |        | 00-   |   |  |  |

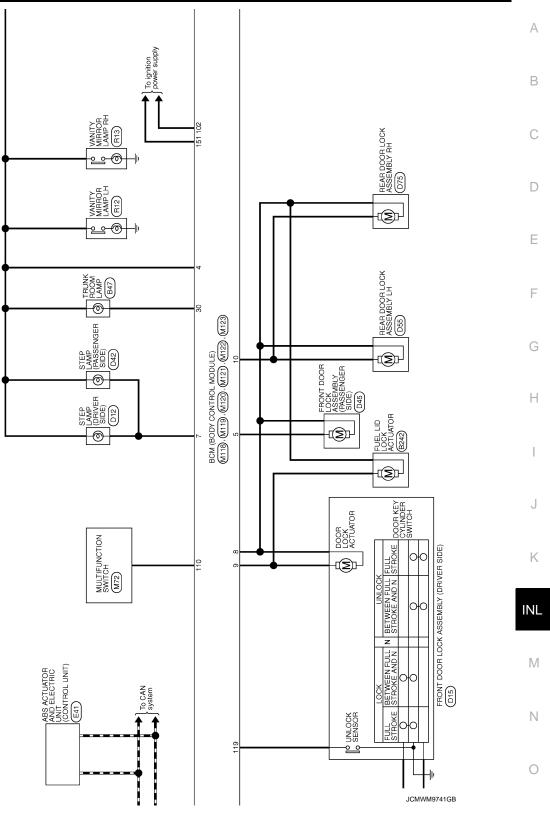
• \*2: M/T models

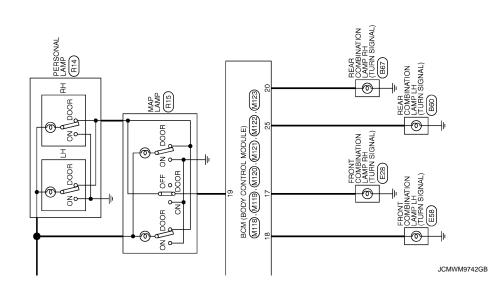




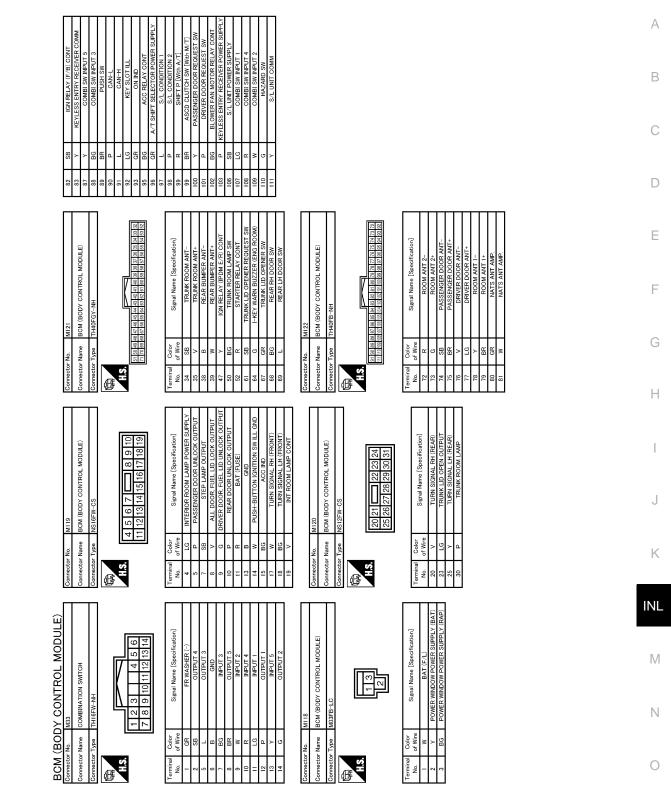


< ECU DIAGNOSIS INFORMATION >



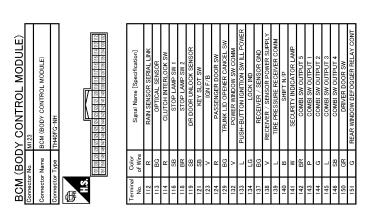


#### < ECU DIAGNOSIS INFORMATION >



JCMWM9743GB

< ECU DIAGNOSIS INFORMATION >



JCMWM9744GB

Fail-safe

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

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| Display contents of CONSULT | Fail-safe               | Cancellation  |
|-----------------------------|-------------------------|---|
| B2013: ID DISCORD BCM-S/L   | Inhibit engine cranking | Erase DTC   |
| B2014: CHAIN OF S/L-BCM     | Inhibit engine cranking | Erase DTC   |
| B2190: NATS ANTENNA AMP     | Inhibit engine cranking | Erase DTC   |
| B2191: DIFFERENCE OF KEY    | Inhibit engine cranking | Erase DTC   |
| B2192: ID DISCORD BCM-ECM   | Inhibit engine cranking | Erase DTC   |
| B2193: CHAIN OF BCM-ECM     | Inhibit engine cranking | Erase DTC   |
| B2195: ANTI-SCANNING        | Inhibit engine cranking | Ignition switch $ON \rightarrow OFF$  |
| B2557: VEHICLE SPEED        | Inhibit steering lock   | When normal vehicle speed signals are received from ABS actua-<br>tor and electric unit (control unit) for 500 ms   |
| B2560: STARTER CONT RELAY   | Inhibit engine cranking | <ul> <li>500 ms after the following CAN signal communication status becomes consistent</li> <li>Starter control relay signal</li> <li>Starter relay status signal</li> </ul>  |
| B2601: SHIFT POSITION       | Inhibit steering lock   | <ul> <li>500 ms after the following signal reception status becomes consistent</li> <li>Selector lever P position switch signal</li> <li>P range signal (CAN)</li> </ul>  |
| B2602: SHIFT POSITION       | Inhibit steering lock   | <ul> <li>5 seconds after the following BCM recognition conditions are fulfilled</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P position switch signal: Except P position (12 V)</li> <li>Vehicle speed: 4 km/h (2.5 MPH) or more</li> </ul>   |
| B2603: SHIFT POSI STATUS    | Inhibit steering lock   | <ul> <li>500 ms after the following BCM recognition conditions are fulfilled</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P position switch signal: Except P position (12 V)</li> <li>Selector lever P/N position signal: Except P and N positions (0 V)</li> </ul>   |
| B2604: PNP/CLUTCH SW        | Inhibit steering lock   | <ul> <li>500 ms after any of the following BCM recognition conditions are fulfilled</li> <li>Status 1</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: P and N position (12 V)</li> <li>P range signal or N range signal (CAN): ON</li> <li>Status 2</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>P range signal and N range signal (CAN): OFF</li> </ul> |
| B2605: PNP/CLUTCH SW        | Inhibit steering lock   | <ul> <li>500 ms after any of the following BCM recognition conditions are fulfilled</li> <li>Status 1</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>Interlock/PNP switch signal (CAN): OFF</li> <li>Status 2</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: P or N position (12 V)</li> <li>PNP switch signal (CAN): ON</li> </ul>                       |
| B2606: S/L RELAY            | Inhibit engine cranking | <ul> <li>500 ms after the following CAN signal communication status becomes consistent</li> <li>Steering lock relay signal (Request signal)</li> <li>Steering lock relay signal (Condition signal)</li> </ul>   |
| B2607: S/L RELAY            | Inhibit engine cranking | <ul> <li>500 ms after the following CAN signal communication status has becomes consistent</li> <li>Steering lock relay signal (Request signal)</li> <li>Steering lock relay signal (Condition signal)</li> </ul>   |

