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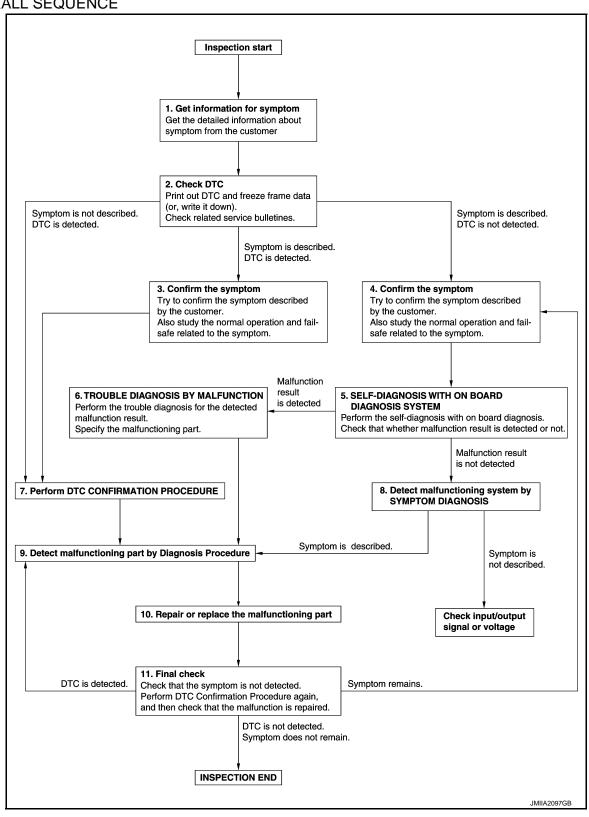
[XENON TYPE] < BASIC INSPECTION >

# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORK FLOW

Work Flow INFOID:0000000009059844 В

#### **OVERALL SEQUENCE**



**DETAILED FLOW** 

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### DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION > [XENON TYPE]

# 1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

# 2. CHECK DTC

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

### Are any symptoms described and any DTC detected?

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

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

Symptom is not described, DTC is detected>>GO TO 7.

### 3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 7.

### 4. CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

## 5. SELF-DIAGNOSIS WITH ON BOARD DIAGNOSIS SYSTEM

Perform the self-diagnosis with on board diagnosis. Check that whether malfunction result is detected or not. <u>Is malfunction result detected?</u>

YES >> GO TO 6. NO >> GO TO 8.

# 6. TROUBLE DIAGNOSIS BY MALFUNCTION

Perform the trouble diagnosis for the detected malfunction result. Specify the malfunctioning part.

>> GO TO 9.

## 7.PERFORM DTC CONFIRMATION PROCEDURE

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

#### NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

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

### Is DTC detected?

### DIAGNOSIS AND REPAIR WORK FLOW

[XENON TYPE] < BASIC INSPECTION > YES >> GO TO 9. NO >> Check according to GI-42, "Intermittent Incident". Α f 8.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step В 4, and determine the trouble diagnosis order based on possible causes and symptom. Is the symptom described? YES >> GO TO 9. NO >> Monitor input data from related sensors or check voltage of related module terminals using CON-SULT. 9. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE D Inspect according to Diagnosis Procedure of the system. Is malfunctioning part detected? Е YES >> GO TO 10. NO >> Check according to GI-42, "Intermittent Incident". 10. REPAIR OR REPLACE THE MALFUNCTIONING PART Repair or replace the malfunctioning part. 2. Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement. Check DTC. If DTC is detected, erase it. >> GO TO 11. Н 11. FINAL CHECK When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely. When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected. Is DTC detected and does symptom remain? YES-1 >> DTC is detected: GO TO 9. YES-2 >> Symptom remains: GO TO 4. >> Before returning the vehicle to the customer, always erase DTC. NO K

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Revision: 2013 March EXL-9 2014 QX50

### INSPECTION AND ADJUSTMENT

< BASIC INSPECTION > [XENON TYPE]

### INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (AFS CONTROL UNIT)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (AFS CONTROL

UNIT): Description

INFOID:0000000009059845

Perform "LEVELIZER ADJUSTMENT" with CONSULT when replacing the AFS control unit.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (AFS CONTROL

UNIT): Special Repair Requirement

INFOID:0000000009059846

1.LEVELIZER ADJUSTMENT

Perform "LEVELIZER ADJUSTMENT".

>> Refer to EXL-10, "LEVELIZER ADJUSTMENT: Special Repair Requirement".

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (HEIGHT SENSOR)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (HEIGHT SENSOR):

Description

INFOID:000000009059847

Perform "LEVELIZER ADJUSTMENT" with CONSULT when replacing the height sensor.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (HEIGHT SENSOR): Special Repair Requirement

1.LEVELIZER ADJUSTMENT

Perform "LEVELIZER ADJUSTMENT".

>> Refer to EXL-10, "LEVELIZER ADJUSTMENT : Special Repair Requirement".

LEVELIZER ADJUSTMENT

LEVELIZER ADJUSTMENT : Description

INFOID:0000000009059849

Perform "LEVELIZER ADJUSTMENT" when installing, removing, and replacing the height sensor and the suspension components.

LEVELIZER ADJUSTMENT : Special Repair Requirement

INFOID:0000000009059850

## ${f 1}.$ check vehicle condition

- 1. Park the vehicle in the straight-forward position.
- 2. Unload the vehicle (no passenger aboard).

>> GO TO 2.

# 2.LEVELIZER ADJUSTMENT

(P)CONSULT WORK SUPPORT

- 1. Select "LEVELIZER ADJUSTMENT" of ADAPTIVE LIGHT work support item.
- Select "START".
- 3. When "ADJUSTMENT IS COMPLETED", select "END". CAUTION:

If "CAN NOT BE TESTED" is indicated, AFS control unit detects that the height sensor signal changes. The levelizer adjustment is cancelled. In this case, turn the ignition switch OFF to prevent the vehicle from the height change. Perform the levelizer adjustment again.

INSPECTION AND ADJUSTMENT < BASIC INSPECTION >	[XENON TYPE]	
	[,,_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Is the levelizer adjustment completed?		0
YES >> GO TO 3.		Α
NO >> Perform the levelizer adjustment again.		
3.self-diagnosis result check		
Perform self-diagnosis with CONSULT. Check that any DTC is not detected.		В
Is any DTC detected?		
YES >> GO TO 2.		
NO >> Levelizer adjustment completed		С
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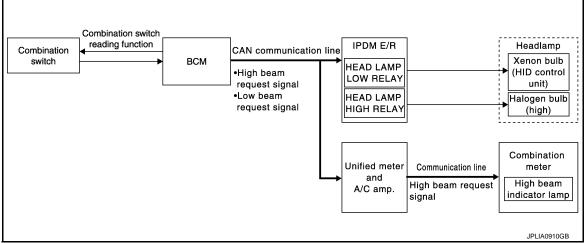
Revision: 2013 March EXL-11 2014 QX50

## SYSTEM DESCRIPTION

### **HEADLAMP SYSTEM**

### System Diagram

INFOID:0000000009059851



## System Description

INFOID:00000000009059852

#### **OUTLINE**

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

### HEADLAMP (LO) OPERATION

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

#### Headlamp (LO) ON condition

- Lighting switch 2ND
- IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp ON according to the low beam request signal.

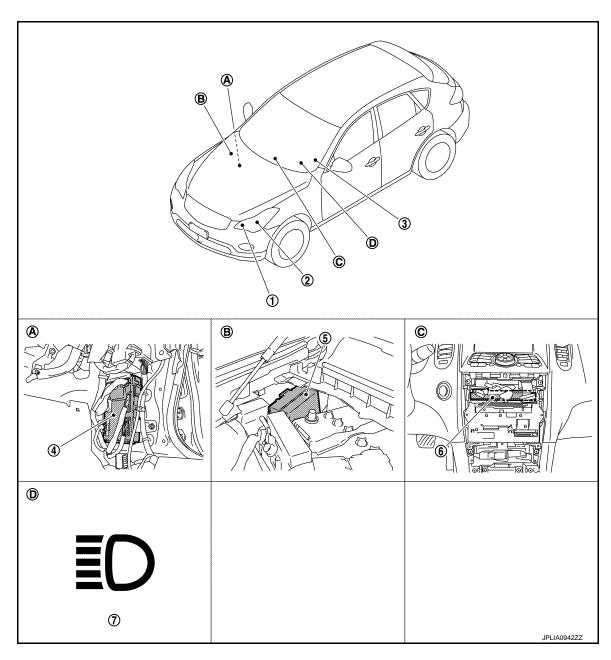
### **HEADLAMP (HI) OPERATION**

• BCM transmits the high beam request signal to IPDM E/R and the combination meter (through the unified meter and A/C amp.) with CAN communication according to the headlamp (HI) ON condition.

#### Headlamp (HI) ON condition

- Lighting switch HI with the lighting switch 2ND
- Lighting switch PASS
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

INFOID:0000000009059853



- 1. Headlamp (HI)
- 4. BCM
- 7. High beam indicator lamp
- A. Dash side lower (Passenger side)
- D. On the combination meter
- 2. Headlamp (LO)
- 5. IPDM E/R
- B. Engine room dash panel (RH)
- 3. Combination switch
- 6. Unified meter and A/C amp.
- C. Behind the cluster lid C

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### **HEADLAMP SYSTEM**

## < SYSTEM DESCRIPTION >

[XENON TYPE]

# Component Description

Part	Description
ВСМ	<ul> <li>Detects each switch condition by the combination switch reading function.</li> <li>Judges that the headlamp is turned ON according to the vehicle condition.</li> <li>Requests the headlamp relay (HI/LO) ON to IPDM E/R (with CAN communication).</li> <li>Requests the high beam indicator lamp ON to the combination meter [with CAN communication (through unified meter and A/C amp.)].</li> </ul>
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".
Combination meter (High beam indicator lamp)	Turns the high beam indicator lamp ON according to the request from BCM [with CAN communication (through unified meter and A/C amp.)].
Front combination lamp assembly  • HID control unit • Xenon bulb	Refer to EXL-71, "Description".

[XENON TYPE]

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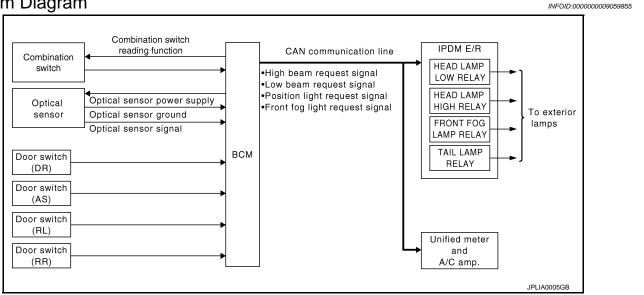
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INFOID:0000000009059850

### **AUTO LIGHT SYSTEM**

## System Diagram



## System Description

OUTLINE

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

Control by BCM

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

#### Control by IPDM E/R

- Relay control function
- Auto light system has the auto light function and the delay timer function.
- Auto light function turns the exterior lamps\* and each illumination ON/OFF automatically according to the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns the exterior lamps OFF depending on the vehicle condition with the auto light function after a certain period of time.
- \*: Headlamp (LO/HI), parking lamp, tail lamp, and front fog lamp (Headlamp HI and front fog lamp depend on the combination switch condition.)

#### AUTO LIGHT FUNCTION

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

#### NOTE:

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to EXL-34, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP) (Xenon Type)".

### **DELAY TIMER FUNCTION**

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

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

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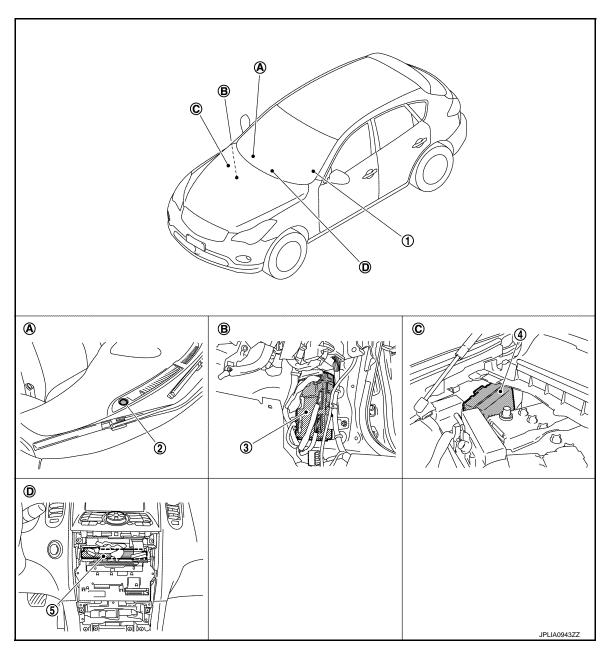
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- Turns the exterior lamp OFF with the ignition switch ACC or the light switch OFF.
- \*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>EXL-34</u>, "<u>HEAD-LAMP</u>: CONSULT Function (BCM HEAD LAMP) (Xenon Type)".

#### NOTE:

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

### **Component Parts Location**



- 1. Combination switch
- 4. IPDM E/R
- A. Instrument upper panel (RH)
- D. Behind the cluster lid C
- 2. Optical sensor
- 5. Unified meter and A/C amp.
- B. Dash side lower (Passenger side)
- 3. BCM
- C. Engine room dash panel (RH)

## **AUTO LIGHT SYSTEM**

## < SYSTEM DESCRIPTION >

## [XENON TYPE]

# Component Description

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Part	Description
BCM	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the outside brightness from the optical sensor signal.</li> <li>Judges the OFF timing according to the vehicle condition.</li> <li>Judges the ON/OFF status of the exterior lamp and each illumination according to the outside brightness and the vehicle condition.</li> <li>Requests ON/OFF of each relay to IPDM E/R (with CAN communication).</li> </ul>
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".
Optical sensor	Refer to EXL-80, "Description".

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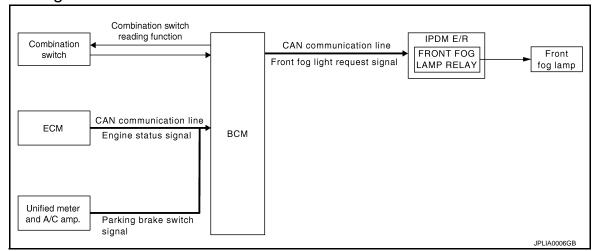
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[XENON TYPE]

## DAYTIME RUNNING LIGHT SYSTEM

### System Diagram

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## System Description

INFOID:0000000009059860

### **OUTLINE**

- Turns the front fog lamp ON as the daytime running light.
- Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and relay control function of IPDM E/R.

#### DAYTIME RUNNING LIGHT OPERATION

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

#### Daytime running light ON condition

While the engine running with the parking brake released

#### Daytime running light OFF condition

- Engine stopped
- Headlamp ON (Passing included)
- IPDM E/R turns the integrated front fog lamp relay ON and turns the front fog lamp ON according to the front fog light request signal.

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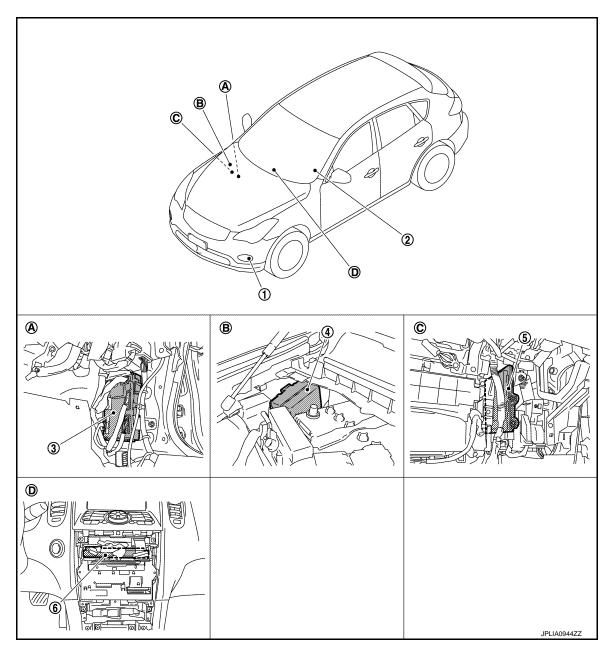
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- Daytime running light (Front fog lamp)
- 4. IPDM E/R
- A. Dash side lower (Passenger side)
- D. Behind the cluster lid C
- 2. Combination switch
- 5. ECM
- B. Engine room dash panel (RH)
- 3. BCM
- 6. Unified meter and A/C amp.
- C. Behind the glove box

## Component Description

INFOID:0000000009059862

Part	Description
ВСМ	<ul> <li>Judges each switch condition with the combination switch reading function.</li> <li>Judges the headlamp ON/OFF status according to the vehicle condition. Requests the front fog lamp relay ON to IPDM E/R (with CAN communication).</li> </ul>
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).

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### **DAYTIME RUNNING LIGHT SYSTEM**

### < SYSTEM DESCRIPTION >

[XENON TYPE]

Part	Description
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".
ECM	Transmits the engine condition signal to BCM with CAN communication.
Unified meter and A/C amp.	Transmits the parking brake switch signal to BCM with CAN communication.

[XENON TYPE]

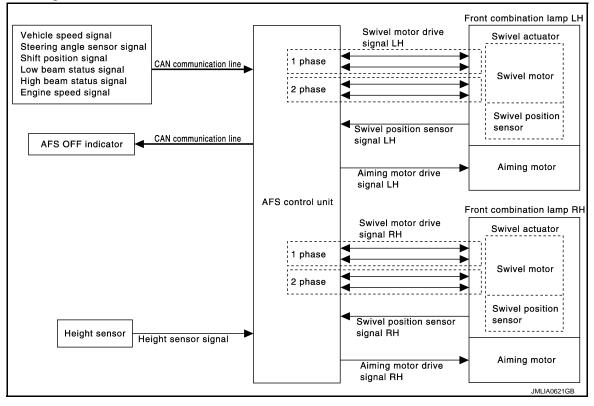
### ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM

System Diagram

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## System Description

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#### OUTLINE

- AFS (ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM) is controlled by AFS control unit.
- AFS has AFS control (swivel control) and the headlamp auto aiming control.
- AFS control swivels the headlamp to the steering direction.
- Headlamp auto aiming control moves the headlamp light axis up/down according to the vehicle height.

#### AFS (ADAPTIVE FRONT-LIGHTING SYSTEM)

#### **AFS Control Description**

- AFS control controls the headlamp (right) only when the steering wheel is turned rightward, and the headlamp (left) only when the steering wheel is turned leftward.
- AFS control unit detects the vehicle condition necessary for AFS control with the following signals.
- Steering angle sensor signal (received from steering angle sensor with CAN communication)
- Engine speed signal (received from ECM with CAN communication)
- Shift position signal (received from TCM with CAN communication)
- Low beam status and high beam status (received from IPDM E/R with CAN communication)
- Vehicle speed signal (received from unified meter and A/C amp. with CAN communication)
- When the operation conditions are satisfied, AFS control unit controls the swivel angle depending on the steering angle and the vehicle speed.

#### AFS operation condition

- Swivel actuator initialization completed
- Headlamp ON
- While the engine running
- Selector lever position other than "P" or "R"
- Vehicle speed approximately 25 km/h (15.5 MPH) or more (left swivel only; Right swivel activates regardless of the vehicle speed.)

#### Swivel Actuator Initialization

AFS control unit performs the swivel actuator initialization when detecting that the engine starts.

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### ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM

[XENON TYPE]

#### ACTIVE ADAPTIVE PRONT-LIGHTING STSTEM

- Swivels the headlamp to the vehicle-center side until it hits the stopper.
- Returns the swivel angle from the stopper. Completes the initialization with regarding the returned position as the swivel angle 0° (straight-forward position).

#### **Swivel Operation**

< SYSTEM DESCRIPTION >

- AFS control unit transmits the drive signal to the swivel actuator when activation conditions are satisfied.
   And swivels the headlamp.
- The swivel starts after steering approximately 20° or more from straight-forward position.

#### NOTE:

The steering angle differs between right turn and left turn.

- The swivel angle becomes the maximum angle toward the driving direction if the steering angle is approximately 90° or more depending on the vehicle speed. The swivel angle is maintained by shutting off the drive signal.
- The swivel starts, and returns to the swivel angle 0° (straight-forward position) when the steering is returned to the straight-forward position.
- AFS control unit returns the swivel angle to the straight-forward position, and stops the swivel regardless of the steering angle if the operation condition is not satisfied while the swivel angle is 0°.

#### AFS OFF Indicator Lamp

- AFS control unit transmits AFS OFF indicator lamp signal to the combination meter (through the unified meter and A/C amp.) with CAN communication.
- Combination meter turns AFS OFF indicator lamp ON/OFF/blinking according to AFS OFF indicator lamp signal.
- AFS OFF indicator lamp is turned ON for 1 second for the AFS OFF indicator lamp bulb check when the ignition switch is turned ON. AFS OFF indicator lamp is turned OFF within 1 second when the engine starts.
- AFS OFF indicator lamp blinks (1 second each) if AFS control unit detects a specific DTC.
   NOTE:

Combination meter blinks AFS OFF indicator lamp (approximately 1 second each) if AFS OFF indicator lamp signal is not received from AFS control unit.

#### **HEADLAMP AUTO AIMING**

Headlamp Auto Aiming Control Description

- Headlamp auto aiming control controls the headlamp light axis height appropriately according to the vehicle height.
- AFS control unit detects the vehicle condition necessary for headlamp auto aiming control with the following signals.
- Height sensor signal
- Engine speed signal (received from ECM with CAN communication)
- Low beam status signal and high beam status signal (received from IPDM E/R with CAN communication)
- Vehicle speed signal (received from unified meter and A/C amp. with CAN communication)
- When the operation conditions are satisfied, AFS control unit transmits the aiming motor drive signal for adjusting the headlamp axis height.

#### Headlamp auto aiming operation condition

- Headlamp ON
- While the engine running
- Vehicle speed (Control mode is switched according to the driving condition.)

### **Headlamp Auto Aiming Operation**

 AFS control unit calculates the vehicle pitch angle from the height sensor signal. AFS control unit judges the angle for adjusting the axis gap from the preset position.
 CAUTION:

# Adjusted axis position may differ from the preset position although the headlamp auto aiming activates properly if the suspension is replaced or worn.

- AFS control unit controls the headlamp axis by changing the aiming motor drive signal output according to the vehicle-rearward height when detecting the following vehicle condition. Output is maintained if other condition than following is detected.
- Engine starts.
- Headlamp is turned ON.
- Vehicle posture becomes stable after changing the vehicle posture change is detected with the headlamp ON and the vehicle stopped.
- Vehicle speed is maintained with the headlamp ON and the vehicle driven.

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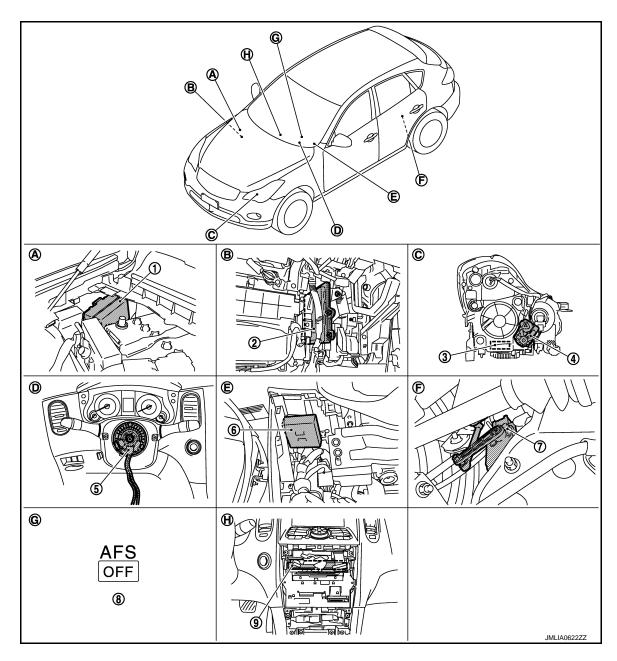
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- 1. IPDM E/R
- 4. Aiming motor
- 7. Height sensor
- A. Engine room dash panel (RH)
- D. Steering column cover (inside)
- G. On the combination meter

- 2. ECM
- 5. Steering angle sensor
- 8. AFS OFF indicator lamp
- B. Behind the glove box
- E. Behind the instrument driver lower panel
- H. Behind the cluster lid C

- Swivel actuator
- 6. AFS control unit
- 9. Unified meter and A/C amp.
- C. Front combination lamp (back)
- F. Rear suspension member (LH)

## Component Description

Part	Description
AFS control unit	Refer to EXL-57, "Description".
Swivel actuator	Refer to EXL-45, "Description".

### **ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM**

### < SYSTEM DESCRIPTION >

[XENON TYPE]

Part	Description		
Aiming motor	Refer to EXL-72, "Description".		
Height sensor	Refer to EXL-51, "Description".		
Steering angle sensor	Refer to EXL-60, "Description".		
IPDM E/R	Transmits the headlamp (LO) ON signal and the headlamp (HI) ON signal to AFS control unit with CAN communication.		
ECM	Transmits the engine speed signal to AFS control unit with CAN communication.		
TCM	Refer to EXL-54, "Description".		
Unified meter and A/C amp.	Refer to EXL-55, "Description".		
Combination meter	Turns AFS OFF indicator lamp ON/OFF/blinking according to AFS control unit request [with CAN communication (through unified meter and A/C amp.)].		