#### < ECU DIAGNOSIS INFORMATION >

| Display contents of CONSULT | Fail-safe   | Cancellation   |
|-----------------------------|---|--|
| B2608: STARTER RELAY        | Inhibit engine cranking   | <ul> <li>500 ms after the following signal communication status becomes consistent</li> <li>Starter motor relay control signal</li> <li>Starter relay status signal (CAN)</li> </ul>   |
| B2609: S/L STATUS           | <ul><li>Inhibit engine cranking</li><li>Inhibit steering lock</li></ul>         | <ul> <li>When the following steering lock conditions agree</li> <li>BCM steering lock control status</li> <li>Steering lock condition No. 1 signal status</li> <li>Steering lock condition No. 2 signal status</li> </ul>  |
| B260A: IGNITION RELAY       | Inhibit engine cranking   | <ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (12 V)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>   |
| B260F: ENG STATE SIG LOST   | Maintains the power supply<br>position attained at the time<br>of DTC detection | <ul><li>When any of the following conditions are fulfilled</li><li>Power position changes to ACC</li><li>Receives engine status signal (CAN)</li></ul>   |
| B2612: S/L STATUS           | <ul> <li>Inhibit engine cranking</li> <li>Inhibit steering lock</li> </ul>      | <ul> <li>When any of the following conditions are fulfilled</li> <li>Steering lock unit status signal (CAN) is received normally</li> <li>The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)</li> </ul>  |
| B2617: BCM                  | Inhibit engine cranking   | 1 second after the starter motor relay control inside BCM becomes normal   |
| B2618: BCM                  | Inhibit engine cranking   | 1 second after the ignition relay (IPDM E/R) control inside BCM be-<br>comes normal  |
| B2619: BCM                  | Inhibit engine cranking   | 1 second after the steering lock unit power supply output control in-<br>side BCM becomes normal   |
| B261E: VEHICLE TYPE         | Inhibit engine cranking   | BCM initialization   |
| B26E8: CLUTCH SW            | Inhibit engine cranking   | <ul> <li>When any of the following BCM recognition conditions are fulfilled</li> <li>Status 1</li> <li>Clutch switch signal (CAN from ECM): ON</li> <li>Clutch interlock switch signal: OFF (0 V)</li> <li>Status 2</li> <li>Clutch switch signal (CAN from ECM): OFF</li> <li>Clutch interlock switch signal: ON (Battery voltage)</li> </ul> |
| B26E9: S/L STATUS           | <ul> <li>Inhibit engine cranking</li> <li>Inhibit steering lock</li> </ul>      | <ul> <li>When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled</li> <li>Steering condition No. 1 signal: LOCK (0 V)</li> <li>Steering condition No. 2 signal: LOCK (12 V)</li> </ul>   |

## DTC Inspection Priority Chart

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

| Priority | DTC   |
|----------|---|
| 1        | B2562: LOW VOLTAGE  |
| 2        | U1000: CAN COMM     U1010: CONTROL UNIT(CAN)  |
| 3        | <ul> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERENCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2195: ANTI-SCANNING</li> </ul> |

## < ECU DIAGNOSIS INFORMATION >

| Priority | DTC   |     |
|----------|---|-----|
|          | B2013: ID DISCORD BCM-S/L     B2014: CHAIN OF S/L-BCM     B2552: ICNITION PELAX   | A   |
|          | <ul> <li>B2553: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VELUCI E OPEED</li> </ul>  | В   |
|          | <ul> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> </ul>         | С   |
|          | <ul> <li>B2604: PNP/CLUTCH SW</li> <li>B2605: PNP/CLUTCH SW</li> <li>B2606: S/L RELAY</li> <li>B2607: S/L RELAY</li> </ul>  | D   |
|          | <ul> <li>B2608: STARTER RELAY</li> <li>B2609: S/L STATUS</li> <li>B260A: IGNITION RELAY</li> </ul>  | E   |
| 4        | <ul> <li>B260B: STEERING LOCK UNIT</li> <li>B260C: STEERING LOCK UNIT</li> <li>B260D: STEERING LOCK UNIT</li> <li>B260F: ENG STATE SIG LOST</li> <li>B2612: S/L STATUS</li> </ul>   | F   |
|          | <ul> <li>B2612: S/L STATUS</li> <li>B2614: BCM</li> <li>B2615: BCM</li> <li>B2616: BCM</li> <li>B2617: BCM</li> </ul>   | G   |
|          | <ul> <li>B2618: BCM</li> <li>B2619: BCM</li> <li>B261A: PUSH-BTN IGN SW</li> </ul>  | Н   |
|          | <ul> <li>B261E: VEHICLE TYPE</li> <li>B26E8: CLUTCH SW</li> <li>B26E9: S/L STATUS</li> <li>B26EA: KEY REGISTRATION</li> </ul>   | I   |
|          | C1729: VHCL SPEED SIG ERR     U0415: VEHICLE SPEED  | J   |
|          | C1704: LOW PRESSURE FL     C1705: LOW PRESSURE FR     C1706: LOW PRESSURE RR     C1707: LOW PRESSURE RL     C1707: LOW PRESSURE RL  | К   |
| 5        | <ul> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> </ul>  | INL |
|          | <ul> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RL</li> <li>C1734: CONTROL UNIT</li> </ul> | Μ   |
| 6        | B2621: INSIDE ANTENNA     B2622: INSIDE ANTENNA     B2623: INSIDE ANTENNA   | N   |
|          |   | 0   |

## DTC Index

#### NOTE:

The details of time display are as follows.

CRNT: A malfunction is detected now.

• PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-15, "COM-MON ITEM : CONSULT-III Function (BCM - COMMON ITEM)"</u>.

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### < ECU DIAGNOSIS INFORMATION >

| CONSULT display  | Fail-safe | Freeze Frame Data<br>•Vehicle Speed<br>•Odo/Trip Meter<br>•Vehicle condition | Intelligent Key<br>warning lamp ON | Tire pressure<br>monitor warning<br>lamp ON | Refer-<br>ence page |
|--|-----------|--|------------------------------------|---|---------------------|
| No DTC is detected.<br>further testing<br>may be required. | _         | _  | _                                  | _   |                     |
| U1000: CAN COMM  | _         | _  | _                                  | _   | BCS-34              |
| U1010: CONTROL UNIT(CAN)                                   | _         | _  | _                                  |   | BCS-35              |
| U0415: VEHICLE SPEED                                       | _         | _  |                                    | _   | BCS-36              |
| B2013: ID DISCORD BCM-S/L                                  | ×         | ×  |                                    | _   | <u>SEC-55</u>       |
| B2014: CHAIN OF S/L-BCM                                    | ×         | ×  | _                                  | _   | SEC-56              |
| B2190: NATS ANTENNA AMP                                    | ×         | _  | _                                  | _   | <u>SEC-47</u>       |
| B2191: DIFFERENCE OF KEY                                   | ×         |  |                                    | _   | <u>SEC-50</u>       |
| B2192: ID DISCORD BCM-ECM                                  | ×         | _  | _                                  | _   | SEC-51              |
| B2193: CHAIN OF BCM-ECM                                    | ×         | _  | _                                  | _   | <u>SEC-53</u>       |
| B2195: ANTI-SCANNING                                       | ×         | _  | _                                  |   | <u>SEC-54</u>       |
| B2553: IGNITION RELAY                                      |           | ×  |                                    |   | PCS-49              |
| B2555: STOP LAMP   | _         | ×  |                                    |   | SEC-59              |
| B2556: PUSH-BTN IGN SW                                     | _         | ×  | ×                                  | _   | SEC-61              |
| B2557: VEHICLE SPEED                                       | ×         | ×  | ×                                  | _   | SEC-63              |
| B2560: STARTER CONT RELAY                                  | ×         | ×  | ×                                  | _   | SEC-64              |
| B2562: LOW VOLTAGE   | _         | ×  | _                                  | _   | BCS-37              |
| B2601: SHIFT POSITION                                      | ×         | ×  | ×                                  | _   | SEC-65              |
| B2602: SHIFT POSITION                                      | ×         | ×  | ×                                  |   | SEC-68              |
| B2603: SHIFT POSI STATUS                                   | ×         | ×  | ×                                  |   | <u>SEC-70</u>       |
| B2604: PNP/CLUTCH SW                                       | ×         | ×  | ×                                  |   | SEC-73              |
| B2605: PNP/CLUTCH SW                                       | ×         | ×  | ×                                  |   | <u>SEC-75</u>       |
| B2606: S/L RELAY   | ×         | ×  | ×                                  |   | SEC-77              |
| B2607: S/L RELAY   | ×         | ×  | ×                                  |   | SEC-78              |
| B2608: STARTER RELAY                                       | ×         | ×  | ×                                  | _   | SEC-80              |
| B2609: S/L STATUS  | ×         | ×  | ×                                  |   | SEC-82              |
| B260A: IGNITION RELAY                                      | ×         | ×  | ×                                  |   | PCS-51              |
| B260B: STEERING LOCK UNIT                                  |           | ×  | ×                                  |   | SEC-86              |
| B260C: STEERING LOCK UNIT                                  |           | ×  | ×                                  |   | <u>SEC-87</u>       |
| B260D: STEERING LOCK UNIT                                  |           | ×  | ×                                  |   | <u>SEC-88</u>       |
| B260F: ENG STATE SIG LOST                                  | ×         | ×  | ×                                  |   | SEC-89              |
| B2612: S/L STATUS  | ×         | ×  | ×                                  |   | <u>SEC-94</u>       |
| B2614: BCM   |           | ×  | ×                                  |   | PCS-53              |
| B2615: BCM   |           | ×  | ×                                  |   | PCS-55              |
| B2616: BCM   |           | ×  | ~<br>×                             |   | <u>PCS-57</u>       |
| B2617: BCM   |           | ×  | ~<br>×                             |   | <u>SEC-98</u>       |
| B2618: BCM   | ×         | × ×  | × ×                                |   | PCS-59              |
| B2619: BCM   | ×         | × ×  | ×                                  |   | <u>SEC-100</u>      |
| B2619: BCM<br>B261A: PUSH-BTN IGN SW                       | ×         | ×  | ×<br>×                             |   | <u>PCS-60</u>       |
| B261E: VEHICLE TYPE  |           | ×  | ×<br>× (Turn ON for 15<br>seconds) | _   | <u>SEC-101</u>      |

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### < ECU DIAGNOSIS INFORMATION >

| CONSULT display           | Fail-safe | Freeze Frame Data<br>•Vehicle Speed<br>•Odo/Trip Meter<br>•Vehicle condition | Intelligent Key<br>warning lamp ON | Tire pressure<br>monitor warning<br>lamp ON | Refer-<br>ence page | A |
|---------------------------|-----------|--|------------------------------------|---|---------------------|---|
| B2621: INSIDE ANTENNA     | —         | ×  | —                                  | —   | DLK-59              | В |
| B2622: INSIDE ANTENNA     | _         | ×  | —                                  | _   | DLK-61              |   |
| B2623: INSIDE ANTENNA     | _         | ×  | —                                  | —   | DLK-63              |   |
| B26E8: CLUTCH SW          | ×         | ×  | ×                                  | _   | <u>SEC-90</u>       | С |
| B26E9: S/L STATUS         | ×         | ×  | × (Turn ON for 15 seconds)         | _   | <u>SEC-92</u>       |   |
| B26EA: KEY REGISTRATION   |           | ×  | × (Turn ON for 15 seconds)         | _   | <u>SEC-93</u>       | D |
| C1704: LOW PRESSURE FL    |           | —  | _                                  | ×   |                     | Е |
| C1705: LOW PRESSURE FR    |           | —  | —                                  | ×   |                     |   |
| C1706: LOW PRESSURE RR    |           | —  | _                                  | ×   | <u>WT-24</u>        |   |
| C1707: LOW PRESSURE RL    |           | —  | _                                  | ×   |                     | F |
| C1708: [NO DATA] FL       |           | —  |                                    | ×   |                     |   |
| C1709: [NO DATA] FR       |           | —  | _                                  | ×   |                     |   |
| C1710: [NO DATA] RR       | _         | —  | —                                  | ×   | <u>WT-26</u>        | G |
| C1711: [NO DATA] RL       | _         | —  | —                                  | ×   |                     |   |
| C1716: [PRESSDATA ERR] FL |           | —  | _                                  | ×   |                     | Н |
| C1717: [PRESSDATA ERR] FR | —         | _  | —                                  | ×   | WT 20               |   |
| C1718: [PRESSDATA ERR] RR | —         | —  | —                                  | ×   | <u>WT-29</u>        |   |
| C1719: [PRESSDATA ERR] RL | —         | —  |                                    | ×   |                     |   |
| C1729: VHCL SPEED SIG ERR | —         | _  | —                                  | ×   | <u>WT-30</u>        |   |
| C1734: CONTROL UNIT       | _         | _  |                                    | ×   | <u>WT-31</u>        | J |

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#### < ECU DIAGNOSIS INFORMATION >

## COMBINATION METER

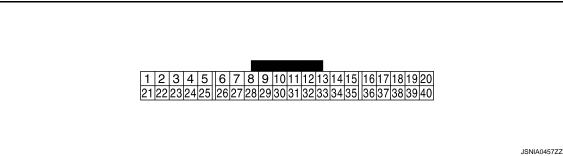
### **Reference Value**

INFOID:000000006857888

### VALUES ON THE DIAGNOSIS TOOL

Refer to MWI-86, "Reference Value".