[XENON TYPE]

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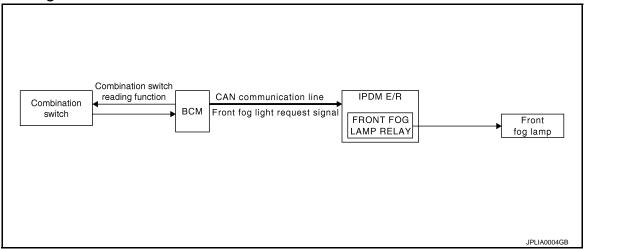
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## FRONT FOG LAMP SYSTEM

### System Diagram



## System Description

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#### **OUTLINE**

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

#### NOTE:

For Canada models, the front fog lamp is turned ON as the daytime running light. Refer to EXL-18. "System Diagram" for the detail.

#### FRONT FOG LAMP OPERATION

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

Front fog lamp ON condition

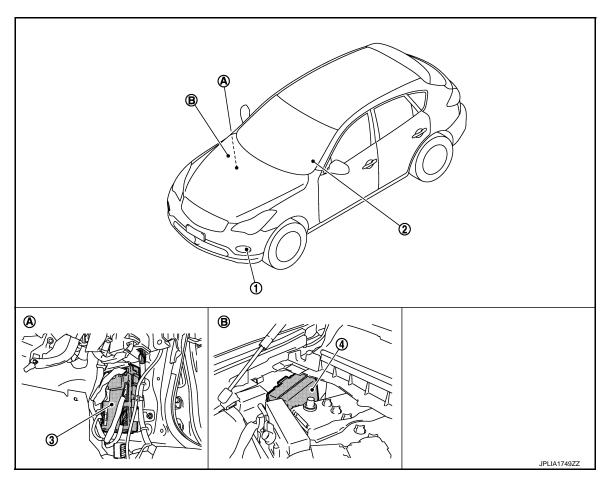
- Front fog lamp switch ON with the headlamp ON (except for the high beam ON)
- IPDM E/R turns the integrated front fog lamp relay ON, and turns the front fog lamp ON according to the front fog light request signal.

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- 1. Front fog lamp
- 4. IPDM E/R
- A. Dash side lower (Passenger side)
- 2. Combination switch
- 3. BCM
- B. Engine room dash panel (RH)

# Component Description

Part	Description	
BCM	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the front fog lamp ON/OFF status according to the vehicle condition.</li> <li>Requests the front fog lamp relay ON to IPDM E/R (with CAN communication).</li> </ul>	
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the requestrom BCM (with CAN communication).	
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".	

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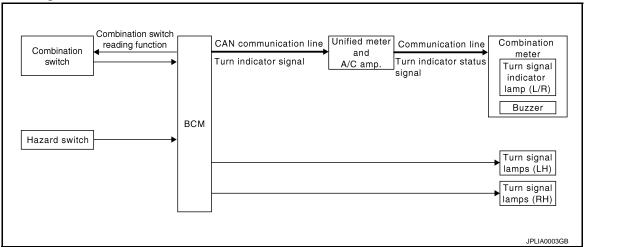
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### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

### System Diagram



## System Description

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#### **OUTLINE**

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

#### TURN SIGNAL LAMP OPERATION

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

#### HAZARD WARNING LAMP OPERATION

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

#### TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION

- BCM transmits the turn signal indicator lamp signal to the combination meter (through the unified meter and A/C amp.) with CAN communication while the turn signal lamp and the hazard warning lamp operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn signal indicator lamp signal.

### HIGH FLASHER OPERATION (FAIL-SAFE)

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

#### NOTE:

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

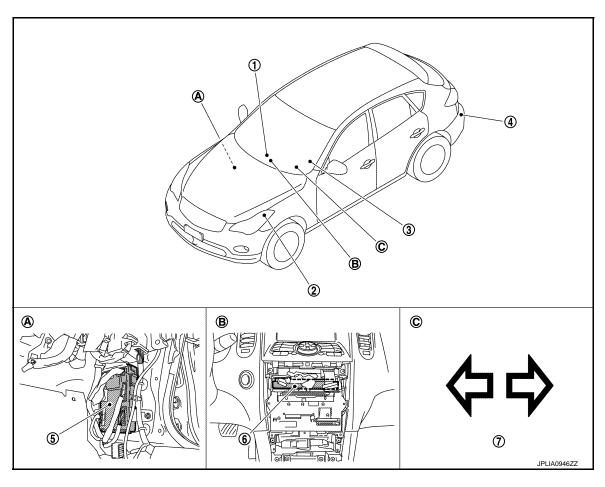
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- 1. Hazard warning switch
- 4. Rear turn signal lamp
- 7. Turn signal indicator lamp
- A. Dash side lower (Passenger side)
- 2. Front turn signal lamp
- 5. BCM
- B. Behind the cluster lid C
- 3. Combination switch
- 6. Unified meter and A/C amp.
- C. On the combination meter

# Component Description

Part	Description			
ВСМ	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the blinks of the turn signal lamp and the hazard warning lamp from each switch status. The applicable turn signal lamp blinks.</li> <li>Requests the turn signal indicator lamp blink to the combination meter (with CAN communication).</li> </ul>			
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".			
Hazard switch (Multifunction switch)	Refer to EXL-83, "Description".			
Combination meter (Turn signal indicator lamp & buzzer)	Blinks the turn signal indicator lamp and outputs the turn signal operating sound w integrated buzzer according to the request from BCM [with CAN communication (through unified meter and A/C amp.)].			

### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

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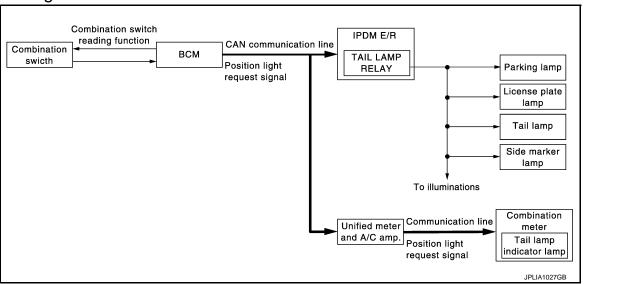
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## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

System Diagram



## System Description

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#### OUTLINE

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

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

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

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

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

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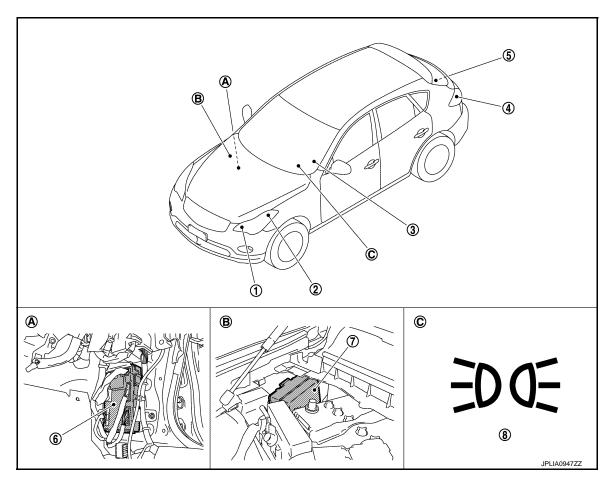
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Revision: 2013 March EXL-29 2014 QX50

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- 1. Parking lamp
- 4. Tail lamp and side marker lamp
- 7. IPDM E/R
- A. Dash side lower (Passenger side)
- 2. Side marker lamp
- 5. License plate lamp
- 8. Tail lamp indicator lamp
- B. Engine room dash panel (RH)
- 3. Combination switch
- 6. BCM
- C. On the combination meter

# Component Description

Part	Description		
ВСМ	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the ON/OFF status of the clearance, license plate, side marker and tail lamps according to the vehicle condition. Requests the tail lamp relay ON to IPDM E/R (with CAN communication).</li> </ul>		
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).		
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".		
Combination meter (Tail lamp indicator lamp)	Turns the tail lamp indicator lamp ON according to the request from BCM [with CAN communication (through the unified meter and A/C amp.)].		

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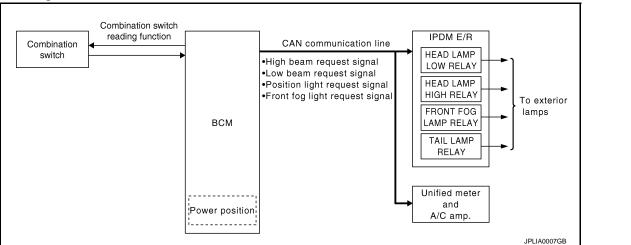
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### EXTERIOR LAMP BATTERY SAVER SYSTEM

System Diagram



## System Description

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#### **OUTLINE**

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

#### Control by BCM

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

### Control by IPDM E/R

- Relay control function
- BCM turns the exterior lamp\* OFF after a period of time to prevent the battery from over-discharge when the ignition switch is turned OFF with the exterior lamp ON.
- \*: Headlamp (LO/HI), parking lamp, tail lamp, side marker lamp, license plate lamp and front fog lamp **NOTE:**

When the lighting switch is turned AUTO, the exterior lamp battery saver switches to the auto light system. Refer to <u>EXL-15</u>, "System <u>Description"</u>.

### EXTERIOR LAMP BATTERY SAVER ACTIVATION

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

#### NOTE:

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

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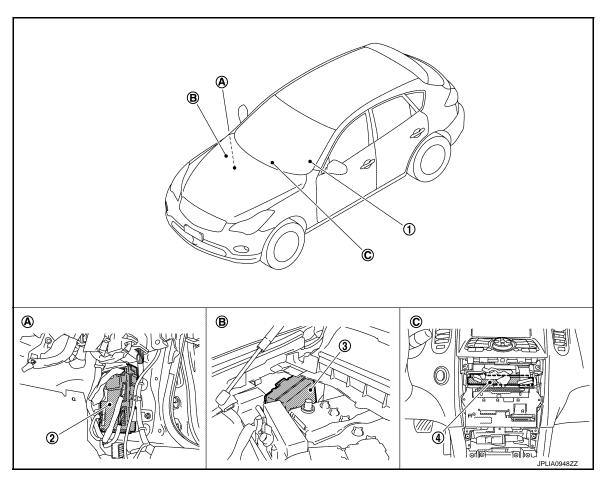
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- 1. Combination switch
- 4. Unified meter and A/C amp.
- A. Dash side lower (Passenger side)
- 2. BCM
- B. Engine room dash panel (RH)
- 3. IPDM E/R
- C. Behind the cluster lid C

# Component Description

Part	Description		
BCM	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the exterior lamp OFF according to the vehicle condition. Requests each relay OFF to IPDM E/R (with CAN communication).</li> </ul>		
IPDM E/R	Controls the integrated relay according to the request from BCM (with CAN communication).		
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".		

### **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[XENON TYPE]

# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

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

x: Applicable item

System	Sub system selection 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 ×		×	×
Back door open system	TRUNK		×	×
Vehicle security system	THEFT ALM × ×		×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

#### NOTE:

### FREEZE FRAME DATA (FFD)

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

**EXL-33** Revision: 2013 March 2014 QX50

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<sup>\*:</sup> This item is displayed, but is not used.

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" (Except emergency stop operation)	
	CRANK>RUN	Power supply position status of the moment a	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" (Emergency stop operation)	
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*	
Vehicle Condition	OFF>ACC	particular DTC is de-	While turning power supply position from "OFF" to "ACC"	
	ON>CRANK	tected*	While turning power supply position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode	
	LOCK		Power supply position is "LOCK"*	
	OFF		Power supply position is "OFF" (Ignition switch OFF)	
	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>		

#### NOTE:

- \*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- · Closing door
- Opening door
- · Door is locked using door request switch
- Door is locked using Intelligent Key

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

### **HEADLAMP**

HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (Xenon Type)

INFOID:0000000009059884

**WORK SUPPORT** 

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Service item	Setting item	Setting		
BATTERY SAVER SET On*		With the exterior lamp battery saver function		
DATTERT SAVER SET	Off	Without the exterior lamp battery saver function		
	MODE 1*	45 sec.		
	MODE 2	Without the function		
	MODE 3	30 sec.		
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time. (All doors closed)	
	MODE 5	90 sec.		
	MODE 6	120 sec.		
	MODE 7	150 sec.		
	MODE 8	180 sec.		
MODE		Normal		
CUSTOM A/LIGHT SET-	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)		
TING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)		
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)		

<sup>\*:</sup> Initial setting

### **DATA MONITOR**

#### NOTE:

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

Monitor item [Unit]	Description			
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.			
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates [STOP/START/CRANK/RUN] condition of engine states.			
VEH SPEED 1 [km/h]	Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].			
KEY SW-SLOT [On/Off]	Indicates [ON/OFF] condition of key slot.			
TURN SIGNAL R [On/Off]				
TURN SIGNAL L [On/Off]				
TAIL LAMP SW [On/Off]				
HI BEAM SW [On/Off]				
HEAD LAMP SW1 [On/Off]	Each switch status that BCM judges from the combination switch reading function			
HEAD LAMP SW2 [On/Off]				
PASSING SW [On/Off]				
AUTO LIGHT SW [On/Off]				
FR FOG SW [On/Off]				

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Monitor item [Unit]	Description	
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored.	
DOOR SW-DR [On/Off]	Indicated [ON/OFF] condition of front door switch (driver side).	
DOOR SW-AS [On/Off]	Indicated [ON/OFF] condition of front door switch (passenger side).	
DOOR SW-RR [On/Off]	Indicated [ON/OFF] condition of rear door switch RH.	
DOOR SW- RL [On/Off]	Indicated [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK [On/Off]	Indicated [ON/OFF] condition of back door switch.	
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor	

### **ACTIVE TEST**

Test item	Operation	Description	
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.	
	Off	Stops the position light request signal transmission.	
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).	
HEAD LAMP	Low	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).	
	Off	Stops the high & low beam request signal transmission.	
FR FOG LAMP	On	Transmits the front fog light request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.	
	Off	Stops the front fog light request signal transmission.	
RR FOG LAMP	On	NOTE:	
RR FOG LAWIF	Off	The item is indicated, but cannot be tested.	
DAYTIME RUNNING LIGHT	On	NOTE:	
DAT TIME NORMING LIGHT	Off	The item is indicated, but cannot be tested.	
	RH		
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.	
	Off		
ILL DIM SIGNAL	On	NOTE:	
ILL DIIVI SIGNAL	Off	The item is indicated, but cannot be tested.	

# FLASHER

# FLASHER : CONSULT Function (BCM - FLASHER) (Xenon Type)

INFOID:0000000009059885

### **WORK SUPPORT**

Service item	Setting item	Setting	
HAZARD ANSWER BACK	Lock Only*	With locking only	Sets the hazard warning lamp answer back function when the door is lock/unlock with the request switch or the key fob.
	Unlk Only	With unlocking only	
	Lock/Unlk	With locking/unlocking	
	Off	Without the function	

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

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#### **DATA MONITOR**

#### NOTE:

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

Monitor item Description [Unit] **REQ SW-DR** Indicated [ON/OFF] condition of door request switch (driver side). [On/Off] **REQ SW-AS** Indicated [ON/OFF] condition of door request switch (passenger side). [On/Off] **PUSH SW** Indicates [ON/OFF] condition of push-button ignition switch. [On/Off] TURN SIGNAL R [On/Off] Each switch condition that BCM judges from the combination switch reading function TURN SIGNAL L [On/Off] HAZARD SW The switch status input from the hazard switch [On/Off] **RKE-LOCK** Indicates [ON/OFF] condition of LOCK signal from Intelligent Key. [On/Off] **RKE-UNLOCK** Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key. [On/Off] **RKE-PANIC** Indicates [ON/OFF] condition of PANIC button of Intelligent Key. [On/Off]

#### **ACTIVE TEST**

Test item	Operation	Description
	RH	Outputs the voltage to blink the right side turn signal lamps.
FLASHER	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

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<sup>\*:</sup> Initial setting

[XENON TYPE]

## DIAGNOSIS SYSTEM (IPDM E/R)

## **Diagnosis Description**

INFOID:0000000009365741

#### **AUTO ACTIVE TEST**

#### Description

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

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- License plate lamps
- Side maker lamps
- Tail lamps
- Front fog lamps
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan (cooling fan control module)

#### Operation Procedure

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)

#### NOTE:

When auto active test is performed with hood opened, sprinkle water on windshield beforehand.

- 2. Turn the ignition switch OFF.
- 3. Turn the ignition switch ON, and within 20 seconds, press the front door switch (driver side) 10 times. Then turn the ignition switch OFF.

#### **CAUTION:**

#### Close passenger door.

- Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
- 5. The oil pressure warning lamp starts blinking when the auto active test starts.
- 6. After a series of the following operations is repeated 3 times, auto active test is completed.

#### NOTE:

When auto active test mode has to be cancelled halfway through test, turn the ignition switch OFF. **CAUTION:** 

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-63</u>, "Component Function Check".
- Do not start the engine.

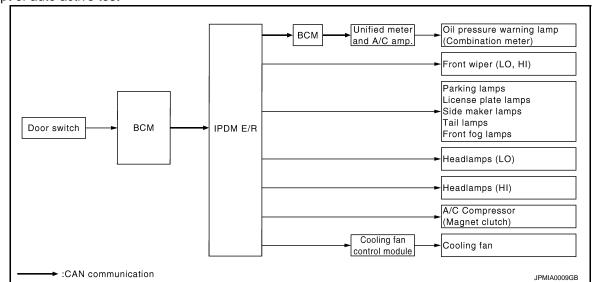
Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 6 steps are repeated 3 times.

Operation sequence	Inspection location	Operation
1	Oil pressure warning lamp	Blinks continuously during operation of auto active test
2	Front wiper	LO for 5 seconds → HI for 5 seconds
3	<ul> <li>Parking lamps</li> <li>License plate lamps</li> <li>Side maker lamps</li> <li>Tail lamps</li> <li>Front fog lamps</li> </ul>	10 seconds
4	Headlamps	LO 10 seconds     HI ON ⇔ OFF 5 times
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
6*	Cooling fan	MID for 5 seconds → HI for 5 seconds

 $<sup>^*</sup>$ : Outputs duty ratio of 50% for 5 seconds ightarrow duty ratio of 100% for 5 seconds on the cooling fan control module.

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of the following components do not operate		YES	BCM signal input circuit
<ul> <li>Parking lamps</li> <li>License plate lamps</li> <li>Side maker lamps</li> <li>Tail lamps</li> <li>Front fog lamps</li> <li>Headlamp (HI, LO)</li> <li>Front wiper (HI, LO)</li> </ul>	Perform auto active test. Does the applicable system operate?	NO	Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R
A/C compressor does not operate	Perform auto active test.  Does the magnet clutch operate?	YES	<ul> <li>Unified meter and A/C amp. signal input circuit</li> <li>CAN communication signal between unified meter and A/C amp. and ECM</li> <li>CAN communication signal between ECM and IPDM E/R</li> </ul>
		NO	Magnet clutch     Harness or connector between IPDM E/R and magnet clutch     IPDM E/R
	Perform auto active test. Does the oil pressure warning lamp blink?	YES	Harness or connector between IPDM E/R and oil pressure switch     Oil pressure switch     IPDM E/R
Oil pressure warning lamp does not operate		NO	CAN communication signal between IPDM E/R and BCM CAN communication signal between BCM and unified meter and A/C amp. Combination meter

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## **DIAGNOSIS SYSTEM (IPDM E/R)**

< SYSTEM DESCRIPTION >

[XENON TYPE]

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

# CONSULT Function (IPDM E/R)

INFOID:0000000009365742

#### APPLICATION ITEM

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

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

#### SELF DIAGNOSTIC RESULT

Refer to EXL-184, "DTC Index".

#### **DATA MONITOR**

#### NOTE:

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

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

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

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Monitor Item [Unit]	MAIN SIG- NALS	Description
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the A/T shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		Displays the status of the steering lock relay request received from BCM via CAN communication.  NOTE:
		For models without steering lock unit, this item is not monitored.
S/L STATE [LOCK/UNLOCK/UNKWN]		Displays the status of the steering lock judged by IPDM E/R.  NOTE:  For models without steering lock unit, this item is not monitored.
DTRL REQ [Off/On]		NOTE: The item is indicated, but not monitored.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.
HL WASHER REQ [Off/On]		NOTE: The item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.
CRNRNG LMP REQ [Off/On]		NOTE: The item is indicated, but not monitored.

#### **ACTIVE TEST**

Test item

Test item	Operation	Description
	Off	
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.
	RH	
HORN	On	Operates horn relay 1 and horn relay 2 for 20 ms.
	Off	OFF
FRONT WIPER	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.

# DIAGNOSIS SYSTEM (IPDM E/R)

## < SYSTEM DESCRIPTION >

[XENON TYPE]

Test item	Operation	Description
MOTOR FAN	1	OFF
	2	Outputs 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Outputs 80% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Outputs 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	NOTE: The item is indicated, but cannot be tested.
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
_	Fog	Operates the front fog lamp relay.

[XENON TYPE]

## **DIAGNOSIS SYSTEM (AFS)**

## **CONSULT Function (ADAPTIVE LIGHT)**

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#### APPLICATION ITEM

Diagnostic mode	Description
ECU Identification	Allows confirmation of auto levelizer control unit part number.
Self Diagnostic Result	Displays the diagnosis results judged by AFS control unit.
Work support	Sets each sensor.
Data monitor	Indicates AFS control unit input data in real time.
Active test	Provides the drive signal to the load. Checks operation.

#### **WORK SUPPORT**

Service item	Description
ST ANG SEN ADJUSTMENT*	_
LEVELIZER ADJUSTMENT	Adjusts the height sensor signal output value (AFS control unit recognized) in the unloaded vehicle condition.

<sup>\*:</sup> Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to <a href="https://example.com/BRC-9">BRC-9</a>, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION: Special Repair Requirement".

#### **DATA MONITOR**

#### NOTE:

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

Monitor item [Unit]	Description	
STR ANGLS SIG [deg]	The steering angle value judged by the steering angle sensor signal received from the steering angle sensor with CAN communication	
VHCL SPD [km/h]	The vehicle speed signal value from the unified meter and A/C amp. with CAN communication	
SLCT LVR POSI [P - 1]	The selector lever status judged by the position indicator signal received from TCM with CAN communication	
HEAD LAMP [On/Off]	The headlamp On/Off status judged by the low beam headlamp (ON) signal received from IPDM E/R with CAN communication	
AFS SW [On/Off]	NOTE: The item is indicated, but not monitored.	
HI SEN OTP RR [V]	The height sensor signal voltage value input from the height sensor	
LEV ACTR VLTG [%]	The ratio value to the battery voltage generated by the levelizer activation signal control value judged by AFS control unit	
SWVL SEN RH* [deg]	The head lamp swivel angle value judged by AFS control unit received from the swiv-	
SWVL SEN LH* [deg]	el position sensor signal input from the swivel actuator	
SWVL ANGLE RH* [deg]	The avivel angle command value to the avivel mater judged by AES control unit	
SWVL ANGLE LH * [deg]	The swivel angle command value to the swivel motor judged by AFS control unit	

<sup>\*:</sup> The swivel angle "0°" (feedback value) of the swivel position sensor signal may differ from the swivel angle "0°" of the swivel motor (AFS control unit command value). This causes that the swivel motor initializes the value based on the step number from the stopper.

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# **DIAGNOSIS SYSTEM (AFS)**

< SYSTEM DESCRIPTION >

[XENON TYPE]

## **ACTIVE TEST**

#### NOTE:

Start the engine when using "ACTIVE TEST".

Test item	Operation Item	Description
	Origin Fast	Swivels the right headlamp to the swivel angle 0° in the normal speed.
	Peak Fast	Swivels the right headlamp to the swivel angle approximately 15° in the normal speed.
LOW BEAM TEST RIGHT	Origin Slow	Swivels the right headlamp to the swivel angle $0^{\circ}$ in the speed at the initialization.
	Peak Slow	Swivels the right headlamp to the swivel angle approximately 15° in the speed at the initialization.
	Origin Fast	Swivels the left headlamp to the swivel angle 0° in the normal speed.
	Peak Fast	Swivels the left headlamp to the swivel angle approximately 17° in the normal speed.
LOW BEAM TEST LEFT	Origin Slow	Swivels the left headlamp to the swivel angle $0^{\circ}$ in the speed at the initialization.
	Peak Slow	Swivels the left headlamp to the swivel angle approximately 17° in the speed at the initialization.
LEVELIZER TEST	Origin	Changes the aiming motor drive signal to approximately 70% of the battery voltage. Moves the headlamp upward and downward.
LLVLLIZLIN TEST	Peak	Changes the aiming motor drive signal to approximately 15% of the battery voltage. Moves the headlamp upward and downward.

#### NOTE:

<sup>&</sup>quot;Fast" operation speed is as three times fast as "Slow".

< DTC/CIRCUIT DIAGNOSIS >

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# DTC/CIRCUIT DIAGNOSIS

## B2503, B2504 SWIVEL ACTUATOR

#### SWIVEL ACTUATOR

The swivel actuator is installed in the headlamp unit. The swivel actuator consists of the swivel motor and the swivel position sensor.

#### SWIVEL MOTOR

- The swivel motor is the two-phase step motor.
- The swivel motor drives headlamp by exciting the two drive coils according to the drive signal from AFS control unit.
- The rotation direction of the swivel motor is changeable by changing the exciting pattern.

#### SWIVEL POSITION SENSOR

The swivel position sensor detects the headlamp swivel angle to transmit the swivel position sensor signal to AFS control unit.

DTC Logic

#### DTC DETECTION LOGIC

- [B2503] Swivel actuator [RH]
- [B2504] Swivel actuator [LH]

DTC detection condition	DTC erase condition	Possible cause
AFS control unit indicates an applicable DTC when detecting any of the following conditions continuously for 2 seconds or more.  • AFS control unit-recognized swivel position differs extremely from the swivel position sensor-input value while the swivel operating.  • The swivel position sensor signal does not change even though AFS control unit transmits the swivel motor driving signal while the swivel operating.  • The swivel motor short and open is detected while the swivel operating.  • The swivel position sensor power supply is 6 V or more, or 4 V or less.  • The swivel position sensor signal is 0.25 V or less, or 4.75 V or more.	Ignition switch OFF	Swivel position sensor  Swivel position sensor  Harness and connector  AFS control unit Swivel motor  Swivel motor  Harness and connector  AFS control unit

<sup>\*:</sup> Initialization is not included.

#### DTC CONFIRMATION PROCEDURE

#### 1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

## 2. CONFIRMATION DTC SELECTION

Select "B2503" or "B2504" for confirmation.

Which DTC is confirmation?

B2503 >> GO TO 3.

B2504 >> GO TO 4.

# 3.DTC CONFIRMATION (B2503)

- 1. Steer to the straight-forward position.
- 2. Start the engine.
- 3. Turn the headlamp ON.
- Shift the selector lever to "N".
- 5. Steer to the right. (Rotate it once or more.)
- 6. Perform the self-diagnosis with CONSULT.

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#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

#### Is "B2503" detected?

YES >> Refer to EXL-46, "Diagnosis Procedure".

NO >> Refer to GI-42, "Intermittent Incident".

## 4.DTC CONFIRMATION (B2504)

- 1. Steer to the straight-forward position.
- 2. Start the engine.
- 3. Turn the headlamp ON.
- 4. Drive at 25 km/h (15.5 MPH) or more.
- 5. Steer to the left. (Rotate it once or more.)
- 6. Stop the vehicle.
- 7. Perform the self-diagnosis with CONSULT.

#### Is "B2504" detected?

YES >> Refer to EXL-46, "Diagnosis Procedure".

NO >> Refer to GI-42, "Intermittent Incident".

## Diagnosis Procedure

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# 1. CHECK SWIVEL POSITION SENSOR SIGNAL INPUT

- 1. Turn the ignition switch ON.
- 2. Check the voltage between the AFS control unit harness connector and the ground.

	Terminals				
	(+)		(-)	Voltage (Approx.)	
	AFS control	unit		(Approx.)	
C	Connector		Ground		
RH	M16	9	Glound	0.25 - 4.75 V	
LH	IVITO	29		0.25 - 4.75 V	

#### Is the measurement value within the standard value?

YES >> GO TO 2.

Less than the standard value >>GO TO 6.

Higher than the standard value>>GO TO 9.

#### 2.check swivel motor

Check the swivel motor. EXL-49, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace the front combination lamp.

## 3. CHECK SWIVEL MOTOR OPEN CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect AFS control unit connector and the headlamp swivel actuator connector.
- Check continuity between the AFS control unit harness connector and the headlamp swivel actuator harness connector.

#### < DTC/CIRCUIT DIAGNOSIS >

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AFS control unit		Headlamp swivel actuator		Continuity			
Co	nnector	Terminal	Connector	Terminal			
		11		8			
RH		13	13 32 34	E20	7	7	
IXI I	KII	32		3	Existed		
	M16	34		4			
	IVITO	15		3	Existed		
LH	17	E59	4				
	36		8				
		38		7			

#### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

## 4. CHECK SWIVEL MOTOR SHORT CIRCUIT

Check continuity between the AFS control unit harness connector and the ground.

	AFS contro	ol unit		Continuity
	Connector	Terminal	1	Continuity
		11	-	
RH		13	-	
КΠ		32	Ground	
	NAAC	34	Ground	Not existed
	M16	15		Not existed
	LH	17		
LП		36		
		38	1	

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5.

## 5. CHECK SWIVEL MOTOR CIRCUIT VOLTAGE OUTPUT

- Connect AFS control unit connector.
- 2. Turn the ignition switch ON.
- 3. Turn the headlamp ON.
- 4. Select "LOW BEAM TEST RIGHT" or "LOW BEAM TEST LEFT" of ADAPTIVE LIGHT active test item.
- 5. With operating the test item, check the voltage between the AFS control unit harness connector and the ground.

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	Terminals		Condition		
	(+)		(-)	Condition	Voltage
-	AFS control unit			Swivel motor	(Approx.)
Con	nector	Terminal		Swiverinotor	
RH		11			
IXI I		32			(V) 15
		15			10
LH	M16	36	Ground	Active	0 → 100 <i>µ</i> s SKIB2408J 8 - 12 V
RH		13			
КΠ		34		Stop	9.5 - 11.5 V
LH		17		ЗЮр	9.5 - 11.5 V
		38			

#### Is the measurement value within the standard value?

YES >> Replace the front combination lamp.

NO >> Replace AFS control unit.

## 6.CHECK SWIVEL POSITION SENSOR SIGNAL OUTPUT

Check the voltage between the AFS control unit harness connector and the ground.

	Terminals				
	(+)		(-)	Voltage (Approx.)	
	AFS contro	l unit		(Approx.)	
	Connector Terminal		Ground		
RH	M16	4	Glound	5 V	
LH	IVITO	24		J V	

#### Is the measurement value normal?

YES >> GO TO 7.

NO >> GO TO 9.

# 7.CHECK SWIVEL POSITION SENSOR POWER SUPPLY CIRCUIT INPUT VOLTAGE

- Turn the ignition switch OFF.
- 2. Disconnect the headlamp swivel actuator connector.
- 3. Turn the ignition switch ON.
- 4. Check the voltage between the headlamp swivel actuator harness connector and the ground.

(+)			(-)	Voltage
	Headlamp swive	el actuator		(Approx.)
	Connector	Terminal	Ground	
RH	E29	2	Ground	5 V
LH	E59	2		5 V

#### Is the measurement value normal?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

## 8.check swivel position sensor signal short circuit

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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- Turn the ignition switch OFF.
- Disconnect AFS control unit connector.
- Check continuity between the AFS control unit harness connector and the headlamp swivel actuator harness connector.

Continuity	Headlamp swivel actuator		ol unit	AFS contro	
Continuity	Terminal	Connector	Terminal	nnector	Со
Existed	1	E29	9	M16	RH
LAISIEU	1	E59	29	IVITO	LH

#### Does continuity exist?

>> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

## 9. CHECK SWIVEL POSITION SENSOR GROUND CIRCUIT VOLTAGE OUTPUT

Check the voltage between the AFS control unit harness connector and the ground.

	(+)		(-)	Voltage
	AFS contro	l unit		(Approx.)
(	Connector		Ground	
RH	M16	2	Ground	0 V
LH	IVITO	27		0 0

#### Is the measurement value normal?

YES >> GO TO 10.

>> Replace AFS control unit. NO

# 10.check swivel position sensor short ground circuit

- Turn the ignition switch OFF.
- Disconnect AFS control unit connector and the headlamp swivel actuator connector.
- Check continuity between the AFS control unit harness connector and the headlamp swivel actuator harness connector.

	AFS contr	ol unit	Headlamp swivel actuator		Continuity
Co	nnector	Terminal	Connector	Terminal	Continuity
RH	M16	2	E29	6	Existed
LH	IVITO	27	E59	6	LAISIGU

#### Does continuity exist?

YES >> Replace the front combination lamp.

>> Repair the harnesses or connectors.

## Component Inspection

## 1. CHECK SWIVEL MOTOR SINGLE PART

- Disconnect the swivel actuator connector.
- Check the resistance among each swivel actuator connector terminal.

Swivel	Resistance	
Terminal	Terminal	(Approx.)
3	7	7.2 Ω
4	8	7.2 Ω
3	4	10 M $\Omega$ or more

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INFOID:0000000009059892

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## Is the measurement value normal?

YES >> Swivel actuator is normal.

NO >> Replace the front combination lamp.

#### **B2514 HEIGHT SENSOR UNUSUAL [RR]**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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# B2514 HEIGHT SENSOR UNUSUAL [RR]

Description INFOID:0000000009059893

The height sensor is installed to the rear suspension arm. The height sensor detects the suspension arm displacement as the vehicle height change. The height sensor transmits the height sensor signal to AFS control unit.

#### NOTE:

The sensor angle of the unloaded vehicle position is the reference value.

DTC Logic INFOID:0000000009059894

#### DTC DETECTION LOGIC

[B2514] Height sensor unusual [RR]

DTC detection condition	DTC erase condition	Possible cause
<ul> <li>An applicable DTC is indicated when any of the following conditions is detected continuously for 2 seconds or more.</li> <li>The height sensor power supply is 6 V or more, or 4 V or less.</li> <li>The height sensor signal is 0.25 V or less, or 4.75 V or more.</li> </ul>	Ignition switch OFF	Height sensor  • Height sensor  • Harness and connector  • AFS control unit

#### DTC CONFIRMATION PROCEDURE

## 1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

## 2.DTC CONFIRMATION

- Start the engine.
- Turn the headlamp ON.
- Select the self-diagnosis with CONSULT.
- Check the self-diagnosis result. Refer to <u>EXL-196</u>, "<u>DTC Index</u>".

## Is "B2514" detected?

YES >> Refer to EXL-51, "Diagnosis Procedure".

>> Refer to GI-42, "Intermittent Incident". NO

## Diagnosis Procedure

# 1. CHECK HEIGHT SENSOR POWER SUPPLY OUTPUT

Turn the ignition switch ON.

Check the voltage between the AFS control unit harness connector and the ground.

Terminals			
(+)		(-)	Voltage (Approx.)
AFS co	ntrol unit		(Approx.)
Connector	Terminal	Ground	
M16	6		5 V

Is the measurement value within the standard value?

YES >> GO TO 2.

NO >> Replace AFS control unit.

## 2.CHECK HEIGHT SENSOR POWER SUPPLY INPUT

Check the voltage between the AFS control unit harness connector and the ground.

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## **B2514 HEIGHT SENSOR UNUSUAL [RR]**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals			
(+) (-)			Voltage
AFS co	AFS control unit		(Approx.)
Connector	Terminal	Ground	
M16	28		0.25 - 4.75 V

#### Is the measurement value within the standard value?

YES >> Replace AFS control unit.

Less than the standard value >>GO TO 3.

Higher than the standard value>>GO TO 6.

# 3.check height sensor power supply circuit output voltage

- 1. Turn the ignition switch OFF.
- 2. Disconnect the height sensor connector.
- 3. Turn the ignition switch ON.
- Check the voltage between the height sensor harness connector and the ground.

Terminals			
(+) (-)			Voltage
Height sensor			(Approx.)
Connector Terminal		Ground	
B32	1		5 V

#### Is the measurement value within the standard value?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

## 4. CHECK HEIGHT SENSOR SIGNAL OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect AFS control unit connector.
- Check continuity between the AFS control unit harness connector and the height sensor harness connector.

AFS control unit		Height sensor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M16	28	B32	2	Existed

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

#### 5. CHECK HEIGHT SENSOR SIGNAL SHORT CIRCUIT

Check continuity between the height sensor harness connector and the ground.

Height	Height sensor		Continuity
Connector	Terminal	Ground	Continuity
B32	2		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace the height sensor.

#### 6.CHECK HEIGHT SENSOR GROUND

Check the voltage between the AFS control unit harness connector and the ground.

## **B2514 HEIGHT SENSOR UNUSUAL [RR]**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals			
(+) (-)			Voltage
AFS control unit			(Approx.)
Connector	Terminal	Ground	
M16	8		0 V

#### Is the measurement value within the standard value?

YES >> GO TO 7.

NO >> Replace AFS control unit.

# 7.check height sensor ground circuit

- 1. Turn the ignition switch OFF.
- 2. Disconnect AFS control unit connector and the height sensor connector.
- Check continuity between the AFS control unit harness connector and the height sensor harness connector.

AFS control unit		Height sensor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M16	8	B32	3	Existed

#### Does continuity exist?

YES >> Replace the height sensor.

NO >> Repair the harnesses or connectors.

## Component Inspection

# 1. CHECK HEIGHT SENSOR

- 1. Remove the height sensor (the height sensor connector is connected).
- 2. Start the engine.
- 3. Turn the light switch 2ND.
- Select "HI SEN OTP RR" of AFS data monitor item.
- 5. With moving the sensor lever, check the monitor status.

Monitor item	Condition		Monitor status [Standard value (Approx.)]
		Contact with stopper	0.9 V
HI SEN OTP RR	Sensor lever position	Moving be- tween two posi- tions	Smooth move- ment
		90° from stopper	4.5 V

#### Is the output value normal?

YES >> Height sensor is normal.

NO >> Replace the height sensor.

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# **B2516 SHIFT SIGNAL [P, R]**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

INFOID:0000000009059899

## B2516 SHIFT SIGNAL [P, R]

Description INFOID:0000000009059897

AFS control unit receives the shift position signal from TCM with CAN communication.

DTC Logic

#### DTC DETECTION LOGIC

[B2516] Shift signal [P, R]

DTC detection condition	DTC erase condition	Possible causes
The shift position signal is not received.	Ignition switch OFF	TCM AFS control unit

#### DTC CONFIRMATION PROCEDURE

#### 1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

## 2.DTC CONFIRMATION

- 1. Turn ignition ON.
- 2. Select the self-diagnosis with CONSULT.
- Check the self-diagnosis result. Refer to <u>EXL-196</u>, "<u>DTC Index</u>".

#### Is "B2516" detected?

YES >> Refer to EXL-54, "Diagnosis Procedure".

NO >> Refer to GI-42, "Intermittent Incident".

## Diagnosis Procedure

1.TCM SELF-DIAGNOSIS

Check the self-diagnosis result with CONSULT. Check that TCM does not detect any DTCs.

#### Is any DTC detected?

YES >> Check TCM. Refer to TM-158, "DTC Index".

NO >> GO TO 2.

#### 2.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

#### Is the memory erased?

YES >> Inspection end.

NO >> Replace AFS control unit.

#### **B2517 VEHICLE SPEED SIGNAL**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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## **B2517 VEHICLE SPEED SIGNAL**

Description

AFS control unit receives the vehicle speed signal from the unified meter and A/C amp. with CAN communication.

DTC Logic

#### DTC DETECTION LOGIC

[B2517] Vehicle speed signal

DTC detection condition	DTC erase condition	Possible causes
The vehicle speed signal is not received.	Ignition switch OFF	<ul><li>Unified meter and A/C amp.</li><li>AFS control unit</li></ul>

#### DTC CONFIRMATION PROCEDURE

## 1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

## 2.DTC CONFIRMATION

- 1. Turn ignition ON.
- 2. Select the self-diagnosis with CONSULT.
- Check the self-diagnosis result. Refer to <u>EXL-196, "DTC Index"</u>.

#### Is "B2517" detected?

YES >> Refer to EXL-55, "Diagnosis Procedure".

NO >> Refer to GI-42, "Intermittent Incident".

## Diagnosis Procedure

## 1. UNIFIED METER AND A/C AMP. SELF-DIAGNOSIS

Check the self-diagnosis result with CONSULT. Check that the unified meter and A/C amp. does not detect any DTCs.

#### Is any DTC detected?

YES >> Check the unified meter and A/C amp. Refer to MWI-109, "DTC Index".

NO >> GO TO 2.

## 2.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

#### Is the memory erased?

YES >> Inspection end.

NO >> Replace AFS control unit.

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#### **B2519 LEVELIZER CALIBRATION**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

# **B2519 LEVELIZER CALIBRATION**

AFS control unit transmits the height sensor signal from the height sensor.

DTC Logic

[B2519] Levelizer calibration

DTC detection condition	DTC erase condition	Possible causes
The height sensor adjustment position is not recognized.	When the levelizer adjust- ment is completed	AFS control unit

## Diagnosis Procedure

INFOID:0000000009059905

# 1.LEVELIZER ADJUSTMENT

Perform the levelizer adjustment.

>> Refer to EXL-10, "LEVELIZER ADJUSTMENT : Special Repair Requirement".

[XENON TYPE]

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## **B2521 ECU CIRCUIT**

Description

AFS control unit judges the vehicle condition from each signal. AFS control unit controls AFS function and the headlamp aiming.

DTC Logic

#### DTC DETECTION LOGIC

[B2521] ECU circuit

Error detection condition	DTC erase condition	Possible cause
<ul> <li>AFS control unit indicates an applicable DTC when detecting any of the following conditions continuously for 2 seconds or more.</li> <li>The swivel position sensor is shorted to the power supply or the ground.</li> <li>The swivel position sensor signal is shorted to the ground.</li> <li>The height sensor power supply is shorted to the power supply or the ground.</li> <li>The height sensor signal is shorted to the ground.</li> <li>AFS control unit RAM/ROM error</li> </ul>	Ignition switch OFF	Swivel position sensor  Swivel position sensor  Harness and connector  AFS control unit Height sensor  Height sensor  Harness and connector  AFS control unit  AFS control unit  AFS control unit (RAM/ROM)  AFS control unit

#### DTC CONFIRMATION PROCEDURE

#### 1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

# 2.DTC CONFIRMATION PROCEDURE

- 1. Turn ignition ON.
- Select the self-diagnosis with CONSULT.
- Check the self-diagnosis result. Refer to <u>EXL-196, "DTC Index"</u>.

#### Is "B2521" detected?

YES >> Refer to EXL-57, "Diagnosis Procedure".

NO >> Refer to GI-42, "Intermittent Incident".

## Diagnosis Procedure

# 1. CHECK EACH SENSOR POWER SUPPLY

Turn the ignition switch ON.

Check the voltage between the AFS control unit harness connector and the ground.

Terminals			
(+)		(-)	Voltage
AFS control unit			(Approx.)
Connector	Terminal		
	4	Ground	
M16	6		5 V
	24		

### Is the measurement value within the standard value?

YES >> GO TO 2.

Less than the standard value >>GO TO 3.

Higher than the standard value>>GO TO 4.

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# 2.CHECK EACH SENSOR SIGNAL

Check the voltage between the AFS control unit harness connector and the ground.

Terminals			
(+)		(-)	Voltage
AFS control unit			(Approx.)
Connector	Terminal		
	9	Ground	
M16	28		0.25 - 4.75 V
	29		

#### Is the measurement value within the standard value?

YES >> Replace AFS control unit.

Less than the standard value >>GO TO 5.

Higher than the standard value>>GO TO 6.

## 3.check each sensor power supply short circuit

- 1. Turn the ignition switch OFF.
- Disconnect AFS control unit connector.
- 3. Check continuity between the AFS control unit harness connector and the ground.

AFS control unit			Continuity
Connector	Terminal	Contin	Continuity
	4	Ground	
M16	6		Not existed
	24		

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace AFS control unit.

## 4. CHECK EACH SENSOR POWER SUPPLY CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect AFS control unit connector.
- 3. Check the voltage between the AFS control unit harness connector and the ground.

Terminals			
(+)		(-)	Voltage (Approx.)
AFS control unit			(Approx.)
Connector	Terminal		
	4	Ground	
M16	6		0 V
	24		

#### Is the measurement value normal?

YES >> Replace AFS control unit.

NO >> Repair the harnesses or connectors.

## CHECK EACH SENSOR SIGNAL SHORT CIRCUIT

- Turn the ignition switch OFF.
- Disconnect AFS control unit connector.
- 3. Check continuity between the AFS control unit harness connector and the ground.

#### **B2521 ECU CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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AFS co	AFS control unit		Continuity
Connector	Terminal		Continuity
	9	Ground	
M16	28		Not existed
	29		

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace AFS control unit.

# 6. CHECK EACH SENSOR SIGNAL SHORT CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect AFS control unit connector.
- Turn the ignition switch ON.
- Check the voltage between the AFS control unit harness connector and the ground.

Terminals			
(+)		(-)	Voltage
AFS control unit			(Approx.)
Connector	Terminal		
	9	Ground	
M16	28		0 V
	29		

#### Is the measurement value normal?

YES >> Replace AFS control unit.

NO >> Repair the harnesses or connectors.

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#### **C0126 STEERING ANGLE SENSOR SIGNAL**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

INFOID:0000000009059911

## C0126 STEERING ANGLE SENSOR SIGNAL

Description

AFS control unit receives the steering angle sensor signal from the steering angle sensor with CAN communication.

DTC Logic

#### DTC DETECTION LOGIC

[C0126] Steering angle sensor signal

DTC detection condition	DTC erase condition	Possible causes
In any of the following conditions  The steering angle sensor signal is not received.  The steering angle sensor signal error is received.  Out-of-standard signal (-900°- +900°) is received.	The ignition switch OFF	Steering angle sensor     AFS control unit

#### DTC CONFIRMATION PROCEDURE

#### 1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

## 2. DTC CONFIRMATION

- 1. Start the engine.
- 2. Turn the steering wheel to the maximum right/left.
- Select the self-diagnosis with CONSULT.
- Check the self-diagnosis result. Refer to <u>EXL-196</u>, "<u>DTC Index</u>".

#### Is "C0126" detected?

YES >> Refer to <u>EXL-60</u>, "<u>Diagnosis Procedure</u>". NO >> Refer to <u>GI-42</u>, "<u>Intermittent Incident</u>".

## Diagnosis Procedure

# $1.\mathsf{abs}$ actuator and electrical unit (control unit) self-diagnosis

Check the self-diagnosis result with CONSULT. Check that ABS actuator and electrical unit (control unit) does not detect any DTCs.

#### Is any DTC detected?

YES >> Check ABS actuator and electrical unit (control unit).Refer to <a href="BRC-117">BRC-117</a>, "DTC No. Index".

NO >> GO TO 2.

#### 2.DTC ERASE

Erase DTC memory of AFS with CONSULT.

#### Is the memory erased?

YES >> Inspection end.

NO >> Replace AFS control unit.

#### **C0428 STEERING ANGLE SENSOR CALIBRATION**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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## C0428 STEERING ANGLE SENSOR CALIBRATION

AFS control unit receives the steering angle sensor signal from the steering angle sensor with CAN communication.

DTC Logic

[C0428] Steering angle sensor calibration

DTC detection condition	DTC erase condition	Possible causes
The steering angle sensor neutral position is not recognized.	When the steering angle sensor neutral position registration is completed	Steering angle sensor

## Diagnosis Procedure

INFOID:00000000009059914

1. STEERING ANGLE SENSOR NEUTRAL POSITION ADJUSTMENT

Perform the steering angle sensor neutral position adjustment.

**CAUTION:** 

Perform the steering angle sensor neutral position adjustment on VDC side. VDC may activate incorrectly.

>> Refer to <u>BRC-9</u>, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement".

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#### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## U1000 CAN COMM CIRCUIT

CAN (Controller Area Network) is the serial transmission for real time application. CAN is the multiplex communication for the vehicle with superior data transmission speed and error detection ability. Many electronic control units are equipped on the vehicle. These control units do not operate individually, but associates with other control units by sharing information. In CAN communication, each control unit is connected with two communication lines (CAN-H and CAN-L). Much information is transmitted with fewer communication lines than before. Each control unit transmits/receives data and reads the necessary data only. CAN Communication Signal Chart. Refer to LAN-25, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

[U1000] CAN communication circuit

DTC detection condition	DTC erase condition	Possible causes
When AFS control unit does not transmit/receive CAN communication signal continuously for 2 seconds or more	Ignition switch OFF	CAN communication system

## Diagnosis Procedure

INFOID:0000000009059917

## 1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result".

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-16, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-42, "Intermittent Incident".

## **U1010 CONTROL UNIT (CAN)**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

# U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

[U1000] CAN communication circuit

DTC	CONSULT display de- scription	DTC detection condition	Possible causes
U1010	CONTROL UNIT (CAN)	AFS control unit detected internal CAN communication circuit malfunction.	AFS control unit

## Diagnosis Procedure

INFOID:0000000009059919

1. REPLACE AFS CONTROL UNIT

When DTC [U1010] is detected, replace AFS control unit.

>> Replace AFS control unit.

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#### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

# POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000009365743

## 1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Rattory power cumply	К
Battery power supply	10

#### 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

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

(	Voltage		
В	CM		(Approx.)
Connector	Terminal	Ground	
M118	1	Glound	Pottoni voltogo
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.

В	СМ		Continuity
Connector	Terminal	Ground	Continuity
M119	13		Existed

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

## 1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible links are not blown.

#### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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Signal name	Fuses and fusible link No.
	С
Battery power supply	50
	51

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 the ignition switch OFF.
- 2. Disconnect IPDM E/R connector.
- Check voltage between IPDM E/R harness connector and the ground.

(+)			Voltage
IPDM E/R		(-)	(Approx.)
Connector			
E4	1	Ground	Battery voltage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair the harness or connector.

## 3.CHECK GROUND CIRCUIT

Check continuity between IPDM E/R harness connectors and the ground.

IPDM E/R			Continuity	
Connector Terminal		Ground	Continuity	
E5	12	Ground	Existed	
E6	41		LXISIGU	

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair the harness or connector.

#### AFS CONTROL UNIT

# AFS CONTROL UNIT : Diagnosis Procedure

## 1. FUSE INSPECTION

Check that the following fuses are not fusing.

Signal name	Connection position	Fuse No.	Capacity
Ignition power supply	FUSE BLOCK (J/B)	3	10 A

#### Is the fuse fusing?

YES >> Repair the applicable circuit. And then replace the fuse.

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect AFS control unit harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between AFS control unit harness connector and ground.

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#### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

(	Voltage		
AFS co	ntrol unit		(Approx.)
Connector	Terminal	Ground	
M16 1			Battery voltage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Check continuity between AFS control unit harness connectors and ground.

AFS co	ntrol unit		Continuity	
Connector Terminal		Ground	Continuity	
M16 25			Existed	

#### Does continuity exist?

YES >> Power supply and ground circuit are normal.

NO >> Repair harness or connector.

## **HEADLAMP (HI) CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [XENON TYPE]

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## HEADLAMP (HI) CIRCUIT

## Component Function Check

# 1. CHECK HEADLAMP (HI) OPERATION

#### **PIPDM E/R AUTO ACTIVE TEST**

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 2. Check that the headlamp switches to the high beam.

#### **PCONSULT ACTIVE TEST**

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the headlamp (HI) is turned ON.