#### **TERMINAL LAYOUT**

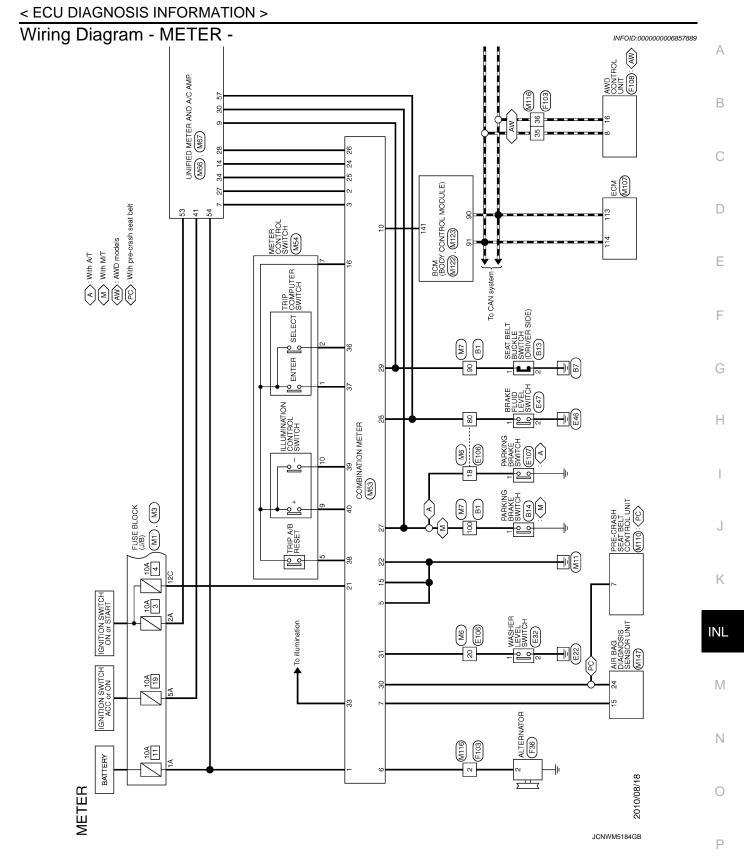


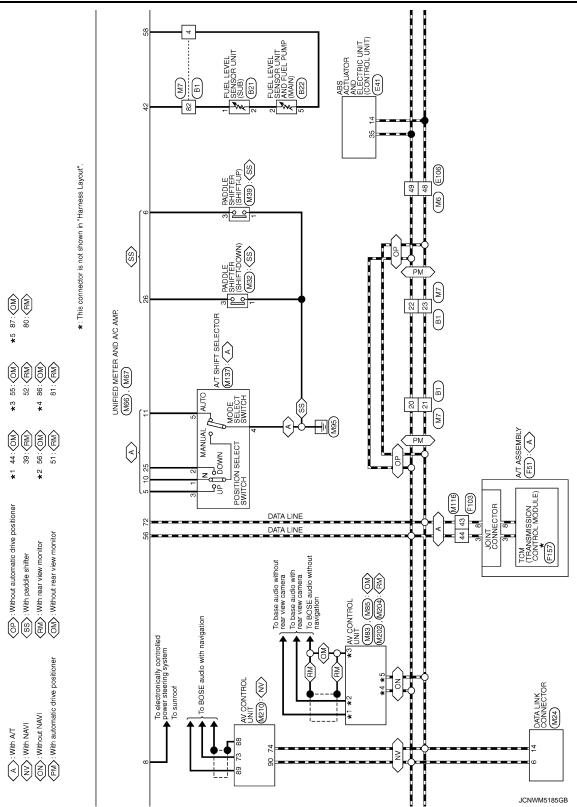
## PHYSICAL VALUES

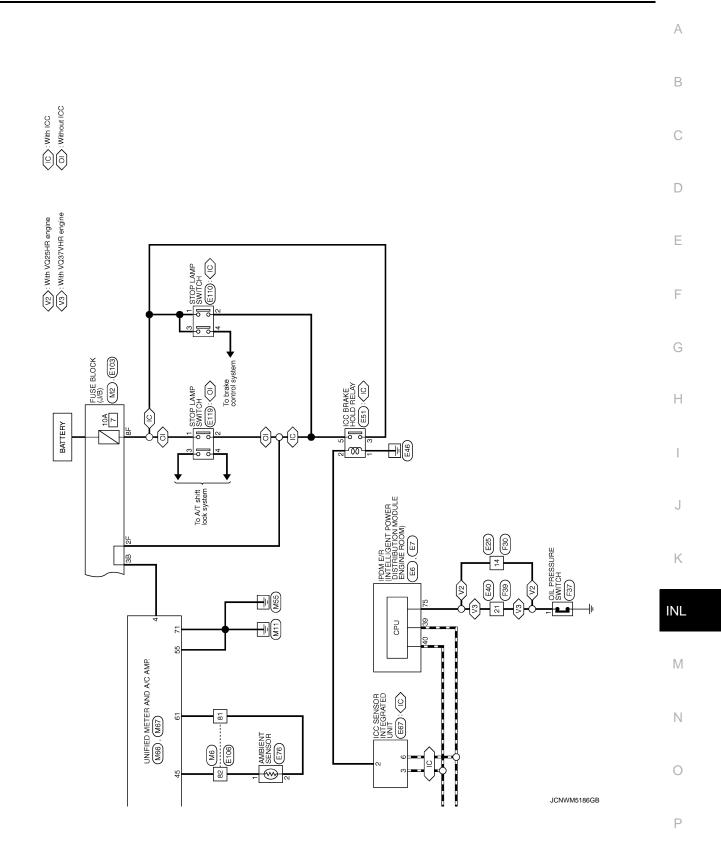
|           | nal No.<br>color) | Description                           |                  |                           | Condition                 | Value   |  |
|-----------|-------------------|---------------------------------------|------------------|---------------------------|---------------------------|---|--|
| +         | -                 | Signal name                           | Input/<br>Output | Contaition                |                           | (Approx.)   |  |
| 1<br>(V)  | Ground            | Battery power supply                  | Input            | Ignition<br>switch<br>OFF | _                         | Battery voltage   |  |
| 2<br>(LG) | Ground            | Communication signal<br>(METER→ AMP.) | Output           | Ignition<br>switch<br>ON  | _                         | (V)<br>6<br>2<br>0<br>2<br>2<br>0<br>2<br>2<br>0<br>2<br>0<br>2<br>0<br>0<br>7<br>5<br>7<br>5<br>7<br>5<br>7<br>5<br>7<br>7<br>7<br>7<br>7<br>7<br>7<br>7<br>7<br>7 |  |
| 3<br>(GR) | Ground            | Communication signal<br>(AMP.→ METER) | Input            | Ignition<br>switch<br>ON  | _                         | (V)<br>6<br>2<br>0<br>•••••••••••••••••••••••••••••••••   |  |
| 5<br>(B)  | Ground            | Ground                                | _                | Ignition<br>switch<br>ON  | _                         | 0 V   |  |
| 6         |                   |                                       |                  | Ignition                  | Charge warning lamp ON    | 0 V   |  |
| (W)       | Ground            | Alternator signal                     | Input            | switch<br>ON              | Charge warning lamp OFF   | 12 V  |  |
| 7         | 0                 |                                       | la i f           | Ignition                  | Air bag warning lamp ON   | 4 V   |  |
| (LG)      | Ground            | Air bag signal                        | Input            | switch<br>ON              | Air bag warning lamp OFF  | 0 V   |  |
| 10        | 0                 |                                       | la i f           | Ignition                  | Security warning lamp ON  | 0 V   |  |
| (W)       | Ground            | Security signal                       | Input            | switch<br>OFF             | Security warning lamp OFF | 12 V  |  |
| 15<br>(B) | Ground            | Ground                                | _                | Ignition<br>switch<br>ON  | _                         | 0 V   |  |

| Terminal No.<br>(Wire color) |        | Description                                   |                  |                          | Condition   | Value  |  |
|------------------------------|--------|---|------------------|--------------------------|---|--|--|
| +                            | _      | Signal name                                   | Input/<br>Output | Condition                |   | (Approx.)  |  |
| 16<br>(BR)                   | Ground | Meter control switch ground                   | _                | Ignition<br>switch<br>ON | _   | 0 V  |  |
| 21<br>(G)                    | Ground | Ignition signal                               | Input            | Ignition<br>switch<br>ON | _   | 12 V   |  |
| 22<br>(B)                    | Ground | Ground  | _                | Ignition<br>switch<br>ON | _   | 0 V  |  |
| 24<br>(BR)                   | Ground | Communication signal<br>(LCD→ AMP.)           | Output           | Ignition<br>switch<br>ON |   | (V)<br>15<br>10<br>5<br>0<br>↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓   |  |
| 25<br>(Y)                    | Ground | Communication signal $(AMP. \rightarrow LCD)$ | Input            | Ignition<br>switch<br>ON |   | (V)<br>6<br>2<br>0<br>4<br>2<br>0<br>4<br>2<br>0<br>4<br>2<br>0<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5 |  |
| 26<br>(R)                    | Ground | Vehicle speed signal<br>(8-pulse)             | Input            | lgnition<br>switch<br>ON | Speedometer operated<br>[When vehicle speed is ap-<br>prox. 40 km/h (25 MPH)] | NOTE:<br>The maximum voltage varies de-<br>pending on the specification<br>(destination unit).                                   |  |
|                              |        |   |                  |                          | Parking brake ON  | 0 V  |  |
| 27<br>(P)                    | Ground | Parking brake switch signal                   | Input            | lgnition<br>switch<br>ON | Parking brake OFF   | (V)<br>8<br>4<br>0<br>10 ms<br>JSNIA0007GB   |  |
| 28<br>(SB)                   | Ground | Brake fluid level switch sig-<br>nal          | Input            | Ignition<br>switch<br>ON | Brake fluid level is normal.  | (V)<br>10<br>0<br>10 ms<br>JSNIA0008GB   |  |
|                              |        |   |                  |                          | The brake fluid level is low-<br>er than the low level                        | 0 V  |  |