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

#### NOTE:

ON/OFF is repeated 1 second each.

#### Is the headlamp (HI) turned ON?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-67, "Diagnosis Procedure".

## Diagnosis Procedure

# 1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

#### PCONSULT ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector.
- 3. Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 5. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

Terminals			Condition		
(+)		(-)	Condition	Voltage	
	IPDM E	/R		External	(Approx.)
Cor	nector	Terminal		lamp	
RH		89 Ground	Hi	Battery voltage	
	E8 90	. Oldana	Off	0 V	
LH			Hi	Battery voltage	
				Off	0 V

#### Is the measurement value normal?

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

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

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

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#### < DTC/CIRCUIT DIAGNOSIS >

	IPDM E/R		Front combination lamp		Continuity
Coni	nector	Terminal	Connector Terminal		Continuity
RH	E8	89	E28	7	Existed
LH	LO	90	E58	7	LAISIEU

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

# 3.CHECK HEADLAMP (HI) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp HI (LH)	IPDM E/R	#54	10 A

#### Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

# 4. CHECK HEAD LAMP (HI) SHORT CIRCUIT

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

IPDM E/R				Continuity
Connector Terminal		Ground	Continuity	
RH	E8	89	Giodila	Not existed
LH	LO -	90		INOL EXISTED

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

# 5.CHECK HEAD LAMP (HI) GROUND OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect the front combination lamp connector.
- 3. Check continuity between the front combination lamp harness connector and the ground.

Fro	nt combinat	ion lamp		Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E28	2	Giodila	Existed
LH E58 2			Existed	

#### Does continuity exist?

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

NO >> Repair the harnesses or connectors.

#### **HEADLAMP (LO) CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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## HEADLAMP (LO) CIRCUIT

Description

Headlamp (LO) circuit is connected to HID control unit integrated in the headlamp. Headlamp (LO) circuit turns xenon headlamp ON.

For the details of HID control unit and the xenon headlamp, refer to EXL-71, "Description".

## Component Function Check

## 1. CHECK HEADLAMP (LO) OPERATION

#### **PIPDM E/R AUTO ACTIVE TEST**

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the headlamp is turned ON.

#### **CONSULT ACTIVE TEST**

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the headlamp (LO) is turned ON.

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

#### Is the headlamp (LO) turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to EXL-69, "Diagnosis Procedure".

## Diagnosis Procedure

# 1.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

#### (P)CONSULT ACTIVE TEST

- 1. Turn the ignition switch OFF.
- Disconnect the front combination lamp connector.
- Turn the ignition switch ON.
- 4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 5. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

Terminals				Test item		
(+)			(-)	Test item	Voltage (Approx.)	
IPDM E/R			EXTERNAL LAMP			
Connector Terminal						
RH	83	Ground	Lo	Battery voltage		
IXII	E8 -	03	Glound	Off	0 V	
LH	LO	84		Lo	Battery voltage	
				Off	0 V	

#### Is the measurement value normal?

YES >> GO TO 2.

NO >> GO TO 3.

## 2.CHECK HEADLAMP (LO) OPEN CIRCUIT

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

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#### < DTC/CIRCUIT DIAGNOSIS >

IPDM E/R			Front comb	Continuity		
Connector Te		Terminal	Connector	Terminal	Continuity	
RH	E8	83	E28	5	Existed	
LH	LO	84	E58	5	LAISIEU	

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

# 3.CHECK HEADLAMP (LO) FUSE

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

Unit	Lotion	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	#57	15 A
Headlamp LO (LH)	IPDM E/R	#56	15 A

#### Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

# 4. CHECK HEADLAMP (LO) SHORT CIRCUIT

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

IPDM E/R			Ground	Continuity
Connector Terminal		Continuity		
RH	E8	83	Giodila	Not existed
LH	LO	84		

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

# 5. CHECK HEADLAMP (LO) GROUND OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect the front combination lamp connector.
- 3. Check continuity between the front combination lamp harness connector and the ground.

Front combination lamp			Ground	Continuity	
Connector Terminal					
RH	E28	3	Glound	Existed	
LH	LH E58 3			LAISIEU	

#### Does continuity exist?

YES >> Perform the xenon headlamp diagnosis. Refer to <a href="EXL-71">EXL-71</a>, "Diagnosis Procedure".

NO >> Repair the harnesses or connectors.

[XENON TYPE]

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#### **XENON HEADLAMP**

Description

#### **OUTLINE**

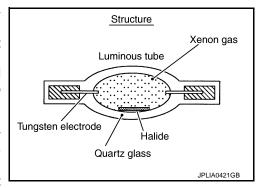
- The lamp light source is by the arch discharge by applying high voltage into the xenon gas-filled bulb instead
  of the halogen bulb filament.
- Sight becomes more natural and brighter because the amount of light are gained adequately and the color of light is sunshine-like white.
- The xenon bulb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

#### ILLUMINATION PRINCIPLE

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

#### NOTE:

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



#### PRECAUTIONS FOR TROUBLE DIAGNOSIS

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

#### WARNING.

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

#### **CAUTION:**

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

#### NOTE:

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

## **Diagnosis Procedure**

## 1. CHECK XENON BULB

Install the normal bulb to the applicable headlamp. Check that the xenon bulb is turned ON.

#### Is the headlamp turned ON?

YES >> Replace the xenon bulb.

NO >> Check the headlamp control system, replace the xenon headlamp assembly if normal.

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Revision: 2013 March EXL-71 2014 QX50

#### **HEADLAMP LEVELIZER CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## HEADLAMP LEVELIZER CIRCUIT

Description

The headlamp levelizer adjusts the headlamp light axis upward and downward with the aiming motor integrated in the front combination lamp.

## Component Function Check

INFOID:00000000009059931

## 1. CHECK AIMING MOTOR OPERATION

#### (P)CONSULT ACTIVE TEST

- 1. Start the engine.
- 2. Turn the lighting switch 2ND.
- 3. Select "LEVELIZER TEST" of ADAPTIVE LIGHT active test item.
- 4. With operating the test item, check the operation.

Test item	Light axis angle	10 m (32.8 ft)-forward light axis change reference quantity (Approx.)	
LEVELIZER TEST	(Reference value)		
Origin	0°	_	
Peak	2.5°	450 mm (17.9 in)	

#### Is the operation normal?

YES >> Headlamp levelizer circuit is normal.

NO >> Refer to EXL-72, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:00000000009059932

## 1. CHECK AIMING MOTOR DRIVE SIGNAL OUTPUT

## **©CONSULT ACTIVE TEST**

- 1. Start the engine.
- Turn the light switch 2ND.
- Select "LEVELIZER TEST" of ADAPTIVE LIGHT active test item.
- 4. With operating the test item, check the voltage between the AFS control unit harness connector and the ground.

Terminals			Test item	
(+)		(–)	rest item	Voltage (Approx.)
AFS control unit			LEVELIZED TEXT	
Connector Terminal			LEVELIZER 1E31	
RH 19	10	Ground	Origin	8.8 V
	13		Peak	1.9 V
LH	40		Origin	8.8 V
			Peak	1.9 V
	FS con	(+)  AFS control unit  nector Terminal  19  M16	(+) (-)  AFS control unit  nector Terminal  19 Ground	(+)         (-)         Test item           JFS control unit nector         Terminal         LEVELIZER TEST           M16         Origin         Peak           A0         Origin

#### Is the measurement value normal?

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

2.CHECK AIMING MOTOR DRIVE SIGNAL CIRCUIT INPUT

- 1. Turn the ignition switch OFF.
- 2. Disconnect AFS control unit connector and aiming motor connector.
- Check continuity between AFS control unit harness connector and the aiming motor harness connector.

### **HEADLAMP LEVELIZER CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Continuity	Aiming motor		AFS control unit		
Continuity	Connector Terminal		Terminal	nnector	Со
Existed	1	E26	19	M16	RH
LXISIEU	1	E56	40	IVITO	LH

### Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses and connectors.

## ${f 3.}$ CHECK AIMING MOTOR DRIVE SIGNAL SHORT CIRCUIT

1. Turn the ignition switch OFF.

- 2. Disconnect AFS control unit connector and aiming motor connector.
- 3. Check continuity between AFS control unit harness connector and ground.

AFS control unit			Continuity	
Con	nector	Terminal	Ground	Continuity
RH	M16	19	Glound	Not existed
LH	IVITO	40		Not existed

### Does continuity exist?

YES >> Repair the harness and connectors.

NO >> Replace AFS control unit.

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### FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## FRONT FOG LAMP CIRCUIT

## Component Function Check

#### INFOID:00000000009059933

## 1. CHECK FRONT FOG LAMP OPERATION

### **RIPDM E/R AUTO ACTIVE TEST**

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the front fog lamp is turned ON.

#### (P)CONSULT ACTIVE TEST

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, Check that the front fog lamp is turned ON.

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

### Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-74, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000009059934

## 1. CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	#58	10 A

#### Is the fuse fusing?

YES >> GO TO 2.

NO >> GO TO 3.

## 2.CHECK FRONT FOG LAMP SHORT CIRCUIT

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

	IPDM E	/R		Continuity
Conr	Connector Terminal		Ground	Continuity
RH	E8	86	Giouria	Not existed
LH	EO	87		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

## 3.CHECK FRONT FOG LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

## 4. CHECK FRONT FOG LAMP OUTPUT VOLTAGE

#### (P)CONSULT ACTIVE TEST

- Disconnect the front fog lamp connector.
- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.

### FRONT FOG LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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

	Т	erminals		Test item	
(+)		(-)	163t Itelli	Voltage	
IPDM E/R			EXTERNAL	(Approx.)	
Cor	nnector	Terminal		LAMP	
RH	RH E8	86	86 Ground	Fog	Battery voltage
				Off	0 V
LH	87		Fog	Battery voltage	
				Off	0 V

#### Is the measurement value normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R.

## 5. CHECK FRONT FOG LAMP OPEN CIRCUIT

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

IPDM E/R		Front fog lamp		Continuity	
Conn	ector	Terminal	Connector Terminal		Continuity
RH	E8	86	E34	1	Existed
LH	LO	87	E64	1	LXISIEU

### Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

### 6.CHECK FRONT FOG LAMP GROUND CIRCUIT OPEN CIRCUIT

Check continuity between the front fog lamp harness connector and the ground.

Front fog lamp				Continuity		
Conr	Connector Termina		Connector Terr		Ground	Continuity
RH	E34	2	Giodila	Existed		
LH	E64	2		Existed		

### Does continuity exist?

YES >> Replace the front fog lamp.

NO >> Repair the harnesses or connectors.

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### **PARKING LAMP CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## PARKING LAMP CIRCUIT

## Component Function Check

INFOID:0000000009059935

INFOID:0000000009059936

## 1. CHECK PARKING LAMP OPERATION

### **PIPDM E/R AUTO ACTIVE TEST**

- Activate IPDM E/R auto active test. Refer to <u>PCS-9</u>, "<u>Diagnosis Description</u>".
- Check that the parking lamp is turned ON.

#### **PCONSULT ACTIVE TEST**

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON
Off : Parking lamp OFF

### Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-76, "Diagnosis Procedure".

## Diagnosis Procedure

# 1. CHECK PARKING LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Parking lamp	IPDM E/R	#52	10 A

#### Is the fuse fusing?

YES >> GO TO 2.

NO >> GO TO 3.

## 2.CHECK PARKING LAMP SHORT CIRCUIT

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

IPDM E/R			Continuity	
Conr	nector	Terminal	Ground	Continuity
RH	E9	91	Ground	Not existed
LH		92		INUL EXISTED

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if fusing is found again.)

## 3.CHECK PARKING LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

## 4. CHECK PARKING LAMP OUTPUT VOLTAGE

### (R)CONSULT ACTIVE TEST

- Disconnect the front combination lamp connector.
- Turn the ignition switch ON.
- 3. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

### **PARKING LAMP CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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

	Т	erminals	Test item		
(+)		(-)	iest item	Voltage	
IPDM E/R			EXTERNAL	(Approx.)	
Cor	nector	Terminal		LAMP	
RH		91	91 Ground -	TAIL	Battery voltage
	E9			Off	0 V
LH	92		TAIL	Battery voltage	
				Off	0 V

#### Is the measurement value normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R.

## 5. CHECK PARKING LAMP OPEN CIRCUIT

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

IPDM E/R		Front combination lamp		Continuity	
Conr	nector	Terminal	Connector Terminal		Continuity
RH	E9	91	E28	8	Existed
LH	LJ	92	E58	8	LAISIEU

#### Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

## **6.**CHECK PARKING LAMP GROUND OPEN CIRCUIT

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

Front combination lamp				Continuity
Conr	Connector Terminal		Ground	Continuity
RH	E28	4	Giouna	Existed
LH	E58	4		EXISTECT

#### Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

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## TURN SIGNAL LAMP CIRCUIT

**Description** 

BCM performs the high flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.

### NOTE:

Turn signal lamp blinks at normal speed when using the hazard warning lamp.

## Component Function Check

#### INFOID:0000000009059938

## 1. CHECK TURN SIGNAL LAMP

## **(P)CONSULT ACTIVE TEST**

- 1. Select "FLASHER" of BCM (FLASHER) active test item.
- 2. With operating the test items, check that the turn signal lamp blinks.

LH: Turn signal lamp LH blinking
RH: Turn signal lamp RH blinking
Off: The turn signal lamp OFF

### Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-78. "Diagnosis Procedure".

## Diagnosis Procedure

#### INFOID:0000000009059939

## 1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

## 2. CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

### **PCONSULT ACTIVE TEST**

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector or the rear combination lamp connector.
- Turn the ignition switch ON.
- Select "FLASHER" of BCM (FLASHER) active test item.
- 5. With operating the turn signal switch, check the voltage between the BCM harness connector and the ground.

	Te	erminals		Test item	Test item	
	(+)		(-)	1630 116111	Voltage (Approx.)	
ВСМ				FLASHER	voltage (Approx.)	
Conne	ector	Terminal		TEASILIN		
Front RH		17			(V) 15	
Front LH	M119	18	Ground	LH or RH	5 0	
Rear RH	14400	20		0"	0.1/	
Rear LH	M120	25		Off	0 V	

Is the measurement value normal?

### TURN SIGNAL LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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YES >> GO TO 3.

NO >> Replace BCM.

## 3.check turn signal lamp open circuit

- Turn the ignition switch OFF.
- Disconnect BCM connector. 2.
- 3. Check the continuity between the BCM harness connector and the front combination lamp or the rear combination lamp harness connector.

ВСМ			Front combination lamp/ Rear combination lamp		Continuity
Conr	nector	Terminal	Connector Terminal		
Front RH	M119	17	E28	6	
Front LH	WITTE	18	E58	6	Existed
Rear RH	M120	20	B261	1	Existed
Rear LH	IVI 120	25	B260	1	

#### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

### 4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and the ground.

	BCM			Continuity
Connector		Terminal		Continuity
Front RH	M119	17	Ground	
Front LH	WITTS	18	Glound	Not existed
Rear RH	M120	20		Not existed
Rear LH	IVITZU	25		

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5.

## 5. CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

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

	t combinatior r combinatio			Continuity
Connector Terminal				
Front RH	E28	4	Ground	
Front LH	E58	4		Existed
Rear RH	B261	2		Existed
Rear LH	B260	2		

### Does continuity exist?

YES >> Replace the front combination lamp or the rear combination lamp.

NO >> Repair the harnesses or connectors. **EXL** 

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**EXL-79** Revision: 2013 March 2014 QX50

[XENON TYPE]

## **OPTICAL SENSOR**

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

## Component Function Check

INFOID:0000000009059941

## 1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

### (P)CONSULT DATA MONITOR

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

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

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

#### Is the item status normal?

YES >> Optical sensor is normal.

NO >> Refer to EXL-80, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000009059942

## 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(-	+)	(-)	Voltage (Approx.)
Optica	sensor		(Approx.)
Connector	Connector Terminal		
M94 1			5 V

#### Is the measurement value normal?

YES >> GO TO 2.

NO >> GO TO 4.

## 2.CHECK OPTICAL SENSOR GROUND INPUT

Check the voltage between the optical sensor harness connector and the ground.

(-	+)	(-)	Voltage (Approx.)
Optica	sensor		(Approx.)
Connector	Connector Terminal		
M94	3		0 V

### Is the measurement value normal?

YES >> GO TO 3.

NO >> GO TO 6.

## 3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

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#### < DTC/CIRCUIT DIAGNOSIS >

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

	Terminals		Condition		
(+	.)	(-)	Condition	Voltage	
Optical sensor			Optical sensor	(Approx.)	
Connector	Terminal		Optical serisor		
			When illuminating	3.1 V or more *	
M94	2		When shutting off light	0.6 V or less	

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

#### Is the measurement value normal?

YES >> GO TO 7.

NO >> Replace the optical sensor.

## 4. CHECK OPTICAL SENSOR OPEN CIRCUIT

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

Optical sensor		В	Continuity	
Connector	Terminal	Connector Terminal		Continuity
M94	1	M123	138	Existed

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

## 5.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optica	l sensor		Continuity
Connector	Terminal	Ground	Continuity
M94	1		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

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

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

Optical	sensor	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M94	3	M123	137	Existed

### Does continuity exist?

YES >> Replace BCM.

NO >> Repair the harnesses or connectors.

## 7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

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Optical sensor		В	CM	Continuity
Connector	Terminal	Connector Terminal		Continuity
M94	2	M123	113	Existed

### Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

# 8.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M94	2		Not existed

## Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

### **HAZARD SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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## HAZARD SWITCH

Description

Hazard switch is integrated in the multifunction switch. Hazard switch inputs the signals to BCM when pressing the switch.

## Component Function Check

## 1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

## (E)CONSULT DATA MONITOR

- 1. Turn the ignition switch ON.
- 2. Select "HAZARD SW" of BCM (FLASHER) data monitor item.
- 3. With operating the hazard switch, check the monitor status.

Monitor item	Condition		Monitor status
HAZARD SW Hazard sv	Hazard switch	While pressing the switch	On
TINZ/IIID OW	Tiazara Switch	While not pressing the switch	Off

#### Is the item status normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-83, "Diagnosis Procedure".

## Diagnosis Procedure

## 1. CHECK HAZARD SWITCH SIGNAL INPUT

With operating the hazard switch, check the voltage between the BCM harness connector and the ground.

	Terminals		Condition		
(+	)	(-)	Condition	Voltage (Approx.)	
ВС	М		Hazard switch	voltage (Approx.)	
Connector	Terminal		Hazaru Switch		
			While pressing the switch	0 V	
M122	110	Ground	While not pressing the switch	(V) 15 10 5 0 10 ms JPMIA0012GB	

#### Is the measurement value normal?

YES >> Replace BCM.

NO >> GO TO 2.

## 2. CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect the multifunction switch connector and BCM connector.
- 3. Check continuity between the multifunction switch harness connector and the BCM harness connector.

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#### < DTC/CIRCUIT DIAGNOSIS >

Multifunc	Multifunction switch BCM		Continuity	
Connector	Terminal	Connector Terminal		Continuity
M72	16	M122	110	Existed

### Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

## 3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between the multifunction switch harness connector and the ground.

Multifunction switch			Continuity	
C	Connector Terminal		Ground	Continuity
	M72	16		Not existed

### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 4.

## 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between the multifunction switch harness connector and the ground.

Multifunc	Multifunction switch		Continuity
Connector	Connector Terminal		Continuity
M72	1		Existed

#### Does continuity exist?

YES >> Replace the hazard switch (multifunction switch).

NO >> Repair the harnesses or connectors.

### TAIL LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

### [XENON TYPE]

## TAIL LAMP CIRCUIT

## Component Function Check

## INFOID:0000000009059946

## 1. CHECK TAIL LAMP OPERATION

#### **■IPDM E/R AUTO ACTIVE TEST**

- Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the tail lamp is turned ON.

### (P)CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the tail lamp is turned ON.

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TAIL : Tail lamp ON Off : Tail lamp OFF

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### Is the tail lamp turned ON?

YES >> Tail lamp circuit is normal.

>> Refer to EXL-85, "Diagnosis Procedure". NO

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## Diagnosis Procedure

#### INFOID:0000000009059947

## 1. CHECK TAIL LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Tail lamp     Rear side marker lamp     License plate lamp	IPDM E/R	#53	10 A

#### Is the fuse fusing?

YES >> Repair the malfunctioning part before replacing the fuse.

NO >> GO TO 2.

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## 2.CHECK TAIL LAMP OUTPUT VOLTAGE

## ©CONSULT ACTIVE TEST

- Disconnect the rear combination lamp connector.
- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

**EXL-85** 

Terminals			Test item		
(+)		(-)	Test item	Voltage (Approx.)	
IPDM E/R			EXTERNAL		
Connector	Terminal	Ground	LAMP		
E5 7		Oround	TAIL	Battery voltage	
	,		Off	0 V	

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#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R.

## 3.CHECK TAIL LAMP OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector.

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### TAIL LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

3. Check continuity between the IPDM E/R harness connector and the rear combination lamp harness connector.

	IPDM E/R Rear combination lamp		Continuity		
C	Connector	Terminal	Connector	Terminal	Continuity
RH	E5	7	B232	1	Existed
LH	E3	,	B60	1	Existed

#### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK TAIL LAMP GROUND OPEN CIRCUIT

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

Rear combination lamp				Continuity
	Connector Terminal		Ground	Continuity
RH	B232	4	Glound	Existed
LH	B60	4		Existed

## Does continuity exist?

YES >> Replace the rear combination lamp.

NO >> Repair the harnesses or connectors.

### LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

## LICENSE PLATE LAMP CIRCUIT

## Component Function Check

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#### NOTE:

Check the tail lamp circuit if the tail lamp and the license plate lamp are not turned ON.

## 1. CHECK LICENSE PLATE LAMP OPERATION

### **PIPDM E/R AUTO ACTIVE TEST**

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the license plate lamp is turned ON.

### **PCONSULT ACTIVE TEST**

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the lighting switch, check that the license plate lamp is turned ON.

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

#### Is the license plate lamp turned ON?

YES >> License plate lamp circuit is normal.

NO >> Refer to EXL-87, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000009059949

## 1. CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

### Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

## 2.CHECK LICENSE PLATE LAMP OPEN CIRCUIT

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

Continuity	License plate lamp		IPDM E/R		
Continuity	Terminal	Connector	Terminal	onnector	С
Existed	1	D117	7	E5	RH
LAISIEU	1	D112	,	LJ	LH

### Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

## 3.check license plate lamp ground open circuit

Check continuity between the license plate lamp harness connector and the ground.

License plate lamp				Continuity
Connector Terminal		Ground	Continuity	
RH	D117	2	Ground	Existed
LH	D112	2		LAISIEU

### Does continuity exist?

YES >> Replace the license plate lamp.

NO >> Repair the harnesses or connectors.