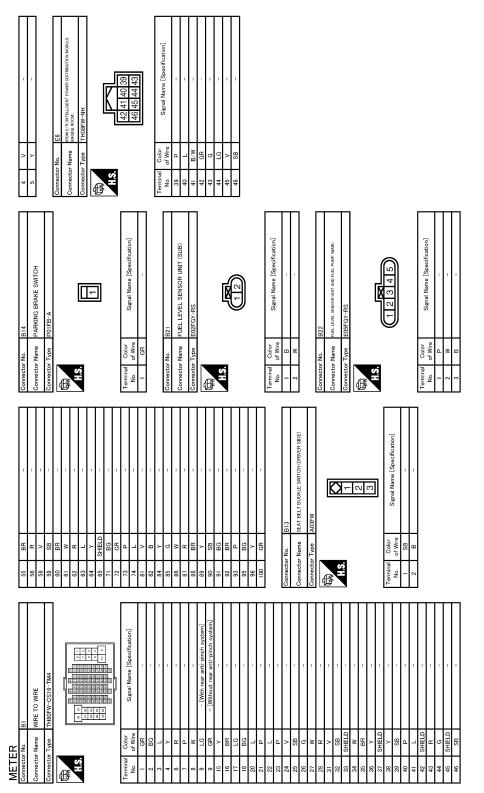
|            | nal No.<br>color) | Description  |                  | Condition                |   | Value   |  |
|------------|-------------------|--|------------------|--------------------------|---|---|--|
| +          | -                 | Signal name  | Input/<br>Output |                          | Condition   | (Approx.)   |  |
| 29         | Ground            | Seat belt buckle switch sig-<br>nal (driver side)    | Input            | Ignition<br>switch<br>ON | When driver seat belt is fas-<br>tened  | 12 V  |  |
| (P)        |                   |  |                  |                          | When driver seat belt is un-<br>fastened  | 0 V   |  |
| 30         | Ground            | Seat belt buckle switch sig-<br>nal (passenger side) | Input            | Ignition<br>switch<br>ON | <ul><li>When getting in the passenger seat</li><li>When passenger seat belt is fastened</li></ul>   | 12 V  |  |
| (G)        |                   |  |                  |                          | <ul><li>When getting in the passenger seat</li><li>When passenger seat belt is unfastened</li></ul> | 0 V   |  |
| 31         | Cround            | Weeher level owitch signal                           | loout            | Ignition<br>switch       | Washer level switch ON  | 0 V   |  |
| (L)        | Ground            | Washer level switch signal                           | Input            | ON                       | Washer level switch OFF   | 5 V   |  |
| 33<br>(R)  | Ground            | Illumination control signal                          | Output           | Ignition<br>switch<br>ON | Lighting switch ON, then operate the illumination control switch.                                   | NOTE:<br>When brightness level is midway<br>(V)<br>10<br>0<br>2 ms<br>JSNIA0010GB |  |
| 36         | 16                | Select switch signal                                 | Input            | Ignition<br>switch       | When bis pressed  | 0 V   |  |
| (LG)       | (BR)              |  |                  | ON                       | Other than the above  | 5 V   |  |
| 37         | 16<br>(BR)        | Enter switch signal                                  | Input            | Ignition<br>switch<br>ON | When 🖵 is pressed   | 0 V   |  |
| (Y)        |                   |  |                  |                          | Other than the above  | 5 V   |  |
| 38<br>(G)  | 16<br>(BR)        | Trip A/B reset switch signal                         | Input            | Ignition<br>switch<br>ON | When trip A/B reset switch<br>is pressed  | 0 V   |  |
| (0)        |                   |  |                  |                          | Other than the above  | 5 V   |  |
| 39<br>(P)  | 16<br>(BR)        | Illumination control switch<br>signal (–)            | Input            | Ignition<br>switch<br>ON | When 🕅 switch is pressed  | 0 V   |  |
| \· /       |                   |  |                  |                          | Other than the above  | 5 V   |  |
| 40<br>(BG) | 16<br>(BR)        | Illumination control switch signal (+)               | Input            | Ignition<br>switch<br>ON | When 🛷 + switch is pressed  | 0 V   |  |
| ()         |                   |  |                  |                          | Other than the above  | 5 V   |  |





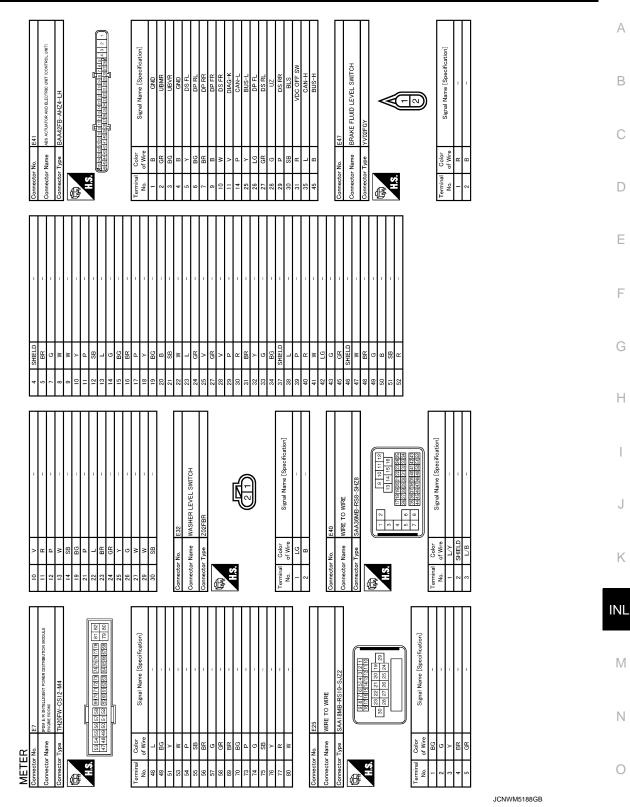


#### < ECU DIAGNOSIS INFORMATION >

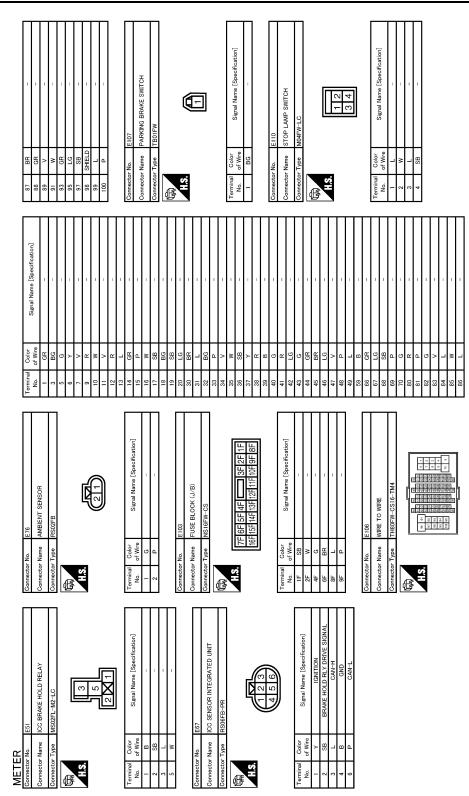


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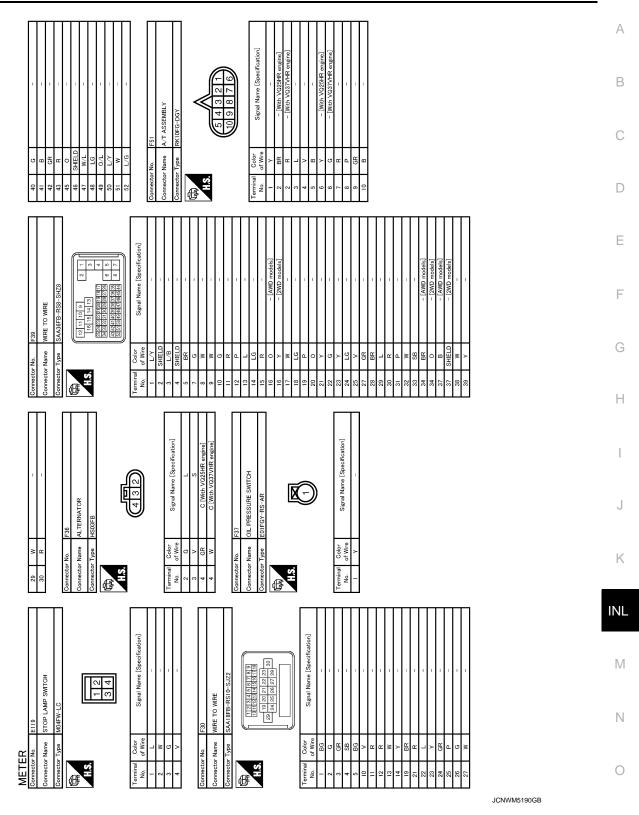