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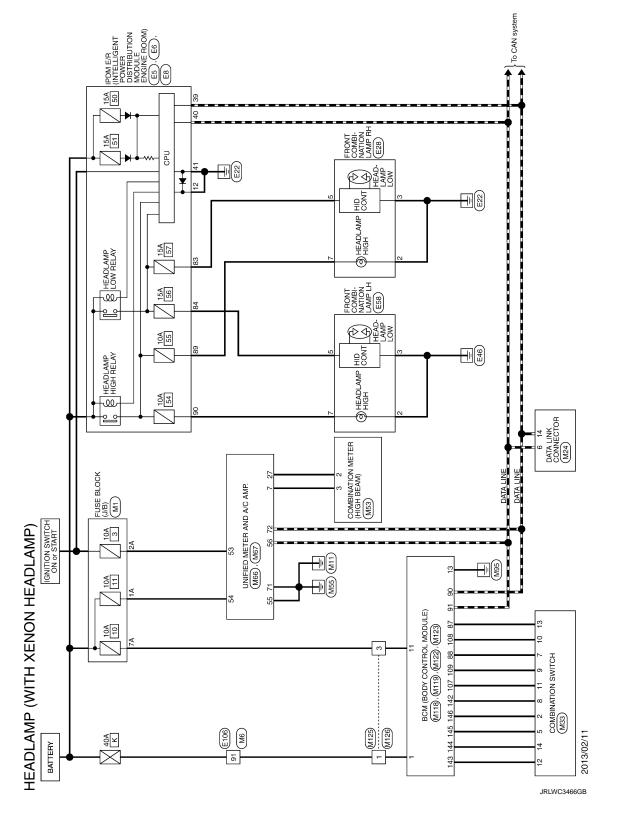
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## **HEADLAMP SYSTEM**

Wiring Diagram - HEADLAMP -



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Connector No.	T		Т	Connector Type				L	/  2 3 4\/	2 2 3 3			20-1-0	Signal Name [Specification]	0	200	- IVO	***		3 &		33	╁	E106 42	43	WIRE TO WIRE	Connector Type TH80FW-CS16-TM4 49		E	6 0 6 0 8 0 9 0 9 0 9 0	n = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 =	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	62	all Color Of Signal Name (Specification)	Wire Ognaria and I promotion					GR .	GR 68	GR - 68 GR - 69 Y 70	GR	GR - 68 GR - 70 Y - 70 BG - 71	GR         .         68           GR         .         69           Y         .         70           BR         .         71           BG         .         77           SB         .         77           TS         70         70           TS         70         70 <th>GR GR Y Y Y Y Y Y W GR GR</th> <th>  Corrector No.   E8   Corrector No.   Wree   Signal Name   Specification    No.   Wree   Signal Name   Specification    No.   No.  </th>	GR GR Y Y Y Y Y Y W GR	Corrector No.   E8   Corrector No.   Wree   Signal Name   Specification    No.   Wree   Signal Name   Specification    No.
45 X	1		ſ					1					90 89 87	50000				t	╁	╀	ł	╁	╁	┝	-				Т	┑	•	[			2 9 9 2			Color Of	Wire		2 B -	+	+++	++++	++++	+++++	<del>               </del>	
200		PDM E/R (INTELLIGENT POWER	Ī					\$ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2 7	31	11		000000000000000000000000000000000000000	Signal Name [Specification]	+	^ -		+	٠	╀	╀	╀	╁	┝	┢	GR -	. 9	0		_ _	prom EVR (NYTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	THOSE WILL	Theorem 1900 West and		K	ŀ	41 40 39	46 45 44 43				Color Of Signal Name (S	erminal Color Of Signal Name [Specification] No. Wire	al Color Of Signal Name [S] Wire Signal Name [S]	Color Of Signal Name [S] Wire P	Color Of Signal Name [S] Wire P	Color Of Signal Name [Signal Na	H.S.   The Diff No. CS12.MA-1V   The Diff No
12-M4-1V   Corrector No.   Early   E	Corrector No.   ES	Corrector No.   E8     Corrector No.   E8     Corrector No.   E8     Corrector Type   E809F94-C5	Corrector Name   Corr	Corrector Name   Connector Type   RSOBFB-PR	H.S.	Terminal Color Of Signal Name [Specification]   Terminal Color Of Signal Nam	Corrector Name   Specification	H.S.	Firm tell Color Of   Signal Name   Specification    Firm tell Color Of   Signal Name   Specification    No.   Wine   No.   N	First   Corrector Name   Specification   Front   Front	H.S.	Signal Name   Specification    Coor Off   Signal Name   Specification    Coor Off   Signal Name   Specification    Corrector Name   FRONT COMBINATION LAMP RH	Signal Name   Specification    Name   Nam	No. Wire   Signal Name   Specification    10   No. Wire   Signal Name	Ferminal Color Of   Signal Name [Specification]   2   8   7   8   8   8   8   8   8   8   8	No.   Signal Name [Specification]   1	Sign   Sign	Signate   Signate   State   State	Sign   W   Corrector No.   E106   Signal Name   Specification    Signal Name   Specificatio	Signature   Sign	Signate   Carrector Name   Corrector Name   Corrector Name   Corrector Name   Corrector Name   Corrector Name   FRONT COMBINATION LAMP RH	Corrector No.   E28   Corrector No.   E106   E106	Corrector No.   E28   Corrector No.   E106   E106	Corrector No.   E28   Corrector Name   FRONT COMBINATION LAMP RH   Corrector Type   THRIFT TO WIRE   45   45   45   45   45   45   45   4	Cornector Name   FRONT COMBINATION LAMP RH   Cornector Type   RSOBFB-PR   Cornector Type   Terminal Cornector Type   RSOBFB-PR   Cornector Type   RSOBFB-PR   Cornector Type   Terminal C	Cornector No.   E28   Cornector Type   Theorem   FRONT COMBINATION LAMP RH   Cornector Type   Theorem   FRONT COMBINATION LAMP RH   Cornector Type   RSIGNEB-PR   FRONT COMBINATION LAMP RH   FROM COMBINATIO	Cornector Name   FRONT COMBINATION LAMP RH   FINAL RANGE B-PR   FINAL RH   FINAL RH	Corrector Type RS08FB-PR	HS   Signal Name   Specification    Corrector Type   RSUBRE IPR   HS   HS   HS   HS   HS   HS   HS   H	H.S.	H.S.	HS.	Fig. 10   Color Of Signal Name [Specification]   Fig. 11   Color Of Signal Name [Specification]   Fig. 12   Color Of Signal Name [Spe	Signal Name   Specification    Specification    Signal Name   Specification    Signal Name	A   A   A   A   A   A   A   A   A   A	A   A   A   A   B   A   A   A   A   B   A   A	4d 4d 4d 4d 4d	No.   Wire	Color Off         Signal Name (Specification)         2         B         -         6         R         -         GR         -           Vive         L         B         -	Signal Name [Specification]   3 B/Y   5 GR	Wife         Upwindown Liphomonous         4         B/W         2         Y         3         Y         3         Y         3         Y         3         Y         3         X         3         3         X         3         X         3         X         3         3         X         3         3         3         3         3         3         3         3         3         4         3         4         3         4         3         4 </td <td>  L</td> <td>L         -</td> <td>  BW</td> <td>S8 . 8 P</td> <td>BR : 13 L :</td> <td></td> <td>L</td>	L	L         -	BW	S8 . 8 P	BR : 13 L :		L

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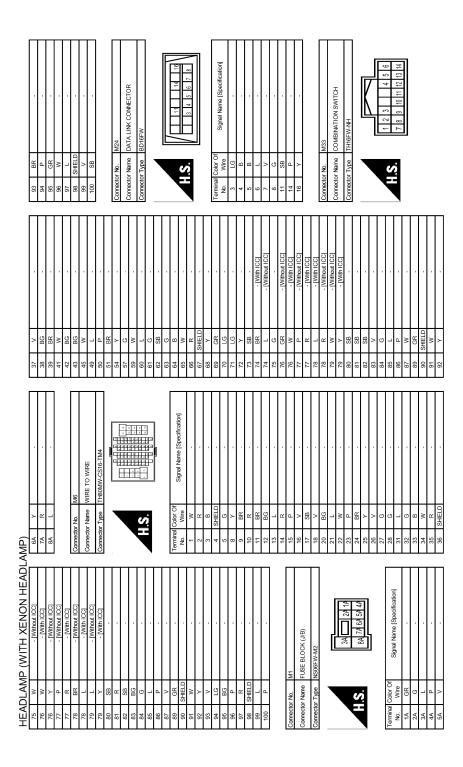
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HEA	DLAN	HEADLAMP (WITH XENON HEADLAMP)	4MP)							
Terminal	_	Of Signal Name [Specification]	59	SB.	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SDE)	Connector No.	M67	Connector No.	M118	
ġ.	Wire		8	<sub>0</sub>	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)	Connector Name	UNIFIED METER AND A/C AMP.	Connector Name	BCM (BODY CONTROL MODULE)	
-	۵		31	-	WASHER LEVEL SWITCH SIGNAL				,	
2	SB	OUTPUT 4	33	В	ILLUMINATION CONTROL SIGNAL	Connector Type TH32FW-NH	TH32FW-NH	Connector Type M03FB-LC	M03FB-LC	
е	g	FR WASHER(+)	36	PC	SELECT SWITCH SIGNAL					
4	9	IGN	37	SB	ENTER SWITCH SIGNAL	_				
S	٦	OUTPUT 3	88	_	TRIP A/B RESET SWITCH SIGNAL				Ŧ	
9	В	GROUND	39	Ь	ILLUMINATION CONTROL SWITCH SIGNAL (-)	•			- m	
7	^	INPUT 3	40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)	٧ = -	44 45 46 47	٧ = -	ļ	
8	BG	OUTPUT 5					57 58 59 60 61 62 63 66 69 70 71 72		7	
6	>	INPUT 2							]	
10	В	INPUT 4	Connector No.		M66					
11	PI	INPUT 1	Connector Nome		BMA CIAC CONTROL OF THE	Terminal Color Of	Signal Nama [Specification]	Terminal Color Of	)f	
12	Ь	OUTPUT 1	000		ONLINE METER AND ACAMIF.	No. Wire	orginal realite [openiication]	No. Wire		
13	BR	INPUT 5	Connector Type	Type	TH40FW-NH	41 \	ACC POWER SUPPLY	1 W	BAT (F/L)	
14	9	OUTPUT 2				42 Y	FUEL LEVEL SENSOR SIGNAL	2 W	POWER WINDOW POWER SUPPLY(BAT)	
				7		43 R	INTAKE SENSOR SIGNAL	>- 8	POWER WINDOW POWER SUPPLY(RAP)	
				•		44 LG	IN-VEHICLE SENSOR SIGNAL			
Connector No.	or No.	M53		į		H	AMBIENT SENSOR SIGNAL			
			Ę	C	5 7 8 9 10 14 14 20	Ë	SI IN OAD SENSOR SIGNAL	Connector No	M119	
Connecte	Connector Name	COMBINATION METER	-	á	23 25 27 28 39 34 38	ł	Managed County of the County o			
		THEOLOGIC		l		$^{+}$	CAMUST GOSTODI SIDE ODOR DE LECTINO SENSOR SIGNAL	Connector Name	BCM (BODY CONTROL MODULE)	
Comect	or Iype	Connector Type TH40FW-NH				93 23 23	IGNITION POWER SUPPLY		00 11000	
	•					+	BALLERY POWER SUPPLY	Connector Type	NS16FW-CS	
	1		'n	Color Of	Signal Name [Specification]	25 B	GROUND	•		
	•		ġ	Wire	Licenson of Charles	26 L	CAN-H			
1	Į	1	2	٦	MANUAL MODE SHIFT UP SIGNAL	22 M	BRAKE FLUID LEVEL SWITCH SIGNAL			
5	Ć	6 7 10 15 15	7	GR	COMMUNICATION SIGNAL (AMPMETER)	58 BR	FUEL LEVEL SENSOR GROUND		4 5 7 8 9 10	
	į	N N N N N N N N N N N N N N N N N N N	8	٦	VEHICLE SPEED SIGNAL (2-PULSE)	59 GR	INTAKE SENSOR GROUND	<u>ا</u>	11 13 14 15 17 18 10	
			6	æ	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	7 09	IN-VEHICLE SENSOR GROUND		14 10 11	
			10	×	MANUAL MODE SIGNAL	61 BR	AMBIENT SENSOR GROUND			
Termina	Ferminal Color Of	L	÷	ď	NON-MANIJAI MODE SIGNAI	╀	SLINI DAD SENSOR GROLIND			
2	Wire	Signal Name [Specification]	14	RR	COMMINICATION SIGNAL (LCD-AMP.)	H		Terminal Color Of		
-	g	BATTERY POWER SLIPPLY	. 6	<u>-</u>	ION ON/OFF SIGNAL	F	ECV SIGNAL	No. Wire	Signal Name [Specification]	
	-		ŝ	>	AT SNOW SIMILE HOURS	+	I AN SIGNAL		VIDELIS GENERALIMON DONNERS STATE	
7 0	2 2	+	25 25	- >	MANITAL MODE SHIET DOWN SIGNAL	200	EACH DOOR MOTOR BOWER SLIBBLY	+	BASSENCED DOOD INLOCK OLITRIE	
י	5	+	3 5		MANAGAL MODE SHILL DOWN SIGNAL	$^{+}$	CACHEOON MOTOR FOR EN	7 7	CATED AND COAT	
0	ء ه	ONDORS OF THE PARTY OF THE PART	/ 7	2 0	VEHICLE SPEED STORY OF HEST	+	Chicago	- >	ALL DOOD FIEL LID LOCK OFFIELD	
-	- 2	ALD DAC SICHAL	87 8		DADIZING DRAIT SAUTCH SIGNAL	1	CANT	> (	DENITE BOOK THE LIB LOCK CUITOIT	
, ç	6	SECURITY SIGNAL	8 8	> >	COMMUNICATION SICINAL (AMB 1.CD)			Ŧ	DEAD DOOR, FOEL CID DIALOCK COLPOI	
į	،	SECONI I SISIAN	5 8	- (	DI OMEDINOTORIO SIGNACE (AMIT - ECD.)			+	NEWS BOOK GREOK COIFUI	
0	n	GROUND	Ŗ	_	BLOWER MOTOR CONTROL SIGNAL			+	BAI (FUSE)	
16	ш	METER CONTROL SWITCH GROUND						$\dashv$	GROUND	
19	В	ILL GND						14 W	PUSH-BUTTON IGNITION SW ILL GND	
20	ч	ILL						15 Y	ACC IND	
21	BG	IGNITION SIGNAL						17 W	TURN SIGNAL RH (FRONT)	
22	В	GROUND						18 BG	TURN SIGNAL LH (FRONT)	
24	BR	COMMUNICATION SIGNAL (LCD-AMP.)						19 V	INT ROOM LAMP CONT	
22	>	COMMUNICATION SIGNAL (AMPLCD)								
26	ď	VEHICLE SPEED SIGNAL (8-PULSE)								
27	>	PARKING BRAKE SWITCH SIGNAL								
28	Μ	BRAKE FLUID LEVEL SWITCH SIGNAL								

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AP)  Corrector No. M123  Corrector No. M125  Corrector No. MRZ  Correc	Corrector Type TH40FG-NH Corrector Type M03FW-LC	H.S. The state of	reminal Color Of Signal Name [Specification] Terminal Color Of Signal Name [Specification] No. Wire Signal Name [Specification]	P OPLICAL SENSOR 1	SB STOP LAMP SW 1 2	۵	SB DR DO	BR KEY SLOT SW	×	PI	132 BR POWER WINDOW SW COMM	W PUSH-BUTTON		137 BG RECEIVER/SENSOR GND	138 Y RECEIVER/SENSOR POWER SUPPLY	139 L TIRE PRESSURE RECEIVER COMM	140 GR SHIFT NP	141 G SECURITY INDILAMP CONT / 15	142   BG   COMBI SW OUTPUT 5	143 P COMBI SW OUTPUT 1	144 G COMBI SW OUTPUT 2 Terminal Color Of Color	145 L COMBISW OUTPUT 3 No. Wire Olympia Pedincation I	146 SB COMBI SW OUTPUT 4 1 W -	150 LG DRIVER DOOR SW 2 Y -	151 G REAR WINDOW DEFOGGER RELAY CONT 3 R -					
HEADLAMP (WITH XENON HEADLAMP)  Commercer No. M122  Commercer Name BOM (BODY CONTROL MODULE)  Commercer Name BOM (BODY CONTROL MODULE)	TH40FB-NH		Signal Name [Specification]	PASSENGER DOOR ANT-	PASSENGER DOOR ANT+	DRIVER DOOR ANT-	DRIVER DOOR ANT+	ROOM ANT1-	ROOM ANT1+	NATS ANT AMP.	NATS ANT AMP.	IGN RELAY (F/B) CONT	KEYLESS ENTRY RECEIVER COMM	COMBI SW INPUT 5	COMBI SW INPUT 3	CAN-L	CAN-H	KEY SLOT ILL CONT	ONI NO	PUDDLE LAMP CONT	ACC RELAY CONT	A/T SHIFT SELECTOR POWER SUPPLY	SHIFT P	PASSENGER DOOR REQUEST SW	DRIVER DOOR REQUEST SW	BLOWER FAN MOTOR RELAY CONT	KEYLESS ENTRY RECEIVER POWER SUPPLY	COMBI SW INPUT 1	COMBI SW INPUT 4	C HIGH NO GWOO
HEADLAN Connector No.	Connector Type	H.S.	Ferminal Color Of No. Wire	H	H	_	PC	>	+	Ť	Μ	œ	<b>\</b>	BR	^	Ь	7	PP	^	Υ	BG	GR	ч	9	SB	BG		_		>
H emo	Conne		Termir No.	74	75	76	77	78	79	80	81	82	83	87	88	90	91	95	93	94	95	96	66	100	101	102	103	107	108	00

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**AUTO LIGHT SYSTEM** Α Wiring Diagram - AUTO LIGHT SYSTEM -INFOID:0000000009059951 IPDM E/R
(INTELLIGENT
POWER
DISTRIBUTION
MODULE
ENGINE ROOM)
(ES) To parking, license plate and tail lamps To illumination В To CAN system C TAIL LAMP BELAY IGNITION SWITCH ON or START D To headlamp (With xenon headlamp)
To headlamp (With halogen headlamp) 15A 50 Е CPU 15A 51 M95 F 15A 57 G

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Connector No. B	31	8	۵	-	Connector No. B16	Terminal	O	Signal Name [Specification]	
Connector Name M	WIRE TO WIRE	26 g	_ E		Connector Name FRONT DOOR SWITCH (DRIVER SIDE)	ġ =	Wire		_
tor Type	Connector Type TH80FW-CS16-TM4	63	Т		Connector Type A03FW	- 2	ď	1	Т
,		64	П			ო	GR	,	П
•	4-4	65	φ	- 0		4	BG		-1
•		99	3			r ;	9 <u>3</u>		Т
3	44	9 8	+			2 4	≥ 5		Т
Ź	4 5 6	8 8	Ü		H.S.	<u>υ</u> 4	g >		<b>T</b>
1	В-	8 2	T			4	- H	, ,	1
		73	H			26	BR		Т
Terminal Color Of	Simple Specification	74	_	-	la C	27	_	-	
Wire	oignal name [opecinication]	75	W		No. Wire Signal Name (Specification)	28	<b>\</b>		
æ		9/	BR	=	2 V -	58	٨	-	
9		77	я.	•		30	GR	•	
SB		78	В	-		31	Я	•	
^		79	Н		Connector No. B23	32	BR	,	
٦		83	BG BG		HIHOTIMS GOOD GARGO Notice HIND	33	O	,	
SB		85	$\dashv$			51	œ	•	_
9		98	9 9		Connector Type A03FW	22	O		_
GR	•	87	>			29	ď	•	_
၅		88	$\dashv$		K	22	8		
Α		88			K	28	В	-	-
SB		8	BG			29	SHIELD	,	_
PI		91	$\dashv$		2	99	PC	,	1
H		92	$\dashv$			61	×		7
SHIELD		83	$\dashv$		]	62	æ		_
>		94				63	۵		7
<u>.</u>		8	$\dashv$		<u></u>	2	_		7
В		96	+		Wire	92	Ø	•	_
œ		88	$\dashv$		2 LG .	99	۵		_
>		8	GR GR			67	_		_
SHIELD						89	SHIELD	,	
SHIELD					Connector No. B201	69	^		
W	•				DOMOST BOWN	70	Υ	-	
SB						71	SB		
_					Connector Type TH80FW-CS16-TM4	72	8		Г
۵.					ı	73	BR		
٦						75	>		
۵					8 8	8	>		
R						8	SB		
>					-1-1	82	PC		
<b>×</b>					8 8	83	Ь		Г
GR					$\pm$	8	œ		Г
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## **AUTO LIGHT SYSTEM**

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Corrector Type INSUGENA-CS
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90 89 88 87
90 89 88 87
Terminal Color Of Signal Name [Specification]
1
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┨
Connector No. E106
Connector Name WIRE TO WIRE
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Connector Type TH80FW-CS16-TM4
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8 6 6 8 6 8 7 8 7 8 7 8 7 8 7
1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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Terminal Color Of
Wire Signal Name [Specification]
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AUTO	LIGHT	AUTO LIGHT SYSTEM	[	-		[	╁		L	ŀ	
9)	-	- [Without ICC]	βA	-		8	+		1	7	'
77	Ь	- [Without ICC]				4	-			W 96	
77	ď	- [With ICC]				42	BG			97 L	
78	HR.	- [Without ICC]	Conne	Connector No.	M6	43	B			98 SHIELD	-
78	_	- IWith ICC				45	H			A 66	,
62		- [Without ICC]	Conne	Connector Name	WIRE TO WIRE	49	╀		L	°	
62	· >	- IWith ICCI	Conne	Connector Type	TH80MW-CS16-TM4	6	۵		]	1	
80	SS					5	╀		_		
╄	œ			1		54	H		8	Connector No.	M7
┝	SB	,		•	3 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22	Ø		·	:	Т
┝	88			Į	0 d d d d	29	H		3	Connector Name	WIRE TO WIRE
┝	g		_	S E	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	09	H		క	Connector Type	TH80MW-CS16-TM4
⊢	_	1	•	ú	:   .  	61	H		]		
98	a.					62	SB		_		
⊢	>	1				63	$\vdash$		_		
	GR		Terminal	O	Power I Secution	64	В				0 S C S S S S S S S S S S S S S S S S S
	SHIELD	1	Ž	Wire	orginal ivallie [opecification]	92	۸		_	νii/	
91	M		-	٨		99	œ		_		н
92	<b>×</b>		2	œ		49	SHIELD				
93	>	1	e	ω		89	Г				
┝	PI		4	SHELD		69	S		P	Terminal Color Of	
╀	BG		ιc	U		02	╀			No. Wire	Signal Name [Specification]
96	۵		00	>		7	H		 	H	- [With automatic drive positioner]
20			٥	8		12	+		 	3	- [Mithout automatic drive positionar]
_	V III		9 5	$^{+}$		7 2 2	Ť		 	t	[without autolianc drive positioner]
+	2 -		1	$^{+}$		2	$^{+}$	1000	1	$^{+}$	
55	1		= !	¥ ;		4/	+	- [with ICC]		9 E	
100	Ь	1	12	g B		74	+	- [Without ICC]	_  	+	
			13	-		72	+			+	
			14	$\dashv$	-	9/	Ĭ	- [Without ICC]	_  	$\dashv$	-
Connector No.	No. M1		15	۵		9/	Χ	- [With ICC]		13 LG	-
Connector Mamo	John Cilies	(a): / AOO id asi ia	16	>	-	77	۵	- [Without ICC]		14 Y	-
	20	ic becom (s/b)	17	SB		77	œ	- [With ICC]		15 G	
Connector 1	Connector Type NS06FW-M2	6FW-M2	18	>		78	٦	- [With ICC]		17 W	
			20	BB		78	œ	- [Without ICC]		18 SB	
_	7		21	_		79		- [Without ICC]			
_	•	lī	22	>		79	H	- [With ICC]	L	20 BR	
		34 24 14	23	۵		8	SB			ŝ	
Č	0	2 7 A S A S A A A	24	æ		8	SB		_	22	
	7	5	52	>		82	H			24 \	,
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			27	C		8	╀		 	-	
Terminal Color Of	olor Of		%	ď		85	ł		L	F	
2	Wire	Signal Name (Specification)	~	-		æ				Į,	
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C 49	> >		3 2	)   		26 60	+		_	S 95	
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JRLWC3752GB

## **AUTO LIGHT SYSTEM**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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E Buckol	В
- With BOSE audio	С
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ceation)	Е
SENSOR SENSOR  SENSOR  WIRE CS16-TM4  GROUND  GROUND  CS16-TM4  CS	F
Name   OPTICK   Name	G
12   8   14   14   14   14   14   14   14	Н
BDITA LINK CONNECTOR	ı
0.00 M M M M M M M M M M M M M M M M M M	J
Corrector No.  Corrector Name	K
	EXL
AUTO LIGHT SYSTEM  39	M
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ACT	
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**EXL-97** 2014 QX50 Revision: 2013 March

AUTO L	AUTO LIGHT SYSTEM								
Connector No.	M118	Connector No.	M121	80	GR	NATS ANT AMP.	139	_	TIRE PRESSURE RECEIVER COMM
Connector	CHICOM LOCATION MOC	Common Mary	CHICOM LOCATION WOOD	81	W	NATS ANT AMP.	140	GR	SHIFT N/P
COLLINGTON INSTITE	BCINI (BODT COINTROL MODOLE)	COLLECTOR INSIDE		82	ď	IGN RELAY (F/B) CONT	141	9	SECURITY IND LAMP CONT
Connector Type	Connector Type M03FB-LC	Connector Type	TH40FGY-NH	83	>	KEYLESS ENTRY RECEIVER COMM	142	BG	COMBI SW OUTPUT 5
				87	BR	COMBI SW INPUT 5	143	۵	COMBI SW OUTPUT 1
_	[	_	_	88	>	COMBI SW INPUT 3	144	U	COMBI SW OUTPUT 2
		1		06	_	- NAC	145	ŀ	COMBI SW OUTPUT 3
	7.3			91	_	CAN-H	146	gg	COMBI SW OUTPUT 4
Ę	7	Ę	26 28 28 28 28 28 28 28 28 28 28 28 28 28	26	<u>.</u>	KEY SLOT III CONT	150	5	DRIVER DOOR SW
	2	1.0	69 69 67 66 65 64 61 80	8	>	CNINC	151	t	REAR WINDOW DEFORGER RELAY CONT
	]			8	. >	THOO GAME I PROGRA	2	1	ייביי אוויססא חבו סססביי ייביי ססי
				95	- E	ACC BELAY CONT			
Terminal Color Of		Terminal Color Of	L	98	t	A/T SHIET SELECTOR POWER SLIPPLY	Connector No	ı	M125
No. Wire	Signal Name [Specification]	No. Wire	Signal Name [Specification]	8 6	+	SHET P			
	BAT (F/L)	34 SB	B LUGGAGE ROOM ANT-	100	U	PASSENGER DOOR REQUEST SW	Connector Name		WIRE TO WIRE
2 W	POWER WINDOW POWER SUPPLY(BAT)	H		101	SB	DRIVER DOOR REQUEST SW	Connector Type	Type	M03FW-LC
H	T	H	B BACK DOOR ANT-	102	BG	BLOWER FAN MOTOR RELAY CONT			
		H		103	97	KEYLESS ENTRY RECEIVER POWER SUPPLY	_	4	
		47 Y	IGN RELAY (IPDM E/R) CONT	107	97	COMBI SW INPUT 1	_	•	
Connector No.	M119	52 SB	L	108	~	COMBI SW INPUT 4	`		
		H		100	>	COMBLSW INPLIT 2	Ę	e	Ŧ
Connector Name	ie BCM (BODY CONTROL MODULE)	╀	DACK DOOD	140	. (	MAZABD SW		á	32
-	O POLICE	+	+	2	9	MCAND SW		l	
connector 1ype	٦.	> 2	+						
_	_	+	+	Connector No	ı	M123	Terminal Color O	John Of	
		+	040	000	Τ	071	2	Wire	Signal Name [Specification]
	4 5 7 8 9 10	79 89	1	Connector Name		BCM (BODY CONTROL MODULE)	<u>§</u>	2 1	
Į	F	$^{+}$			Т		- 0	;	
Ź	11 13 14 15 17 18 19	69	R REAR LH DOOR SW	Connector Type	7	I HAUF G-NH	7 0	×	
				_	7		r	r	
		Compositor No	M122		•				
T	200	COLLECCOL NO.	IVI 122	_	Ţ				
No Wire	Signal Name [Specification]	Connector Name	ne BCM (BODY CONTROL MODULE)	•	ľ	2 2 2 3 3 3	Connector No.	_	MTZ6
Ť	NTEBIOR BOOM! AMB BOWED SLIBB! X	Connector Type	HWOODH		Ą	20 000 140 000 000 000 000 000 000 000 00	Connector Name		WIRE TO WIRE
t	+	COLLEGEO 13	٦.				Connector	Aur	Connector Type M03MW-LC
> _	t	_							
. «	ALL DOOR FIJELLID LOCK OLITPLE	_		Terminal	Color Of		_	•	
6	DRIVER DOOR. FUEL			ž	Wire	Signal Name [Specification]	_	•	
F	REAR DOOR U	Ę	20 00 00 00 00 00 00 00 00 00 00 00 00 0	113	۵	OPLICAL SENSOR			
╁	╀	2	170 HB 128 W	116	. gr	STOP I AMP SW 1	Ę	e	<u>-</u>
+	a de			7	3 -	STOP AMP SW 2	Ĭ.	á	2 3
+	DI ISH BI ITTO			110	- g	DE POOR INTERIOR		ı	]
╀	t	Torminal Color Of	L	50,	9 6	MS TO IS SEN			
+	NGILL	No.	Signal Name [Specification]	123	í≥	IGN E/B	Terminal Color Of	John Of	
+	1	t	TAN BOOD BEING	125	: 5	DASSENCED DOOD SW	2	Wire	Signal Name [Specification]
$^{+}$	1	+	1	450	2 2	PASSENGEN DOON SW	t	2 4	
9		6/ 2/	1	133	+	POWER WINDOW SW COMIN	- 0	>	
		+		3 5	Ť	COLUMN TO THE POWER	4 0	-	
		2 2		7 2	5 6	DECEMBER OND	,	4	
		+		130	2 >	DECEMENSEMBOR SINDIX			
		/9 BK		130	-	RECEIVER/SENSOR POWER SUPPLY			