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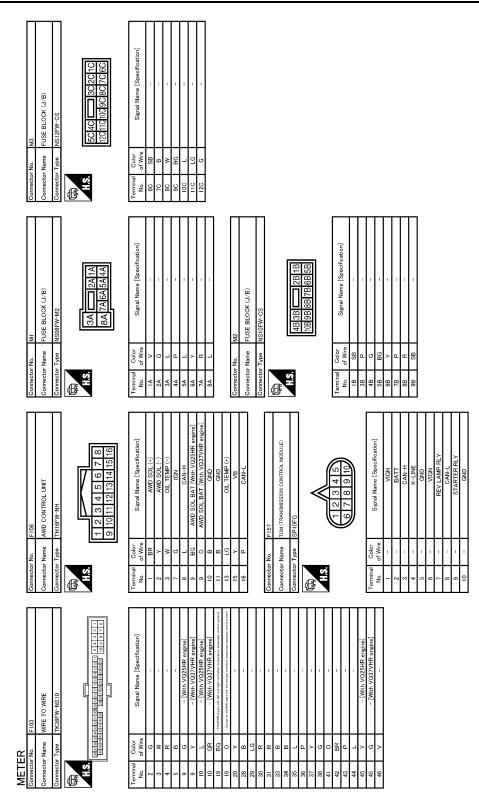


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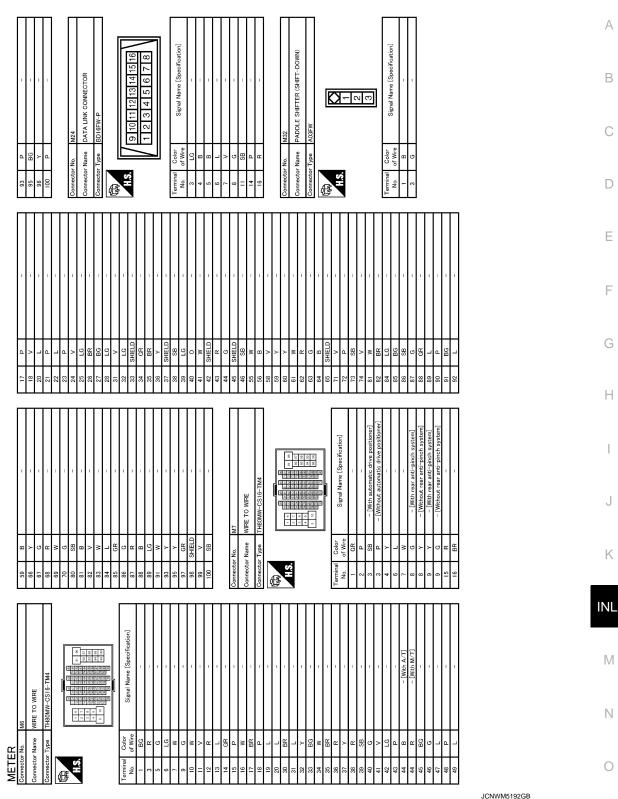


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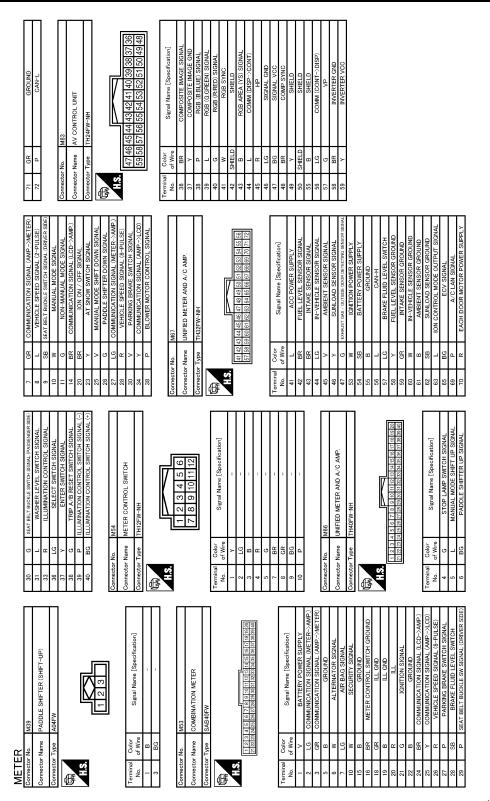


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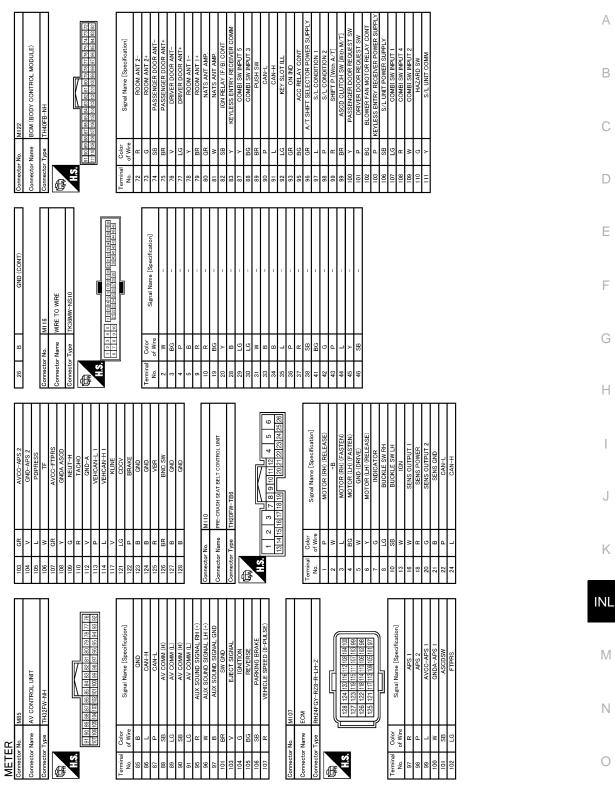


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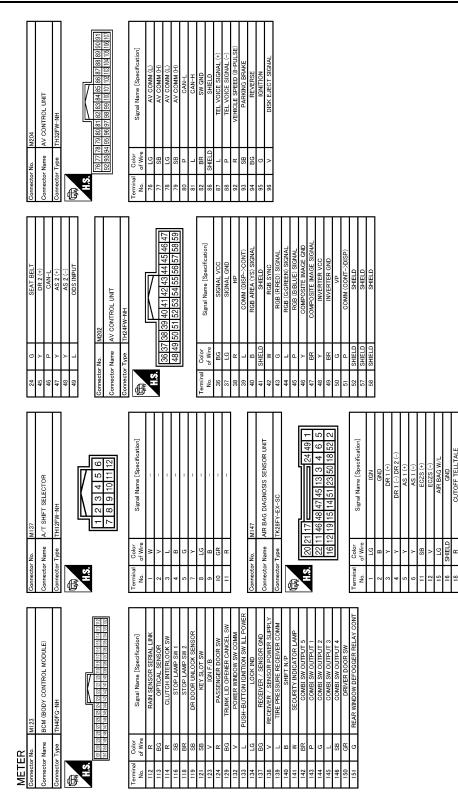
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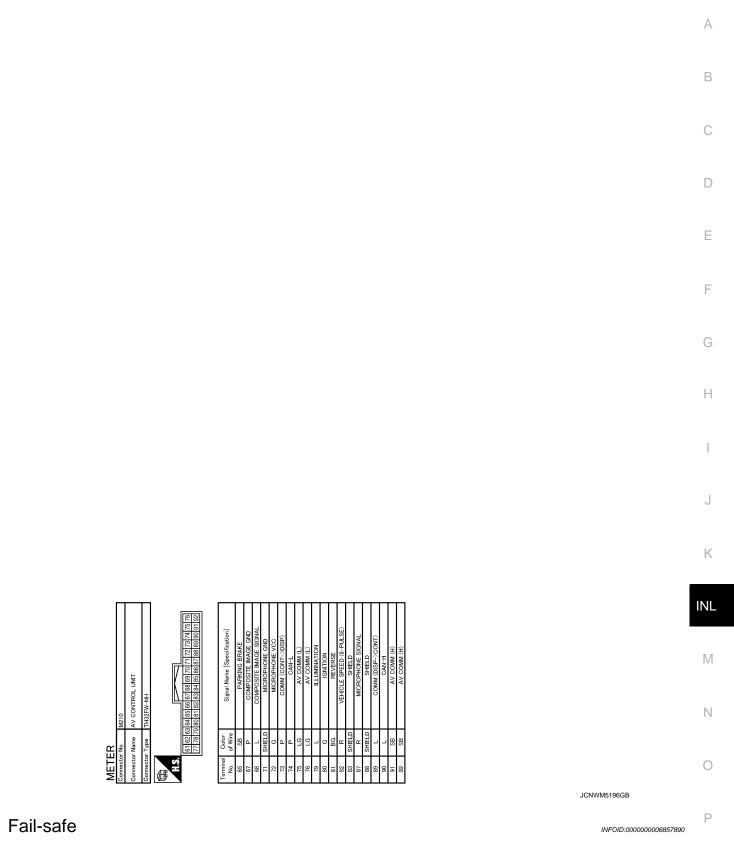
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#### < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >



# FAIL-SAFE

Combination meter performs fail-safe operation when unified meter and A/C amp. communication is malfunction.

Solution for communication error between the unified meter and A/C amp. and combination meter.

#### < ECU DIAGNOSIS INFORMATION >

|   | Function                       | Specifications  |  |
|---|--------------------------------|---|--|
| Speedometer   |                                |   |  |
| Tachometer  |                                |   |  |
| Fuel gauge  |                                | <ul> <li>Reset to zero by suspending communication.</li> </ul>  |  |
| Engine coolant temperature  | gauge                          |   |  |
|   | Door open warning              |   |  |
|   | Parking brake release warning  | The diapley turns off by suspending communication   |  |
|   | Low tire pressure warning      | <ul> <li>The display turns off by suspending communication.</li> </ul>  |  |
|   | Fuel filler cap warning        |   |  |
| Information display   | Instantaneous fuel warning     | When reception time of an abnormal signal is 2 seconds or   |  |
|   | Average fuel consumption       | <ul> <li>less, the last received datum is used for calculation to indicate the result.</li> <li>When reception time of an abnormal signal is more than two</li> </ul> |  |
|   | Average vehicle speed          |   |  |
|   | Travel distance                | seconds, the last result calculated during normal condition is indicated.   |  |
| Illumination control  |                                | When suspending communication, change to nighttime mode.  |  |
| Buzzer  |                                | The buzzer turns off by suspending communication.   |  |
|   | ABS warning lamp               |   |  |
|   | SLIP indicator lamp            |   |  |
|   | Brake warning lamp             | The lamp turns on by suspending communication.  |  |
|   | CRUISE warning lamp            |   |  |
|   | Malfunction indicator lamp     |   |  |
|   | High beam indicator            |   |  |
|   | Turn signal indicator lamp     |   |  |
|   | Oil pressure warning lamp      | The lamp turns off by suspending communication.   |  |
|   | A/T CHECK warning lamp         |   |  |
|   | VDC OFF indicator lamp         |   |  |
|   | AWD warning lamp               |   |  |
|   | Low tire pressure warning lamp |   |  |
| Warning lamp/indicator lamp       Oil pressure warning lamp         A/T CHECK warning lamp         VDC OFF indicator lamp         AWD warning lamp    The lamp turns off by suspending communication. |                                |   |  |
| Key warning lamp       AFS OFF indicator lamp       Master warning lamp   |                                |   |  |
|   |                                | ]   |  |
|   | Tail lamp indicator lamp       | The lamp turns off by suspending communication.   |  |
|   | Front fog lamp indicator lamp  |   |  |

## **DTC** Index

INFOID:000000006857891

Refer to <u>MWI-107, "DTC Index"</u>.

## **INTERIOR LIGHTING SYSTEM SYMPTOMS**

#### < SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS INTERIOR LIGHTING SYSTEM SYMPTOMS

## Symptom Table

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#### **CAUTION:**

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

| Symptom  | Possible cause  | Inspection item   |
|--|---|---|
| All the following lamps do not turn ON.<br>• Map lamp<br>• Personal lamp<br>• Trunk room lamp<br>• Step lamp<br>• Vanity mirror lamp           | <ul> <li>Harness between BCM and each interior room lamp</li> <li>BCM</li> </ul>  | Interior room lamp power supply circuit Refer to INL-20.                          |
| <ul> <li>Interior room lamp does not turn ON even<br/>though the door is open.</li> <li>(It turns ON when turning the interior room</li> </ul> | Harness between BCM and each<br>door switch   | Door switch circuit<br>Refer to <u>DLK-66</u> .                                   |
| <ul><li>lamp ON.)</li><li>Interior room lamp does not turn OFF even though the door is closed.</li></ul>                                       | <ul> <li>Harness between BCM and each interior room lamp</li> <li>BCM</li> </ul>  |   |
| Interior room lamp timer does not activate.<br>(It turns ON/ OFF when the door opens/closes.)  | _   | Check the interior room lamp setting.<br>Refer to INL-16.                         |
| Step lamps (driver side and passenger side) do<br>not turn ON.<br>(Map lamp and personal lamp turn ON.)  | Harness between BCM and each     step lamp  | Step lamp circuit   |
| Step lamps (driver side and passenger side) do<br>not turn OFF.<br>(Map lamp and personal lamp turn OFF.)                                      | • BCM   | Refer to <u>INL-24</u> .  |
| Trunk room lamp does not turn ON.  | Harness between BCM and trunk room lamp switch  | Trunk room lamp switch circuit Refer to DLK-78.                                   |
| (Bulb is normal.)<br>• Trunk room lamp does not turn OFF.  | <ul> <li>Harness between BCM and trunk<br/>room lamp</li> <li>Harness between BCM and trunk<br/>room lamp</li> <li>BCM</li> </ul> |   |
| Push-button ignition switch illumination does not illuminate.  | <ul> <li>Harness between BCM and push-<br/>button ignition switch</li> <li>BCM</li> </ul>   | Push-button ignition switch illumina-<br>tion circuit<br>Refer to <u>INL-28</u> . |
| Interior room lamp battery saver does not activate.  | _   | Check the interior room lamp battery saver setting.<br>Refer to INL-17.           |

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#### < PRECAUTION >

# 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.

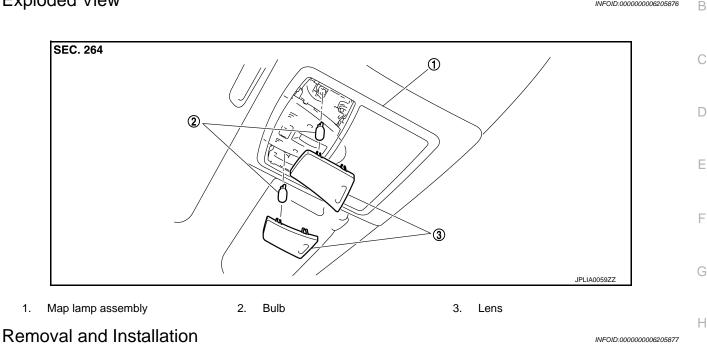
#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### 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.

## < REMOVAL AND INSTALLATION > **REMOVAL AND INSTALLATION** MAP LAMP



Refer to INL-109, "Exploded View" for the map lamp assembly installation/removal.

### Replacement

#### **CAUTION:**

- Disconnect negative battery 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 Κ 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.

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## VANITY MIRROR LAMP

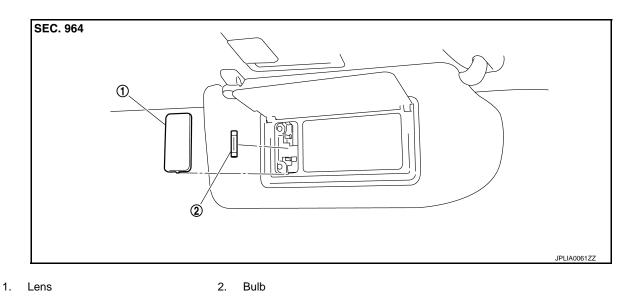
## < REMOVAL AND INSTALLATION >

## VANITY MIRROR LAMP

## **Exploded View**

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INEOID-000000006205880



## Replacement

#### **CAUTION:**

- Disconnect negative battery 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.