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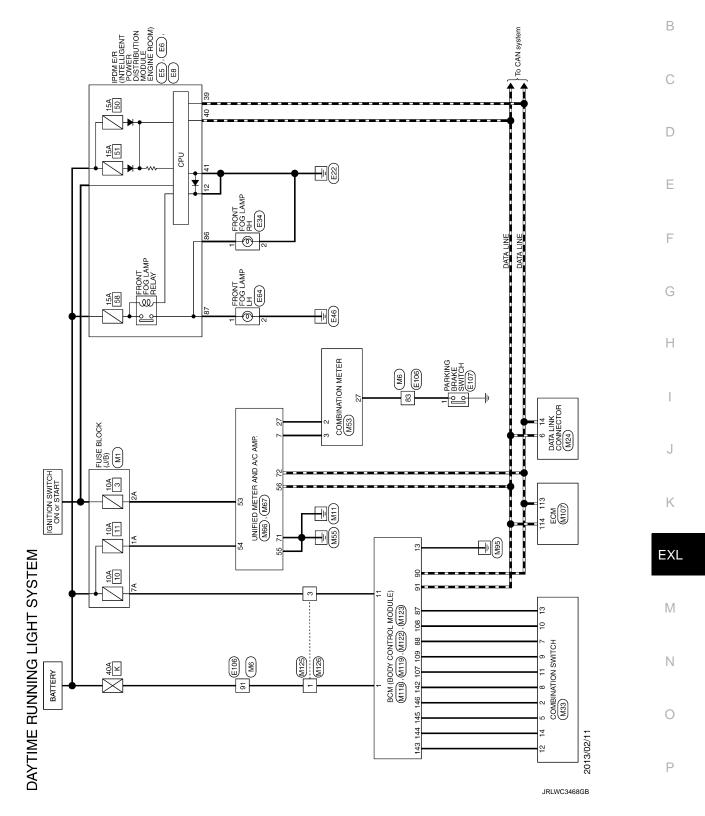
[XENON TYPE]

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## DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram - DAYTIME LIGHT SYSTEM -



DAYTIME RUNNING LIGHT SYSTEM	46 R	Connector No F64		2	-		Г
		١		7 8	+		Т
PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	0	Connector Name FRONT FOG LAMP LH	G LAMP LH	22 22	> <	-	Т
DOCUME COST AND AND	41	т		3 3	+		Т
I HZUFW-USIZ-M4-1V	1	Connector Type FFIZUZEB		74	-		7
	Connector Name PROME PROMER DISTRIBUTION MODULE	•		25	+		Т
	Т	•		07	+		1
	Connector Lype INSUSE-VV-CS	•	Ę	7	+		Т
12 15 20 20 20 20 20 E				87	9		7
18 Si		٧		33	┥		_
			)	32	$\dashv$		-
				33	+		1
	1000			용	$\dashv$		7
Signal Nama [Specification]	90 88 88 86	nal Color Of	Sinnal Nama [Spacification]	35		-	
		No. Wire	an realine [opeomodation]	98	SHIELD	-D	-
		1 1 1		37	>		
	Terminal Color Of	2 B/W		38	BR BR		Т
	No. Wire Signal Name [Specification]			33	╀		Т
	t			41	$^{+}$		Т
		Consociation No.			+		т
	-	1		7	+		Т
		Connector Name WIRE TO WIRE	IBE	43	$\dashv$		1
				45	Α.		-
	2 C	Connector Type TH80FW-CS16-TM4	S16-TM4	49	<u> </u>		Г
	BR			20	۵		Т
	0	•		2	╀		Т
	+	\		0 4	+		Т
		•	- A	ă [	2 6	-	Т
	ſ		7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	à	+	,	Т
	Connector No. E34	·	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	99	$\dashv$		1
	Connector Name EDONT EOC LAMB BH		2 2 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	09			_
				61	9		Г
E6	Connector Type FHZ02FB			62	SB		Г
M E/R (INTELLIGENT POWER DISTRIBUTION MODULE		Terminal Color Of	3	63	>		Г
ENGINE ROOM)		Wire	Signal Name [Specification]	25	H		Т
TH08FW-NH		м		65	┞		Т
		2 W	,	99	~		Г
		9		29	SHELD	- 0	Т
E		4 GR	,	89	T		Т
1		5 GR		69	97		Τ
41 40 39	1	>	,	02	>	,	Т
E	Terminal Color Of	H		71	╀		Г
40 42 44 43	No. Wire Signal Name [Specification]	╁	1	72	╀		Т
	t	t		73	α	•	Т
	2 BW	12 BG		74	Ŧ	- IWith ICCI	Т
Signal Name [Specification]	┨	$^{+}$		. 1	+		Т
		+		Į.	+	- [without Icc]	Т
		$\dashv$		72	+	- [with ICC]	_
•		15 P		75	Χ	- [Without ICC]	
		16 V		9/	M	- [with ICC]	Г
		17 SB	1	9/	>	- [Without ICC]	Т
1		Ļ		77	۵.	- [Without ICC]	Т
		, 0			+	Establish (Co.)	Т
	_	20 BG		77	<u>د</u>	- [With ICC]	٦

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## **DAYTIME RUNNING LIGHT SYSTEM**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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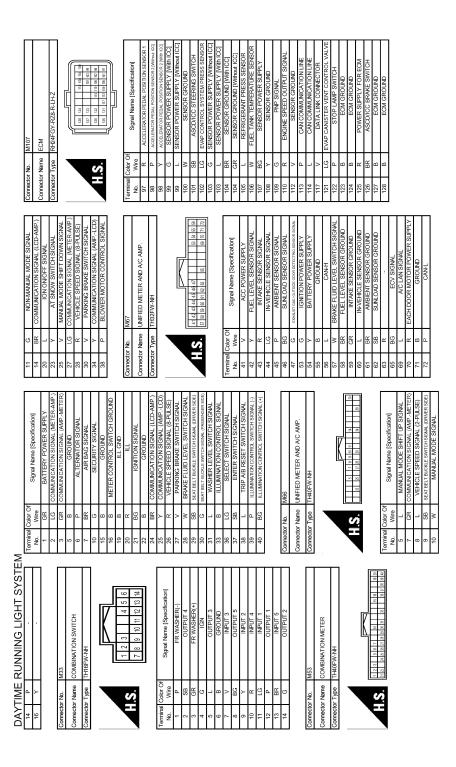
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	85	100   SB	
<del>                                      </del>	C   C   C   C   C   C   C   C   C   C	L   L   L   L   L   L   L   L   L   L	
Connector type   NSOFFW-M2   10	Signal Name (Specification)	Corrector Name   WIRE TO WIRE   Corrector Name   Name   TheOMM*CSIG*TM4   Signal Name   Specification   Corrector Name   Corretor Name   Corrector Name   Corrector Name   Corrector Name   Cor	
	89 GR 9 91 WW 92 V 93 95 96 96 96 97 WW 94 94 95 95 96 96 97 WW 94 94 UG 95 97 WW 97	Corrector Name PARRING BRAKE SWITCH Corrector Name PARRING BRAKE SWITCH Corrector Name PARRING BRAKE SWITCH Terminal Color Off Signal Name (Specification) No. Wire 1 BG	

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## **DAYTIME RUNNING LIGHT SYSTEM**

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DAYT	DAYTIME RUNNING LIG	<b>GHT SYSTEM</b>									
Connector No.	No. M118		Connector No.	П	M122	Connector No.		M123	Connector No.	M125	
Connector Name	BCM (BODY CONTRO	OL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)	Connector Name	Name B	BCM (BODY CONTROL MODULE)	Connector Name	Connector Name WIRE TO WIRE	
Connector Type	Type M03FB-LC		Connector Type	П	TH40FB-NH	Connector Type	П	TH40FG-NH	Connector Type	M03FW-LC	
	H.S.		7	\(\overline{\chi}\)		H.S.	vi vi		H.S.	3 1	
Terminal Color Of No. Wire	Signal	secification]	Terminal No.	Ferminal Color Of No. Wire	Signal Name [Specification]	Terminal Color Of No. Wire	Color Of Wire	Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	
-	Н	F/L)	74	SB	PASSENGER DOOR ANT-	113	Ь	OPLICAL SENSOR	1 W		
2	W POWER WINDOW POWER SUPPLY(BAT	VER SUPPLY(BAT)	75	GR	PASSENGER DOOR ANT+	116	SB	STOP LAMP SW 1	Н	•	
က	Y POWER WINDOW POW	WER SUPPLY(RAP)	9/	>	DRIVER DOOR ANT-	118	۵.	STOP LAMP SW 2	er Er	,	
			77	9 >	DRIVER DOOR ANT+ ROOM ANT1-	119	88 H	DR DOOR UNLOCK SENSOR KEY SLOT SW			
Connector No.	No. M119		79	æ	ROOM ANT1+	123	*	IGN F/B	Connector No.	M126	_
		Ĺ	80	GR	NATS ANT AMP.	124	PT	PASSENGER DOOR SW			
Cornector	CONTROL NAME   BOW (BOD! CONTROL MODULE)	- MODULE)	81	×	NATS ANT AMP.	132	HH.	POWER WINDOW SW COMM	Collinector Marine	Collector Marine   WHINE TO WHINE	
Connector Type	Type NS16FW-CS		82	œ	IGN RELAY (F/B) CONT	133	П	PUSH-BUTTON IGNITION SW ILL POWER	Connector Type	M03MW-LC	
			83	<b>X</b>	KEYLESS ENTRY RECEIVER COMM	134	GR	LOCK IND			
_			87	ЯB	COMBI SW INPUT 5	137	BG	RECEIVER/SENSOR GND	_		
_			88	^	COMBI SW INPUT 3	138	Y	RECEIVER/SENSOR POWER SUPPLY	•		
	4 5 /	8 8 10	06	Ь	CAN-L	139	٦	TIRE PRESSURE RECEIVER COMM	•		
Ę	11 13 14 15	17 18 10	91	1	CAN-H	140	GR	SHIFT N/P	č E	c	
		2	95	97	KEY SLOT ILL CONT	141	g	SECURITY IND LAMP CONT	į	[5]	
			93	^	ON IND	142	BG	COMBI SW OUTPUT 5		]	
			94	<b>&gt;</b>	PUDDLE LAMP CONT	143	۵	COMBI SW OUTPUT 1			
Terminal Color Of	Color Of Stand Money (Specification)	looitootioo	96	98	ACC RELAY CONT	144	9	COMBI SW OUTPUT 2	Terminal Color Of		
ġ	Wire Signal Name Lop	Jecilicationi	96	GR	A/T SHIFT SELECTOR POWER SUPPLY	145	-	COMBI SW OUTPUT 3	No. Wire	orginal realite [obecincation]	
4	LG INTERIOR ROOM LAMP POWER SUPPL'	POWER SUPPLY	66	Я	SHIFT P	146	SB	COMBI SW OUTPUT 4	1 W	-	
2	L PASSENGER DOOR U	UNLOCK OUTPUT	100	9	PASSENGER DOOR REQUEST SW	150	97	DRIVER DOOR SW	2 Y		
7	Y STEP LAMP	AP CONT	101	SB	DRIVER DOOR REQUEST SW	151	9	REAR WINDOW DEFOGGER RELAY CONT	3	-	
80	V ALL DOOR, FUEL LID	LID LOCK OUTPUT	102	BG	BLOWER FAN MOTOR RELAY CONT						
6	G DRIVER DOOR, FUEL LID	ID UNLOCK OUTPUT	103	97	KEYLESS ENTRY RECEIVER POWER SUPPLY						
10	BR REAR DOOR UNLOCK OUTPUT	OCK OUTPUT	107	97	COMBI SW INPUT 1						
11	R BAT (FUS	USE)	108	œ	COMBI SW INPUT 4						
13	B GROUN	OND	109	>	COMBI SW INPUT 2						
14	W PUSH-BUTTON IGNITION SW ILL GND	ION SW ILL GND	110	ŋ	HAZARD SW						
15	Y ACC IN	QN									
17	TURN SIGN	RH (FRONT)									
18	BG TURN SIGNAL LI	.H (FRONT)									
19	V INT ROOM LAN	LAMP CONT									

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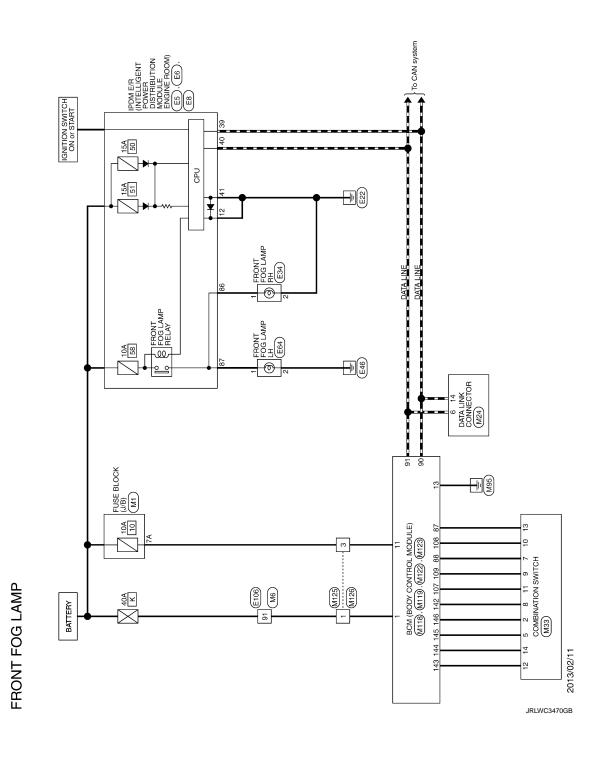
JRLWC3749GB

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## FRONT FOG LAMP SYSTEM

Wiring Diagram - FRONT FOG LAMP -

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CROIN FOG LAIMIN	46 B	Connector No	No.		21	-	
l	4	OD HECTO	Τ		7	- -	
Connector Name   PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE   ENGINE ROOM)		Connector Name	Name FRONT FOG LAMP LH		22 8	> 0	
TEDOTIAL COST MAS AND	24-14-1	d	T		53 53	ם פ	
Connector Lype   LHZUFW-CS1Z-IM4-1V	T	Connector Type	7		74	١ :	
	Connector Name   IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE   ENGINE ROOM)	_	•		£ 8	<b>&gt;</b>	
	Т				9	> :	
E	Connector Type INSU8FW-CS	_	Ę		7 8	<b>≥</b> (	
8		•			87	2 2	
20 M		2			50	BG:	'
			)		35	M	ı
					33	В	
	1				34	ď	
Terminal Color Of Signal Name (Seconfication)	94 88 88 84 80 N	Terminal Color Of	Solor Of Sincel Name (Secondination)	laniton	32	ŋ	
Wire Signal Marine [Specification]		S	Wire Signal realine [Special	cationi	36	SHIELD	
			-		37	>	
	Torminal Color Of	c	Ab d		00	- 00	
	Signal Name [Specification]	7	DVVV		8	۲ G	
	+				38		i
B/W	83 BG -				41	M	
	- × × × × × × × × × × × × × × × × × × ×	Connector No.	No. E106		42	9	1
					43	RR.	
	F	Connector Name	Name WIRE TO WIRE		45	W	
	6	Contractor Tuno	Tues Tuesday Code TM4		ç	-	
	+	Collinector	7		9	7	
	89 BR				20	۵	
	- d 06		6	Г	51	_	
		_			54	BG	
					22	BR	1
	Connector No E34	Ę	2 2	1	04	,W	
	Τ	2	10 10 10 10 10 10 10 10 10 10 10 10 10 1	Ŧ	8		
	Connector Name FRONT FOG LAMP RH			_	3	5]	
				1	61	<b>9</b>	
E6	Connector Type FHZ02FB				62	SB	
IPOM E/R (INTELLIGENT POWER DISTRIBUTION MODULE		Terminal (	Color Of	1	83	Α.	
Cornector Name Engine Room)		ģ	Wire Signal Name [Specification]	cation]	49	æ	
Connector Type TH08FM-NH	]			I	S. S.	1 (1	
			200		8	0 0	
		7			Ť	r	
		က	В .			SHIELD	
<u>R</u>		4	GR		89	>	
<u>[</u>		2	GR -		69	97	
41 40 39		00	· ·		02	*	
Г	Terminal Color Of	σ	BB		7.1	œ	1
46 45 44 43	No Wire Signal Name [Specification]	Ş		Ī	ç	: >	
	+	2 ;	200		7.7	- 0	n
		-	SB		3	9	
Terminal Color Of Signal Nama (Secarification)	2 B/W	12	BG -		74	BR	- [With ICC]
orginal realine [obeculication]		13	T		74	7	- [Without ICC]
		14	α.		7.5	c	- IWith ICCI
						,	[00:101]
		CL.	٠,		ę,	Λ	- [without ICC]
		16			76	W	- [With ICC]
		17	SB		9/	<b>&gt;</b>	- [Without ICC]
		18	^		22	Ь	- [Without ICC]
		8	9	Ī			
					11	c	DAVISE IOO

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FRONT FOG LAMP	OG LAMIP - [Without ICC] - [Without ICC] - [Without ICC]	Connector No.	$\overline{}$	M6 WIRE TO WIRE		43 BG 45 W 49 L			88 89 001	SHELD V	
₩	- [With ICC]	Connector Type	П	TH80MW-CS16-TM4		50 50 88				-	
ж 8			7			Н			Com	Connector No.	M24
83 SB BG				5 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1	29 %			Com	Connector Name	DATA LINK CONNECTOR
Н		۲	ŠĦ	N		Н			Com	Connector Type	BD16FW
4			1	3 y y y y y y y y y y y y y y y y y y y	•	$\dashv$	,				
86 P						+					
Т	1				<u>"</u>	+					
GR GR	1	Terminal	Color Of Wire	Signal Name [Specification]	0 4	64 B			_	Ę	11 14 16
Т		-	D   M		Τ	60 99			1	<u> </u>	3 4 5 6 7 8
╀	,	2	c cc	,		돐	-		,		>
>		9	8	,	Ľ	7 89					
Н		4	SHIELD		Ц	H			Terminal	)	of Signal Name [Specification]
4		2	G			$\dashv$			2		
96 P	1	ω 0	> 8			71 LG			m 4	P <sub>C</sub>	,
_		n (	6		Ϊ	+			1	+	
36 SMIELD		1 1	r H		ľ	74 BR	- Iwith ICC	55	0 9	ـ ۵	
۵		12	Sa	,	Ľ	┝	ľ		_	>	
		13	7		Ľ	75 G			œ	ŋ	
		14	ď	-	Ľ	Ĺ		[CC]	7	SB	-
Connector No. M	M1	15	Ь	-	Ĺ	W 97		ccj	14	Ь	
stor Name	Connector Name (FLISE BLOCK (J/B)	16	>		1	$\dashv$		loci	16	>	-
	, , , , , , , , , , , , , , , , , , , ,	17	gg :	-	1	77 R		CCI			
Connector Type N	NS06FW-M2	3 3	> 2		Ϊ	+			Š		0074
•		20	.5g -	-	ľ	8/ K	- [Without ICC]	20	S	Connector No.	M33
1		22	<b>→</b>		Ϊ	╀		2 2	Conn	Connector Name	COMBINATION SWITCH
•	3A 3A 1A	23	<u>a</u>	1	Ľ	80 SB			Conin	Connector Type	TH16FW-NH
ر ت	00 72 62 52 42	24	R		Ľ	H					
į	5	25	<b>\</b>	-	Ľ	Н			_	1	
	]	26	>	-		83 V				•	_ _ _
		27	ŋ	•		84 G	,				1 2 3
a	Signal Name [Specification]	28	Ŋ		<u>"</u>	4			1	V.	0 7
_	organic reduce [obcompanion]	31	٦	-	~		•		•	3	7 8 9 10 11 12 13 14
1A GR		32	g			+					
9		33	В	•		┪					
		34	Μ	•	<u>"</u>	ည	- a		Terminal	O	Signal Name [Specification]
۵		32	œ	,	<u>"</u>	91 W			Ź	Wire	
>		36	SHIELD		<u>ٽ</u>	92 Y	•		-	Ь	FR WASHER(-)
4		37	>		<u>"</u>	4			2	SB	
œ		38	BG		<u>"</u> ]				9	GR	FRW
1		39	BR		<u>"</u> ]	+			4	O	IGN
		41	≥		<u>"</u> ]	M 96			2	+	OUTPUT 3
		42	BG		_	7 L			9	В	GROUND

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	Connector No. M125	Connector Name WIRE TO WIRE	Connector Type M03EW-I C		[			3 2			Terminal Color Of	No. Wire Signal Name [Specification]	- M	2 Y	3 R		- [	Connector No. M126	Connector Name   WIRE TO WIRE		Connector Type M03MW-LC	•					C 7	]		Terminal Color Of Signal Name [Specification]	1	M >	\ \ \	3 8														
- 1	tor No. M123	Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40EG-NH	1	•			St 151 16 16 16 16 16 16 16 17 15 15 15 15 15 15 15 15 15 15 15 15 15			erminal Color Of	Wire Signal Name [Specification]	P OPLICAL SENSOR	SB STOP LAMP SW 1	Ь	DR DO	KE	W	Pl	T	W PUSH-BUTTON IGNITION SW ILL POWER		BG RECEIVER/SENSOR GND	Y RECEIVER/SENSOR POWER SUPPLY	L TIRE PRESSURE RECEIVER COMM	GR SHIFT N/P	SS			G COMBI SW OUTPUT 2	COMBISW OUIPULS	9 9	2	G REAR WINDOW DEFOGGER RELAY CONT														
	Connector No.	Connecto	Connecto		_		7				Terminal	ð	113	116	118	119	121	123	124	132	133	134	137	138	139	140	141	142	143	144	145	1	3	151	_													
-	GROUND	PUSH-BULLON IGNITION SWILL GND	TURN SIGNAL BH (FRONT)	TURN SIGNAL LH (FRONT)	INT ROOM LAMP CONT		14400	W122	BCM (BODY CONTROL MODULE)	Connector Type TH40FB-NH					2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	110 186 188 107 100 100 100 100 100 100 100 100 100			of Signal Name [Specification]		PASSENGER DOOR ANT-	PASSENGER DOOR ANT+	DRIVER DOOR ANT-	DRIVER DOOR ANT+	ROOM ANT1-	ROOM ANT1+	NATS ANT AMP.	NATS ANT AMP.	IGN RELAY (F/B) CONT	KEYLESS ENTRY RECEIVER COMM	COMBI SW INPULS	COMBLOW INTO 3	CANAL	CANT	KEY SLOT ILL CONT	ON IND	PUDDLE LAMP CONT	ACC RELAY CONT	A/T SHIFT SELECTOR POWER SUPPLY	SHIFT P	PASSENGER DOOR REQUEST SW	DRIVER DOOR REQUEST SW	BLOWER FAN MOTOR RELAY CONT	KEYLESS ENTRY RECEIVER POWER SUPPLY	COMBI SW INPUT 1	COMBI SW INPUT 4	COMBI SW INPUT 2	HAZARD SW
ŀ	+	4 t	17 W	F	╀	-	Onnocotor No	A I RECTOR INC.	Connector Name	annector Type	odf. loose	7			S II V	į			쿋		74 SB	75 GR	76 v	77 LG	78 Y	$\dashv$	4	+	82 R	+	8/ 8/	8 8	+	+	92 LG	+	$\dashv$	+	96 GR	99 R	100 G	101 SB	102 BG	103 LG	107 LG	108 R	109 Y	110 G
FRONT FOG LAMP	+	8 BG COUPULS	10 R INPIT 4	91	P OUTPUT 1	BR INPUTS	3 10 1100	31_	Connector No M118		Connector Name   BCM (BODY CONTROL MODULE)	Connector Type M03FB-LC				1 3					hall Color Of Signal Name (Specification)		BAT (F/L)	2 W POWER WINDOW POWER SUPPLY(BAT)	3 Y POWER WINDOW POWER SUPPLY(RAP)			Connector No. M119	Connector Name   BCM (BODY CONTROL MODULE)		Connector Type NS16FW-CS			1 2 2 2 10	] ] ,	11 13 14 15 17 18 19				f Signal Nama (Sacarification)	orginal realite [obecomoration]	MP POWER SUPPLY	X OUTPUT	MP CONT	LID LOCK OUTPUT	G DRIVER DOOR, FUEL LID UNLOCK OUTPUT	10 BR REAR DOOR UNLOCK OUTPUT	R BAT (FUSE)

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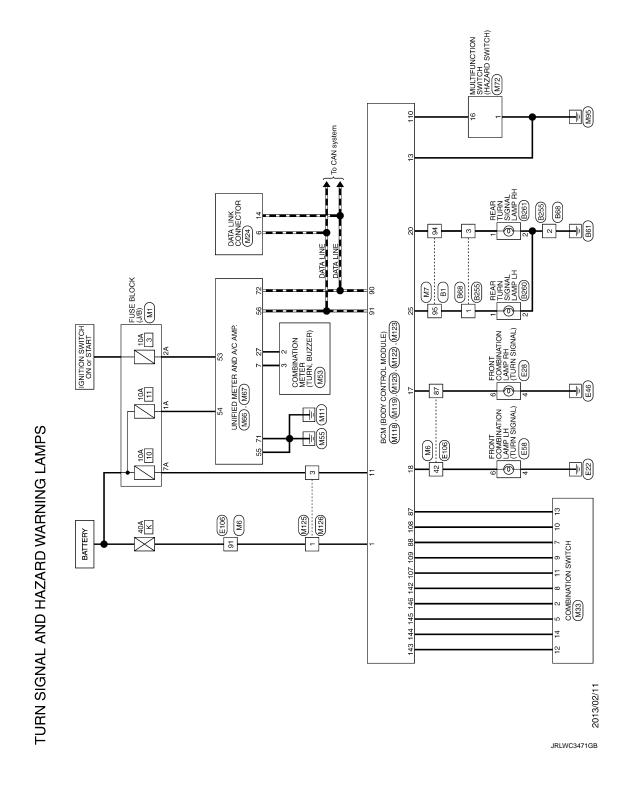
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[XENON TYPE]

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## TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram - TURN AND HAZARD WARNING LAMPS -



[XENON TYPE] < DTC/CIRCUIT DIAGNOSIS >

			/ 1
	ммР LH	WP RH certication	В
	B260 REAR TURN SIGNAL LAMP LH HS02FG-W	Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	С
	Connector No. B260 Connector Name REAR TUR Connector Type HS02FG-W	Herminal Color Of No. Wire R Corrector No. Wire Corrector No. Wire I Vive I Viv	D
			Е
	IRE	Signal Name [Specification]	F
	Connector No. B68 Connector Name WIRE TO WIRE Connector Type RH08MB	WIRE T	G
	Connector No. Connector Name	H.S.  Terminal Coor Of No. Ornector No. Orne	Н
			ı
			1
MPS	L SHIELD R	S   S   S   S   S   S   S   S   S   S	J
IING LA	60 61 62 SH 63	<del></del>	К
ARD WARNING LAMPS			EXL
HAZARI	M4	Signal Name (Specification)	
NAL AND	B1 WIRE TO WIRE TH80FW-CS16-TM4		M
TURN SIGNAL AND HAZ	Connector No. B Connector Name V Connector Type		N
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**EXL-109** Revision: 2013 March 2014 QX50

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[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS	NING L	AMPS					
Connector No. E28	Connector No.	. No. E106		43	BR		П
		_		45	×		98 SHIELD
Connector Name FRONI COMBINATION LAMP RH	Connector Name	Name WIRE TO WIRE	O WIRE	49	-		7
Connector Type RS08FB-PR	Connector Type	Т	TH80FW-CS16-TM4	92	۵		100 P
		٦.		5	-		$\downarrow$
		•		54	RG		
		\ \		22	88		Connector No. 1M1
	1	Ţ	F = 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	o C	3		Т
(234)	₹	Č		09	: 5		Connector Name FUSE BLOCK (J/B)
1.5. F F 7 8 //		į	- 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	6	C.		Connector Tyne NS06FW-M2
3		Ī		9	9		٦
				63	8 8		
Toursiant Colon Of	Togginol	JO solo		8 8	: 0		
No Wire Signal Name [Specification]		5 .	Signal Name [Specification]	65	ی د		34 0 24 14
۲	-	a a		99	۵		
BAY				67	SHELD		8A 74 64 54 4A
B/W	ď	: α		89	>		
	,	2 0		8 9			
	ŧ .	5 6		8 8	2 3		
> 0	n «	¥5 ;		2 1	\$ (		<u>ة</u>
BR	00	<b>&gt;</b>	i	-	¥ :		Wire
n.	ກ	¥		2	<u>-</u>		GR
	10	BG	-	73	В		2A G -
	11	SB	•	74	BR	- [with ICC]	3A L
Connector No. E58	12	BG		74	٦	- [Without ICC]	4A P -
CASA LANCOTT HANDRANG PROCESS	13	7	1	75	9	- [With ICC]	
CONTRECTOR INSIDE FROM COMBINATION LAMP LA	14	ď		75	×	- [Without ICC]	
Connector Type RS08FB-PR	15	Ь		9/	*	- [With ICC]	7A R
	16	>		9/	Υ	- [Without ICC]	
	17	SB		77	۵	- [Without ICC]	
	18	>		77	œ	- [With ICC]	
-	50	BG		78	BR	- [Without ICC]	Connector No. M6
	21	٦		78	7	- [with ICC]	
11.3. (5 6 7 8 <i>)</i>	22	>		79	_	- [Without ICC]	Connector Name   WIRE   U WIRE
	23	o	1	79	Υ	- [with ICC]	Connector Type TH80MW-CS16-TM4
	24	4		80	SB		
al	25	>	•	81	ď	-	
Olginal Ivallic	56	^		82	SB		2
2 B -	27	W		83	BG		
3 B/Y -	28	o		84	9		
	31	BG		85	٦		4 P
- ^ 9	32	W	1	98	۵	•	
	33	8		87	>		
7 P	34	æ	1	88	GR		_
8 BG .	32	o		90	SHELD		No. Wire Signal Name [Specification]
	98	SHIELD		9	>		- W
	37	>		92	Υ		2 R
	æ	BR		93	H		3 B
	39	BG	ì	94	Н	•	4 SHIELD
	41	W		95	Н		s 6
	45	9	-	96	Ь	-	8 Y

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< DTC/CIRCUIT DIAGNOSIS > [XENON TYPE]

	В
MZ4 DATA LINK CONNECTOR BD16FW  Signal Name [Specification]	C
74	D
ecfication] The positioner] The positioner	E
Signat Name (Spacification)  - [With automatic drive positioner] - [Without automatic drive positioner]	F
Money   Mone	G
	·
- [Without ICC] - [Without ICC	I
IRE TO WI	J
NING LAMP;   NIN	K
N CO WAAN CO	EX
TURN SIGNAL AND HAZARD WARNING LAMPS  9 BB BB C C C C C C C C C C C C C C C C	IV.
N S G N S S S S S S S S S S S S S S S S	N
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	C
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Revision: 2013 March **EXL-111** 2014 QX50

10 G H H H H H H H H H H H H H H H H H H		34 Y	COMMUNICATION SIGNAL (AMPLCD) BLOWER MOTOR CONTROL SIGNAL	Connector No.	M72
THIS FWAME   THIS FWAME   THIS STATE   THIS B   THIS B		38	BLOWER MOTOR CONTROL SIGNAL	Connector Name	
THGFWANI   THGFWANI   1 2 3				000000000000000000000000000000000000000	
1   2   3   4   5   6   22   8   6   1   2   1   8   6   6   6   6   6   6   6   6   6				Connector Type	TH16FW-NH
1   2   3   4   5   6   22   8   8     1   2   3   4   5   6   24   8   8     1   2   3   4   5   6   25   7   7     2   8   10   11   12   3   4   25   7     3   8   8   8   8   8     5   8   8   8   8   8     5   8   8   8   8     6   8   8   8   8     7   8   8   8   8     8   9   10   10   10     9   10   10   10     10   10   10     10   10		Connector No.	M67		
1 2 3		Connector Name	LINIFIED METER AND A/C AMP.		
1 2 3   4 5 6			Т		<u> </u>
7   8   9   10   11   12   13   14   256   R   V   V   V   V   V   V   V   V   V		Connector Type	I HSZFW-INH	Ę	0 0
1	VEHICLE SPEED SIGNAL (8-PULSE)	1		į	-
Signal Name   Specification    29 SB	PARKING BRAKE SWITCH SIGNAL				1359
Signal Name   Specification    2/3   SB	BRAKE FLUID LEVEL SWITCH SIGNAL	Į			
P   FRWASHER()   31   L     GR   OUIPUT   35   B     GR   FRWASHER(+)   36   LG     G   GR   GR     U   OUIPUT   36   LG     U   OUIPUT   36   LG     U   OUIPUT   36   LG     U   WPAT   37   SB     U   WPAT   36   LG     U   WPAT   37   GR     U   WP	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SDE)	H.S.	7. 52 43 44 43 40 47 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Terminal Color Of	Signal Name [Specification]
SB   OUTPUT 4   33   B     GR   FRWMSHER(+)   36   LG     G   IGN   37   SB     L   OUTPUT 3   38   L     B   GROUND   39   P     BG   OUTPUT 5   BG     GROUND   39   P     GROUND   39	WASHER LEVEL SWITCH SIGNAL			╁	GROUND
GR   FFWASHER(+)   36   LG     G   GIPJUT 3   38   L     L   GROUND   39   P     V   INPUT 3   40   BG     BG   OUTPUT 5	ILLUMINATION CONTROL SIGNAL			3	ACC
G   COMPAUT   SB   C   C   C   C   C   C   C   C   C	SELECT SWITCH SIGNAL	Terminal Color Of	F	4	1
L OUIPUT3 38 L     B GROUND 39 P     V INPUT3 40 BG	ENTER SWITCH SIGNAL	No. Wire		5 Y	ILL CONT
B         GROUND         39         P           V         INPUT 3         40         BG           BG         OUTPUT 5         A0         BG	TRIP A/B RESET SWITCH SIGNAL	41 \	ACC POWER SUPPLY	e SB	AV COMM (H)
V         INPUT 3         40         BG           BG         OUTPUT 5         BG         BG	ILLUMINATION CONTROL SWITCH SIGNAL (-)		FUEL LEVEL SENSOR SIGNAL	8 LG	AV COMM (L)
BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)	$\dashv$	INTAKE SENSOR SIGNAL	<b>В</b>	SW GND
		4	IN-VEHICLE SENSOR SIGNAL	$\dashv$	DISK EJECT SIGNAL
Y INPUT 2		$\dashv$	AMBIENT SENSOR SIGNAL	16 G	HAZARD ON
α.	99	_	SUNLOAD SENSOR SIGNAL		
LG INPUT 1	UNIFIED METER AND A/C AMP.	+	EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL		
P OUTPUT 1		53 G	IGNITION POWER SUPPLY	Connector No.	M118
BK IN	440FW-NH	+	BALLERY POWER SUPPLY	Connector Name	BCM (BODY CONTROL MODULE)
14 G OUIPUI 2		9 .	GROUND		0 1 00000
		_	CAN-H	Connector Type	M03FB-LC
Conventor No.		A 6	BIXAKE FLUID LEVEL SWITCH SIGNAL	_	
MICO	7 8 9 8 14	+	INTAKE SENSOR OPOUND		
Connector Name COMBINATION METER	23 25 29 39 34 38	+	IN-VEHICLE SENSOR GROUND	•	7
Connector Type TH40FW-NH		61 BR	AMBIENT SENSOR GROUND	Ę	
	•	62 SB	SUNLOAD SENSOR GROUND	?	2
Terminal Color Of Signal Norm (Spanit	Signal Nama [Secondinal	H			
No. Wire Ogner remark Librarian	orginal refine [openingation]	65 BG	ECV SIGNAL		
	MANUAL MODE SHIFT UP SIGNAL	$\dashv$	A/C LAN SIGNAL	la C	Signal Name [Specification]
GR	COMMUNICATION SIGNAL (AMPMETER)	70 R	EACH DOOR MOTOR POWER SUPPLY	No. Wire	Leavening of Leavening in the Control of Con
	VEHICLE SPEED SIGNAL (2-PULSE)	71 B	GROUND	1	BAT (F/L)
Н	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	72 P	CAN-L	2 W	POWER WINDOW POWER SUPPLY(BAT)
10 W	MANUAL MODE SIGNAL			3	POWER WINDOW POWER SUPPLY(RAP)
all Color Of Sinnal Name [Specification]	NON-MANUAL MODE SIGNAL				
14 BR	COMMUNICATION SIGNAL (LCD-AMP.)				
BATTERY POWER SUPPLY 20 L	ION ON/OFF SIGNAL				
LG COMMUNICATION SIGNAL (METER-AMP.) Z3 Y	AL SNOW SWITCH SIGNAL				
COMMUNICATION SIGNAL (AMPMETEK) 25 V	MANUAL MODE SHIFT DOWN SIGNAL				
D SITEMATOR SIGNAL 28 R	VEHICLE SPEED SIGNAL (MELEN-AMP.)				
BR AIR BAG SIGNAL 30 V	PARKING BRAKE SWITCH SIGNAL				

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< DTC/CIRCUIT DIAGNOSIS > [XENON TYPE]

		А
	pecification)	В
M125 WIRE TO WIRE M03FW-LC	Signal Name (Specification)  M126  M03MV-LC  Signal Name (Specification)	С
Corrector No. N	HS.  Terminal Color Of No. Wire Corrector No. No. Wire Corrector No. No. Wire Corrector Type M. 1 Wire J. No. Wire J. Wire J. No. Wire J. Wire J. No. Wire J. Wire	D
MODULE)	Neme (Specification) PLICAL SENSOR TOP LAMP SW 2 TOP LAMP SW 2 TOP LAMP SW 2 TOP LAMP SW 2 TOR LIM COCK SENSOR WEY SLOT SW TEAT SOOT SW TENT SW COMM WIND STRUCK NO TOKK NO TO	E
BODY CONTROL I	Signal Name (Specification)  OPLICAL SENSOR  STOP LAMP SW 1  STOP LAMP SW 2  DR DOOR IN WLOCK SENSOR  KEY SLOT SW  FRY SLOT SW  FRY SLOT SW  FRY SLOT SW  PASSENGER DOOR SW  POWER WINDOW SW COMM  PUSH-BUTTON ISW ILL POWE  COCK IND  RECEIVER SENSOR POWER SUPPLY  THE PRESSURE RECEIVER COMM  SECHRET NP  COMBI SW OUTPUT 3  COMBI SW OUTPUT 4  COMBI SW OUTPUT 4  COMBI SW OUTPUT 4  COMBI SW OUTPUT 3  COMBI SW OUTPUT 3  COMBI SW OUTPUT 3  COMBI SW OUTPUT 4  DRIVER DOOR SW  REAR WINDOW DEFOGSER RELIV CONT	F
Connector No. M123 Connector Name BCM (BC Connector Type TH40FG-	Terminal Color Of No.   No.   No.   No.   No.   No.   No.   118   P   118   No.   118   No.	G
8 8 8		Н
CONTROL MODULE)	Signal Name [Specification] PASSENGER DOOR ANTI- PASSENGER DOOR ANTI- DRIVER DOOR ANTI- BROOM ANTI- ROOM ANTI- ROOM ANTI- ROOM ANTI- ROOM ANTI- ROOM ANTI- NATS ANT AMP- IGNEELD TO SPECIFICATION COMBISM INPUT 5 COMBISM INPUT 5 COMBISM INPUT 5 COMBISM INPUT 5 COMBISM INPUT 7 COMPLETAMP CONT ACT SELECTOR POWER SUPPL SHEFT P PASSENGER DOOR REQLEST SW DRIVERS PURITY SCHEET OF REQUEST SW DRIVERS POOR REQLEST SW COMBISM INPUT 1 COMBISM INPUT 1 COMBISM INPUT 2 COMBISM INPUT 2	I
M122 M122 BCM (BOD) TH40FB-N4		J
Corrector No. Corrector Name Corrector Type H.S.	Terminal Color Of No. When No.	К
ZARD WAF MODULE)	edication  NIOCK OUTPUT CONT UNCOK OUTPUT UNCOK OUTPUT UNCOK OUTPUT UNCOK OUTPUT UNCOK OUTPUT ON SWILL GND ON	EXL
Corrector Type   NST6FW.CS   Corrector Type   NST6FW.CS   Till	Signel Name (Specification) INTERIOR ROOM LAMP POWER SI PASSENGER DOOR UALOK OUT ALL DOOR, FLEL LID UNICOCK OUT THE SIGN CONT THEN SIGNAL FIF (FESS) RATION THEN SIGNAL FIF (FENS) FIF	M
TURN SIGNAL AI Corrector Name BCAM (BODY Corrector Type INSTIGNACE) H.S.	Terminal Color Of   No.   Wire   No.   Wire   No.   Wire   No.	N
		0
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2014 QX50

**EXL-113** 

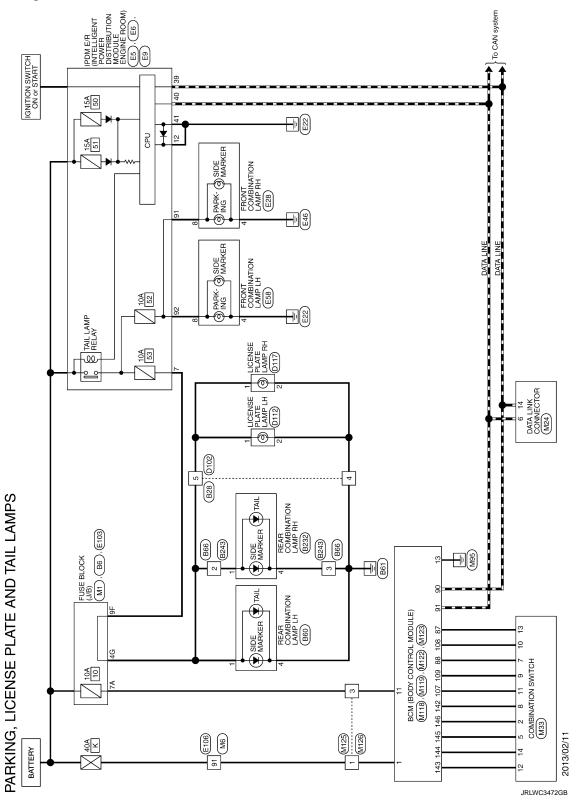
Revision: 2013 March

[XENON TYPE]

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### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram - PARKING, LICENSE PLATE AND TAIL LAMPS -



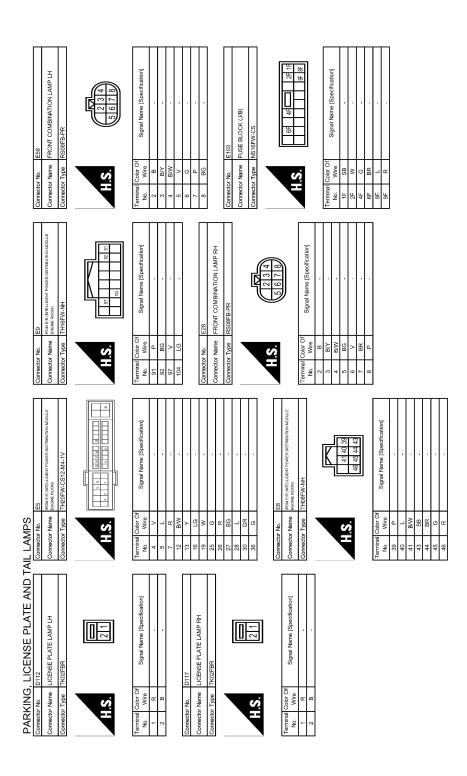
[XENON TYPE] < DTC/CIRCUIT DIAGNOSIS >

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ecification]  every monitor]  sew monitor]	В
WANH  WANH  Signal Name [Sp. 2] 2] 2] 2] 3] 18] 18]  Signal Name (Sp. 3] 18] 18] 18] 18] 18] 18] 18] 18] 18] 18	С
Corrector No.   D102	D
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P   P   P   P   P   P   P   P   P   P	G
18   Commetted   Commetted	Н
The Jame   Signal Name   Specification	J
10   10   10   10   10   10   10   10	K
Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  1	EXI
LICENSE PLAT   B6	M
Connector No.   Connector No.   Connector No.   Mire   11G   W   W   W   W   W   W   W   W   W	N
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**EXL-115** Revision: 2013 March 2014 QX50

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[XENON TYPE]



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[XENON TYPE] < DTC/CIRCUIT DIAGNOSIS >

Signal Name   Signal Name   Specification    Signal Name   Signal Name   Specification    Signal Name   Signal Name   Specification    Signal Name   Signal Name   Signal Name   Specification    Signal Name   Signal Na	SHELD   SHEL
MINE T THROWN	MATON (J. 19)  HUSTON (J. 19)  NSORE BLOCK (J. 19)  NSORE WAZ  Signal Name (Specification)  Signal Name

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**EXL-117** Revision: 2013 March 2014 QX50

PARKING	PARKING, LICENSE PLATE AND TAIL LAMPS	AIL LA	MPS						
72 Y	-	Termina	Terminal Color Of	Picture (Specification)	Connector No.	M118	Connector No.	lo. M122	
73 SB		N	Wire	oighal name [openiication]	Connector Mamo	CALIDON CONTROL MODILE	Corporator Momo		GILIGOM IOGENOS AGOS MOS
_	- [With ICC]	3	PI		COLLINECTOL NAIL		COLLECTO		CONTROL MODOLE)
74 L	- [Without ICC]	4	В		Connector Type	M03FB-LC	Connector Type	ype TH40FB-NH	_
75 G		വ	В						
76 GR	- [Without ICC]	9	_		_		_	•	
76 W	- [With ICC]	7	>			1			
77 P	- [Without ICC]	80	g			13			<u> </u>
77 R	- [With ICC]	=	SB		SE/		Ę	8 8	の は は は は は は は は は は は は は は は は は は は
78 L	- [With ICC]	14	۵		2	7		10 88 88 00	200 100 100 100 100 100 100 100 100 100
78 R	- [Without ICC]	16	>						
W 62	- [Without ICC]								
Y 67	- [With ICC]				Terminal Color Of	JO Jones Since Street	Terminal Color Of		[mailton Since Of a mail of land of
80 SB		Connector No.	or No.	M33	No. Wire		No.	Wire	iliai ivalire [Specification]
81 SB				TOTERSO INCITATIONS	1	BAT (F/L)	74	SB	PASSENGER DOOR ANT-
82 SB			o Marine		2 W	POWER WINDOW POWER SUPPLY(BAT)	75	GR PAS	PASSENGER DOOR ANT+
83 ^		Connect	Connector Type	TH16FW-NH	3	POWER WINDOW POWER SUPPLY(RAP)	92	^	DRIVER DOOR ANT-
8 0							2.2	97	DRIVER DOOR ANT+
82 r			1				78	Α.	ROOM ANT1-
86 P			•	<u>_</u>	Connector No.	M119	62	BR	ROOM ANT1+
W 28		_	Į		-	THE CONTROL OF THE CONTROL	80	GR	NATS ANT AMP.
89 GR		7	ď	2 3 4 0 0	Corriector Name	BOM (BOD) CONTROL MODULE)	81	M	NATS ANT AMP.
OS SHIELD	-	1	į	7 8 9 10 11 12 13 14	Connector Type	Connector Type NS16FW-CS	82	R 16	IGN RELAY (F/B) CONT
91 W							83	Y KEYLES	KEYLESS ENTRY RECEIVER COMM
92 Y					_		87	BR	COMBI SW INPUT 5
93 BR		Terminal	I Color Of	Signal Name (Specification)			88	^	COMBI SW INPUT 3
94 P		è	Wire	orginal varie [opeomoanori]		4 5 7	06	Ь	CAN-L
95 GR		-	۵	FR WASHER(-)	Ø <u>=</u> \	11 13 14 15 17 18 10	91	7	CAN-H
M 96	-	2	SB	OUTPUT 4		01 11 01 11	92	LG P	KEY SLOT ILL CONT
97 L		က	GR	FR WASHER(+)			93	^	ON IND
98 SHIELD		4	g	IGN			94	٨	PUDDLE LAMP CONT
		2	٦	OUTPUT 3	lal	Of Street Name (Specification)			ACC RELAY CONT
100 SB		9	В	GROUND	No. Wire		96	GR A/T SHIFT	A/T SHIFT SELECTOR POWER SUPPLY
		7	^	INPUT 3	4 LG	INTERIOR ROOM LAMP POWER SUPPLY	66	В	SHIFT P
		8	BG	OUTPUT 5	2 F	PASSENGER DOOR UNLOCK OUTPUT	100		PASSENGER DOOR REQUEST SW
Connector No.	M24	6	<b>&gt;</b>	INPUT 2	7 Y	STEP LAMP CONT	101	SB DRIV	DRIVER DOOR REQUEST SW
Connector Manne	DATA LINK CONNECTOR	10	œ	INPUT 4	8	ALL DOOR, FUEL LID LOCK OUTPUT	102	BG BLOWER	BLOWER FAN MOTOR RELAY CONT
COILIBECTO MAINE	DAIN COINT	1	PP	INPUT 1	9	DRIVER DOOR, FUEL LID UNLOCK OUTPUT	103	LG KEYLESS E	KEYLESS ENTRY RECEIVER POWER SUPPLY
Connector Type BD16FW	BD16FW	12	۵	OUTPUT 1	10 BR	REAR DOOR UNLOCK OUTPUT	107	97	COMBI SW INPUT 1
		13	æ	INPUT 5	± R	BAT (FUSE)	108	œ	COMBI SW INPUT 4
_		14	Ø	OUTPUT 2	13 B	GROUND	109	<b>*</b>	COMBI SW INPUT 2
					14 W	PUSH-BUTTON IGNITION SW ILL GND	110	9	HAZARD SW
•	/81 11 11				15 Y	ACC IND			
<b>∀</b> ∃	╫				17 W				
	3 4 5 6 7 8				H	T			
					/ 61	INT ROOM LAMP CONT			