#### VANITY MIRROR LAMP BULB

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

## CIGARETTE LIGHTER ILLUMINATION

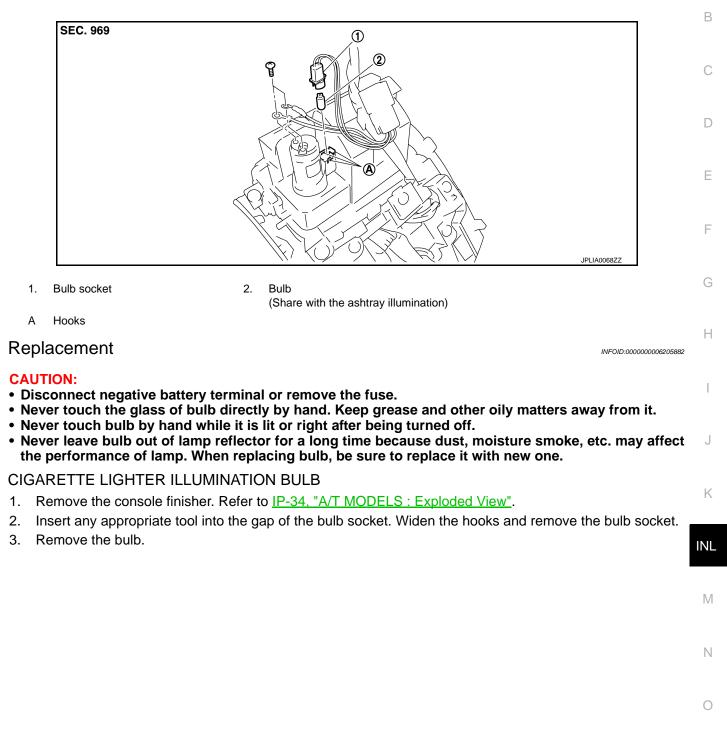
< REMOVAL AND INSTALLATION >

# CIGARETTE LIGHTER ILLUMINATION

## **Exploded View**

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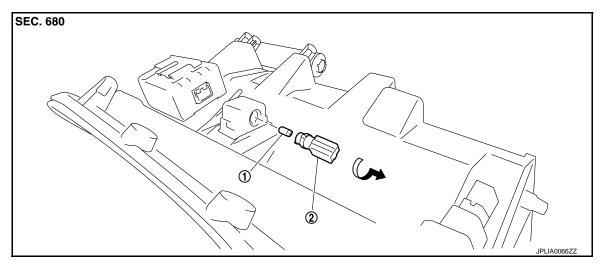


## < REMOVAL AND INSTALLATION >

# GLOVE BOX LAMP

## Exploded View

INFOID:000000006205883



1. Bulb

2. Bulb socket

## Replacement

INFOID:000000006205884

#### **CAUTION:**

- Disconnect negative battery 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.

#### GLOVE BOX LAMP BULB

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

## < REMOVAL AND INSTALLATION >

# STEP LAMP

# Exploded View

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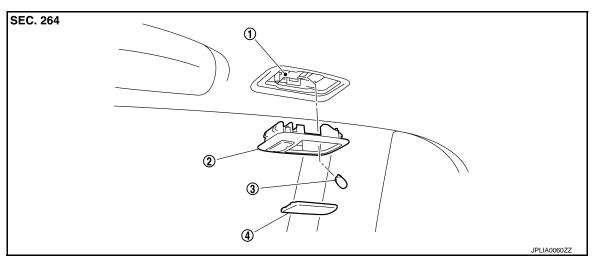
| SEC. 809   |        |
|--|--------|
|  |        |
|  |        |
|  |        |
| JPLIA0062ZZ  |        |
| 1. Step lamp case     2. Bulb     3. Lens       A Metal clip   |        |
| Removal and Installation   | 205886 |
| CAUTION:<br>Disconnect the battery negative terminal or remove the fuse.   |        |
| <ol> <li>REMOVAL</li> <li>Insert any appropriate tool into the gap between the step lamp and the door trim. Remove the step lan</li> <li>Disconnect the connector.</li> <li>INSTALLATION</li> <li>Install in the reverse order of removal.</li> </ol>  | np.    |
| Replacement  | 205887 |
| CAUTION:<br>• Disconnect negative battery terminal or remove the fuse.   |        |
| <ul> <li>Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.</li> <li>Never touch bulb by hand while it is lit or right after being turned off.</li> <li>Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may aff<br/>the performance of lamp. When replacing bulb, be sure to replace it with new one.</li> </ul> | ect    |
| STEP LAMP BULB   |        |
| <ol> <li>Remove the step lamp. Refer to <u>INL-113, "Exploded View"</u>.</li> <li>Remove the lens.</li> </ol>  |        |
| 3. Remove the bulb.  |        |
|  |        |

### < REMOVAL AND INSTALLATION >

# PERSONAL LAMP

## **Exploded View**

INFOID:00000006205888



- 1. Personal lamp case
- 2. Personal lamp finisher

4. Lens

- 3. Bulb

#### NOTE:

Replace the personal lamp case as a set (right and left). Before installing the headlining assembly, remove the personal lamp case. Refer to INL-114, "Removal and Installation".

#### Removal and Installation

#### **CAUTION:**

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

#### REMOVAL

- 1. Insert any appropriate tool into the gap between the lens. Remove the lens.
- Press the both side pawls (A) to the arrow direction ( 2. Remove the personal lamp finisher.

#### NOTE:

Replace the personal lamp case as a set (right and left). Remove the personal lamp case after installing the headlining assembly. Refer to INT-24, "NORMAL ROOF : Exploded View" (normal roof), INT-27, "SUNROOF : Exploded View" (sun roof).



#### INSTALLATION

Install in the reverse order of removal.

#### NOTE:

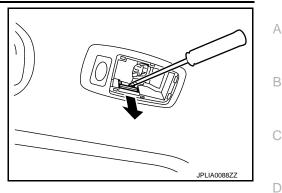
The following is easier to install the personal lamp finisher with the headlining installed.

INFOID:000000006205889

## PERSONAL LAMP

#### < REMOVAL AND INSTALLATION >

Press the personal lamp finisher to the headlining. Pull the personal lamp case pawl to the arrow direction (
 with any appropriate tool.



INFOID:000000006205890

# CAUTION:

Replacement

- Disconnect negative battery 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.

#### PERSONAL LAMP BULB

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

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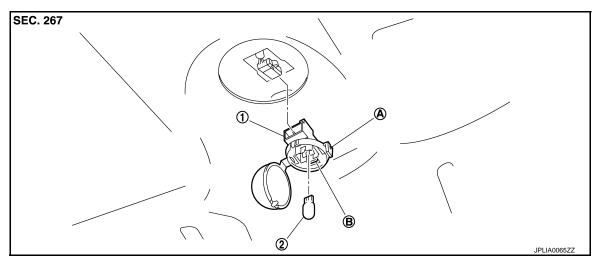
### TRUNK ROOM LAMP

### < REMOVAL AND INSTALLATION >

## TRUNK ROOM LAMP

## Exploded View

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

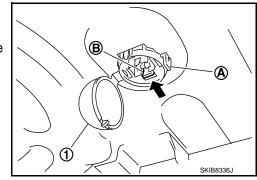
## Removal and Installation

#### **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

#### **CAUTION:**

- Disconnect negative battery 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.
- 2. Remove the bulb.

### INL-116

INFOID:000000006205893

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## SERVICE DATA AND SPECIFICATIONS (SDS)

### < SERVICE DATA AND SPECIFICATIONS (SDS)

# SERVICE DATA AND SPECIFICATIONS (SDS) SERVICE DATA AND SPECIFICATIONS (SDS)

## **Bulb Specifications**

INFOID:00000006205894 B

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| Item  | Туре  | Wattage (W) |  |
|---|-------|-------------|--|
| Push-button ignition switch illumination  | LED   | _           |  |
| Map lamp  | Wedge | 8           |  |
| Center console indirect illumination<br>(Integrated into the map lamp assembly) | LED   | _           |  |
| Vanity mirror lamp  | _     | 2           |  |
| Glove box lamp  | _     | 1.4         |  |
| Cigarette lighter illumination<br>(Shared with ash tray illumination)           | _     | 1.4         |  |
| Step lamp   | Wedge | 8           |  |
| Personal lamp   | Wedge | 8           |  |
| Trunk room lamp   | Wedge | 3.4         |  |

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