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< DTC/CIRCUIT DIAGNOSIS > [XENON TYPE]

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	M125	WIRE TO WIRE	M03FW-LC		32	Signal Name [Specification]			-			M126	adivi OI adivi	WINE TO WINE	M03MW-LC					c	5 3			[majpoolijpoolij joseelj joseelj joseelj	orginal real to populication	7	-	-
QQ/	r No.	r Name	r Type	7	κį	Terminal Color Of No. Wire	^	٨	Я			r No.	a Momo	i value	r Type		1	•		V	į			Terminal Color Of	Wire	W	Υ	ď
-	Connector No.	Connector Name	Connector Type		4	Terminal No.	-	2	3			Connector No.	Company Monaco		Connector Type				`	7				Terminal	o N	1	2	3
F	<u>.</u> —		П				Т								~			. 1					_					L
SOME LINT GIVE SEVEN LINE SAME	M123	BCM (BODY CONTROL MODULE)	TH40FG-NH	[	10 (11 (12 (13 (13 (13 (13 (13 (13 (13 (13 (13 (13	Signal Name [Specification]	OPLICAL SENSOR	STOP LAMP SW 1	STOP LAMP SW 2	DR DOOR UNLOCK SENSOR	WEY SLOT SW	IGN F/B	PASSENGER DOOR SW	POWER WINDOW SW COMM	PUSH-BUTTON IGNITION SW ILL POWER	LOCK IND	RECEIVER/SENSOR GND	RECEIVER/SENSOR POWER SUPPLY	TIRE PRESSURE RECEIVER COMM	d/N L∃IHS	SECURITY IND LAMP CONT	COMBI SW OUTPUT 5	COMBI SW OUTPUT 1	COMBI SW OUTPUT 2	COMBI SW OUTPUT 3	COMBI SW OUTPUT 4	DRIVER DOOR SW	REAR WINDOW DEFOGGER RELAY CONT
ON N	r No.	r Name	r Type	7	H.S.	Terminal Color Of No. Wire	۵	SB	Ь	SB	BR	W	97	BR	W	GR	BG	Υ	L	GR	9	BG	۵	9	L	SB	LG	9
0	Connector No.	Connector Name	Connector Type		4	Terminal No.	113	116	118	119	121	123	124	132	133	134	137	138	139	140	141	142	143	144	145	146	150	151

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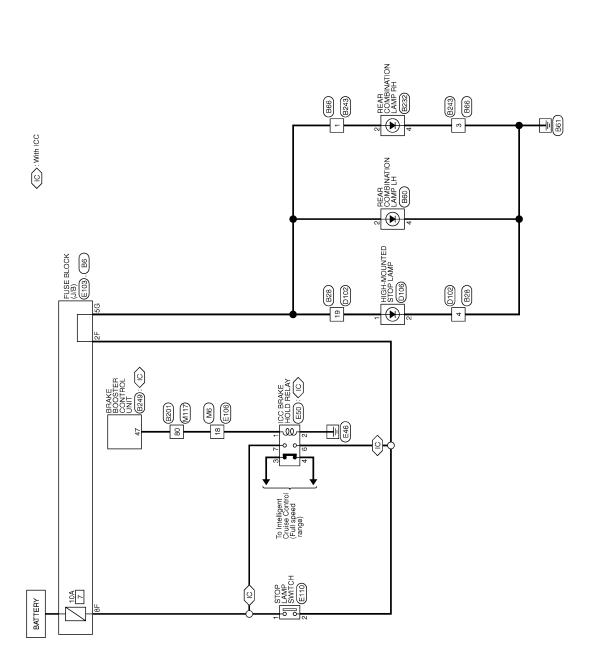
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Revision: 2013 March **EXL-119** 2014 QX50

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## STOP LAMP

Wiring Diagram - STOP LAMP -



STOP LAMP



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ŀ	ν.		1	Connector No. B201	Dally OT Bally Condy reference		Connector Type TH80FW-CS16-TM4	1				1   1   1   1   1   1   1   1   1   1					Terminal Color Of			2 R	3 GR	4 BG -	╀	10 W	╀	+	17 BB -	+	+	Ŧ	29 Y	30 GR	31 R	32 BR -	33 6	51 R		H	H	58 B	S9 SHIELD	- 9T 09	61 W	F	H	64 L -			- 1 <u>29</u>	68 SHIELD -
ŀ	2] (	200	m 11	$\dashv$	23 BR -	H			Connector No IB60	Τ	Connector Name   REAR COMBINATION   AMP   H		Connector Type TH04MW-NH						1 2 4			Terminal Color Of	No. Wire Signal Name [Specification]	t	5 6	t			Connector No B66	_	Connector Name WIRE TO WIRE	Connector Type TH24MW-NH	1				123 E	13 14 15 16 17 18	2		Terminal Color Of	No. Wire Signal Name [Specification]	1 LG	2 R -	3 B	13 L	14 W	15 B	16 BR -	H
(IP	Bo	Connector Name FUSE BLOCK (J/B)		NS12FBR-CS				[	56 46	000	\$01 \$11 \$71			9	Signal Name [Specification]				1				828		WIRE TO WIRE	TH24MW-NH					3 4 5 6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			91	Signal Name [Specification]	1		1				- [With around view monitor]	- [Without around view monitor]	- [Without around view monitor]	- [With around view monitor]		- [With around view monitor]	- [Without around view monitor]	
<b>7</b> ۱	Connector No.	Connector Name		Connector Type		•		•	Ę	2				Terminal Color Of	No. Wire	10G W	11G W	⊢	┡	92 10			Connector No.		Connector Name   WIRE TO WIRE	Connector Type TH24MW-NH		•			Ę	Ċ			Ferminal Color Of	No. Wire	1 GR	3 W	┝	5 R	F	H	14 R	Ś	Т	15 Y	16 W	17 L	17 R	18 SHIELD

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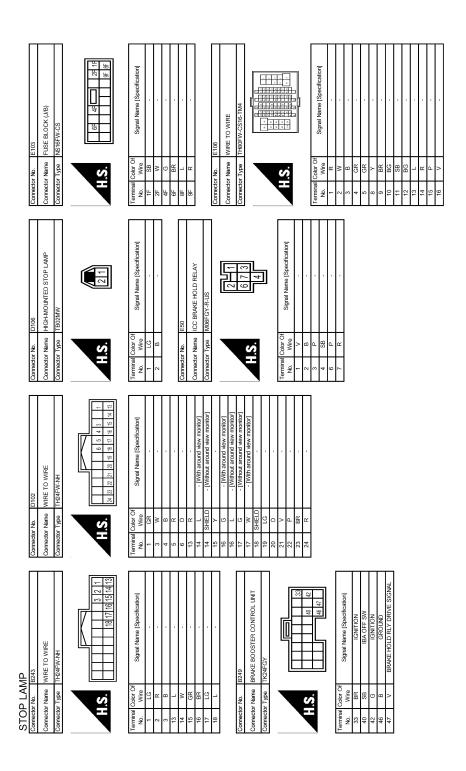
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BG	*	_	۵	BR	Υ	9	^	٦	9	SB	9	В	W	œ	SHIELD	> .	GR	P.C	re	>	88	¥	_ (	9 8	5 3	: 0.	. ~	_	œ	>	> 8	9 5	3 8	3 >	. (5	_	Ь	W	GR	SHELD	W	>	BR	۵	GR	×	
43	45	49	20	51	24	25	26	09	61	62	63	64	99	П	┪	89	69	20	71	72	73	4/	74	2 4	2/9/2	14	12	78	78	79	62 8	80	5 8	83 85	28	82	98		88	П	91	35	93	8	96	96	6
W6		WIRE TO WIRE	TH80MW-CS16-TM4				3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Constitution (Constitution)	Signal Ivame [Specification]		-				-																			-		-							
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77 P - [Without ICC]	77 R - [With ICC]	78 BR - [Without ICC]			Н		H	82 SB -	BG	84 G	T S8	d	. v 28	П	90 SHIELD -		92 Y	$\dashv$	94 LG -	+	<u>a</u> 1	┪	CT.	3 000	4		Connector No. E110			Connector Type M04FW-LC	•			<u>া</u>	112			) lai	No. Wire ogner varie [Specification]	Н	2 W		4 SB -				
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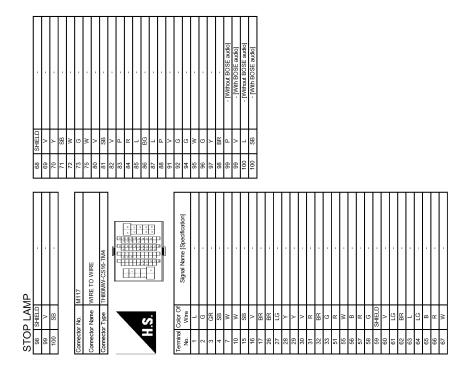
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# **BACK-UP LAMP**

Wiring Diagram - BACK-UP LAMP -

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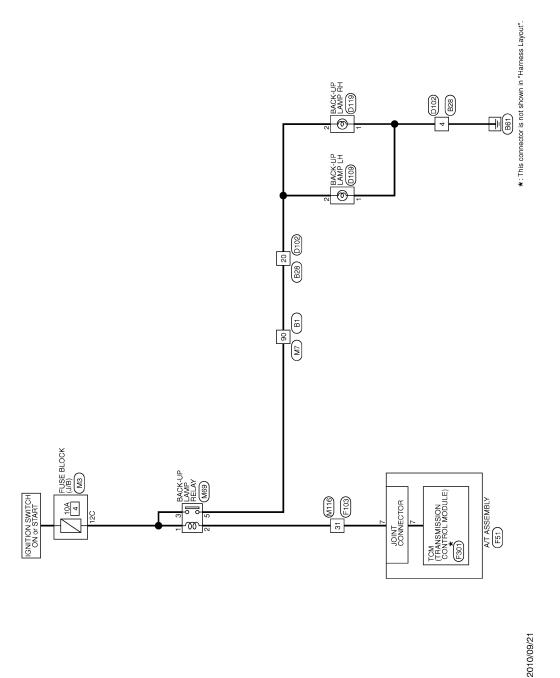
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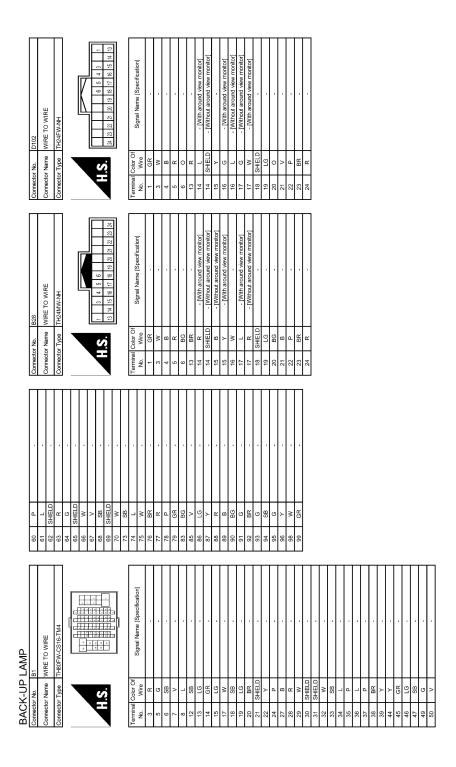
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Name   Specification    Name   Name   Specification    Name   Name   Specification    Name   Name   Specification    Name
Specification   Terminal Color Of Signal Name   Specification   No. Wire   Signal Name   Specification   Signal Name   Sp
Specification   No. Wire   Spring   Name   Specification   No. Wire   Specification   No. Wire   Spring   Name   Specification   No. Wire   Specification
1
2 BR BATTERY POWER SUPPLY   Corrector Name   Countrol (WOULE)     3 C
1
Specification
T R BACK-UP LAWP RELAY   10 B GR STARTER LAY   10 Corrector No. Wire   10 Signal Name [Specification]   10 CR CANH   10 CR
Corrector No.   F103   Corrector No.   Correcto
Corrector No.   F103   Corrector No.   F103   Corrector No.   F103   Corrector No.   F103   Corrector No.   Corrector No.   Corrector No.   Corrector No.   Corrector No.   Corrector No.   Corrector Type   Tx36FW-NS10   Corrector Type   Tx36FW-NS1
Cornector No.   F103
Corrector No.   F103
Corrector Name   WIRE TO WIRE   Corrector Name   WIRE TO WIRE   Corrector Name   WIRE TO WIRE   Corrector Name   Corrector
Corrector Asine   Write: 1
Corrector Type   Tri36FW-MS10   2   CANH
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Signal Name   Specification    Specifi
Signal Name (Specification)   Sign
29 - STARTER RELAY  Cobor Off W R R R Y Y Y Y S S S S S S S S S S S S S
Odor Of Signal Name (Specification)  Wire  W W W W W W W W W W W W W W W W W W
Ownord Signal Name (Specification)  G W  R  B  C R  Y  C GR  BG  I Without ICC]
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W W W W W W W W W W W W W W W W W W W
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GR - Without ICC]
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æ	٦		Connect	or Type	Connector Type MS02FL-M2-LC	45	BR		_
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< ECU DIAGNOSIS INFORMATION >

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# **ECU DIAGNOSIS INFORMATION**

## BCM (BODY CONTROL MODULE)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
IN WII LINIII	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
FR WIPER INT	Other than front wiper switch INT	Off
FR WIFER INT	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dia position
RR WIPER ON	Other than rear wiper switch ON	Off
KK WIPEK ON	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
RR WIPER IN I	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
KK WIPER STOP	Rear wiper is not in STOP position	On
TUDNI CIONAL D	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TUDNI SICNAL I	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAND CVA	Other than lighting switch 1ST and 2ND	Off
TAIL LAMP SW	Lighting switch 1ST or 2ND	On
LILDE AM CVA	Other than lighting switch HI	Off
HI BEAM SW	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
HEAD LAIMP SW 1	Lighting switch 2ND	On
LIEAD LAMD CVV	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
DA COUNC OW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ALITO LICUIT CVA	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

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### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status						
FR FOG SW	Front fog lamp switch OFF	Off						
FR FOG SW	Front fog lamp switch ON	On						
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off						
DOOR SW-DR	Driver door closed	Off						
DOOK SW-DK	Driver door opened	On						
OOD SW AS	R SW-AS  Passenger door closed  Passenger door opened							
DOOR SW-AS	Passenger door opened	On						
DOOR SW-RR	Rear RH door closed							
DOOR SW-RR	Rear RH door opened	On						
DOOR SW-RL	Rear LH door closed	Off						
DOOR SW-RL	Rear LH door opened	On						
DOOD CW DK	Back door closed	Off						
DOOR SW-BK	Back door opened	On						
CDL LOCK SW	Other than power door lock switch LOCK	Off						
ODE FOOK 211	Power door lock switch LOCK	On						
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off						
CDL UNLOCK SW	Power door lock switch UNLOCK	On						
VEV CVI LIZ CW	Other than driver door key cylinder LOCK position	Off						
KEY CYL LK-SW	Driver door key cylinder LOCK position	On						
CEV CVI LINI CVV	Other than driver door key cylinder UNLOCK position	Off						
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On						
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off						
HAZARD SW	Hazard switch is OFF	Off						
TAZARD SW	Hazard switch is ON	On						
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off						
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off						
TD/DD ODEN SW/	Back door opener switch OFF	Off						
TR/BD OPEN SW	On							
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off						
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off						
RKE-LOCK	LOCK button of the key is not pressed	Off						
NNE-LOUR	LOCK button of the key is pressed	On						
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off						
ANC-UNLOCK	UNLOCK button of the key is pressed	On						
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off						
DKE DVIIC	PANIC button of the key is not pressed	Off						
RKE-PANIC	PANIC button of the key is pressed	On						
	UNLOCK button of the key is not pressed	Off						
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	On						

#### < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
OF FIGAL DENOOR	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
KEQ OW -DIK	Driver door request switch is pressed	On
REQ SW -AS	Off	
NEW OW NO	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
VER OW -DD/ I L	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
SKAKE SW Z	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
DETE/CANCE SW	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
JI I FIN/IN JVV	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
UNLK SEN -DR	Driver door is unlocked	Off
DIATIV OFIA -DIV	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
OOI I OVV "IF DIVI	Push-button ignition switch (push-switch) is pressed	On
GN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
JI I I I I DIVI	Selector lever in P or N position	On

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### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
OFT D. MET	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
SFI IN -IVIE I	Selector lever in N position	On
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
PRIVIT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
VEV SW. SLOT	The key is not inserted into key slot	Off
KEY SW -SLOT	The key is inserted into key slot	On
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONEDMID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet
CONFRM ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
CONTINUID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet
COLINI IIVIO	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done

#### < ECU DIAGNOSIS INFORMATION >

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Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
GONT INIVIDE	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
CONFIRM IDT	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TP 4	The ID of fourth key is not registered to BCM	Yet
174	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
IF 3	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
IP 2	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
IFI	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
ID REGGITET	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGOTTIN	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGGI RICI	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
ID REGOT RET	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
WATERING FULL	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
DUZZEN	Tire pressure warning alarm is sounding	On

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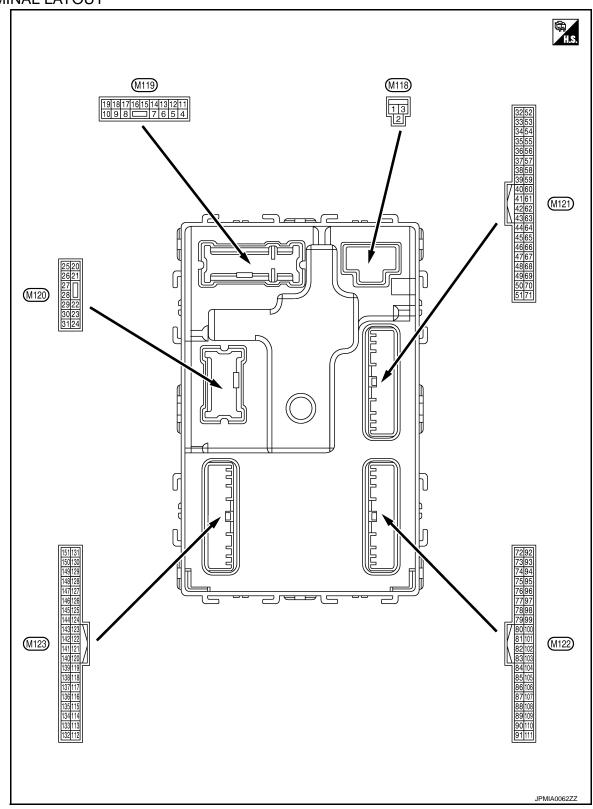
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TERMINAL LAYOUT



PHYSICAL VALUES

## < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON	1	Battery voltage
,		Late de la constante de la con			battery saver is activated. com lamp power supply)	0 V
4 (LG)	Ground	Interior room lamp power supply	Output	ed.	battery saver is not activator room lamp power supply)	Battery voltage
5	Cround	Passenger door UN-	Output	Passenger door  UNLOCK (Actuator is activated)		Battery voltage
(L)	Ground	LOCK	Output	Other than UNLOCK (Actuator is not activated)		0 V
7	Ground	Stan Jama	Output	Step lamp ON OFF		0 V
(Y)	Ground	Step lamp	Output			Battery voltage
8	Ground	All doors, fuel lid	Output	All doors  LOCK (Actuator is activated)		Battery voltage
(V)	Ground	LOCK	Output	Other than LOCK (Actuator is not activated)		0 V
9	Ground	Driver door, fuel lid	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
(G)	Giodila	UNLOCK	Output	Driver door	Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
(BR)	Ground	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	-	Ignition switch ON	l	0 V
					OFF	0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position  (V)  10  0  JSNIA0010GB
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF or ON ACC	Battery voltage

### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			Condition	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					Turn signal switch OFF	0 V	
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	10 5 0 1 s PKID0926E 6.5 V	
					Turn signal switch OFF	0 V	
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage	
( • )				шпр	ON Turn signal switch OFF	0 V 0 V	
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
23	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage	
(G)	Ground	Back door open	Output	Back door	Other than OPEN (Back door opener actuator is not activated)	0 V	
					Turn signal switch OFF	0 V	
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s	
					OFF (Charact)	6.5 V	
26 (G)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped) ON (Operated)	0 V  Battery voltage	
(=)					On (Operated)	ballery voltage	

## < ECU DIAGNOSIS INFORMATION >

	ninal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
34	Occupation	Luggage room anten-	0.4.4	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	Ground	na (–)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
35		Luggage room anten-		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1
(V)	Ground	na (+)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
38	Ground	Back door antenna (-	Output	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(B)	Ground	ound )	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

## < ECU DIAGNOSIS INFORMATION >

Term	inal No.	Description				
	e color)	Signal name	Input/		Condition	Value (Approx.)
+	_	Signal name	Output			(* 144.07.11)
39	Ground	Back door antenna	Output	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(W)	Glodina	(+)	Guipur	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0063GB
47	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage
(Y)	Ground	E/R) control	Output	ignition switch	ON	0 V
52	Ground	Starter relay control	Output	Ignition switch	When selector lever is in P or N position	Battery voltage
(SB)	Ground	Starter relay control	Output	ON	When selector lever is not in P or N position	0 V
60		Push-button ignition		Push-button igni-	Pressed	0 V
(BR)	Ground	switch (Push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage
					ON (Pressed)	0 V
61 (W)	Ground	Back door opener request switch	Input	Back door opener request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
		Intelligent Key warn-		Intelligent Key	Sounding	0 V
64 (V)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	Battery voltage
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	(V) 15 10 5 0 10 ms JPMIA0016GB
					Not in stop position	0 V
					Tot in Grop position	0 v

#### < ECU DIAGNOSIS INFORMATION >

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	inal No.	Description				Value
+ (vvire	e color)	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0  JPMIA0011GB 11.8 V
					ON (Door open)	0 V
					Pressed	0 V
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms 10 ms 11.8 V
					ON (Door open)	0 V

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	ninal No. e color)	Description		Condition		Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
74	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(SB)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
75	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S	
(GR)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
76	Ground	Driver door antenna (-)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S	
(V)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
77 (LG)		Driver door antenna (+)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
78		Room antenna 1 (–)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s	
(Y)	Ground	(Instrument panel)	Output	ŎFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
79	Ground	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
(BR)		(Instrument panel)		OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	

#### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value
+	-	Signal name	Input/ Output	Condition		(Approx.)
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
(R)	Ground				ON	Battery voltage
83 (Y)	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
				When operating e	ither button on the key	(V) 15 10 5 1 ms  JMKIA0065GB

#### < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description				Value	А
+	e color)	Signal name			Condition	(Approx.)	$\wedge$
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	ВС
87 (BR)	Ground	Combination switch INPUT 5			Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms	E F
			Input	Combination switch	Rear wiper switch ON (Wiper intermittent dial 4)	1.3 V  (V) 15 10 2 ms  JPMIA0039GB  1.3 V	G H
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB	J K

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## < ECU DIAGNOSIS INFORMATION >

Terminal No. Description (Wire color)			Condition		Value	
+	-	Signal name	Input/ Output	Contanton		(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 2 ms JPMIA0036GB 1.3 V
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms 1.3 V
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms 1.3 V
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
90 (P)	Ground	CAN-L	Input/ Output	_		_
91 (L)	Ground	CAN-H	Input/ Output	_		_

# < ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					OFF	Battery voltage
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s 1 s JPMIA0015GB
					ON	0 V
93	_				OFF or ACC	Battery voltage
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	0 V
94		5	•	5	OFF	Battery voltage
(Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(BG)	Giouna	ACC Telay CUTILIOI	Output	igililion switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	_		Battery voltage
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V
(R)	Ground	tion switch	Input	Selector level	Any position other than P	Battery voltage
					ON (Pressed)	0 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms 10 ms JPMIA0016GB
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
102		Blower fan motor re-			OFF or ACC	1.0 V 0 V
(BG)	Ground	lay control	Output	Ignition switch	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OF		Battery voltage

## < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
					Turn signal switch LH	(V) 15 10 5 2 ms JPMIA0037GB 1.3 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

## < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description				Value	^
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C D
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	E
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	G H
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	J K
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms	M
						JPMIA0039GB 1.3 V	0

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	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB
					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V

# < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value				
(Wire	e color) –	Signal name	Input/ Output		Condition	value (Approx.)	/			
113	Crownd	Ontical conser	lanut	Ignition switch	When bright outside of the vehicle	Close to 5 V	[			
(P)	Ground	Optical sensor	Input	ON	When dark outside of the vehicle	Close to 0 V				
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage	(			
		Stop lamp switch 2		Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	[			
118	Ground	(Without ICC)	Input		ON (Brake pedal is depressed)	Battery voltage				
(P)	Oround	Stop lamp switch 2	прис	pressed) and ICC	OFF (Brake pedal is not de- brake hold relay OFF	0 V				
		(With ICC)			ON (Brake pedal is de- rake hold relay ON	Battery voltage	ı			
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB	(			
					UNLOCK status (Unlock switch sensor ON)	1.1 V 0 V				
121	Ground	Kov alet awiteb	Innut	When the key is ir	serted into key slot	Battery voltage				
(BR)	Ground	Key slot switch	Input	When the key is n	ot inserted into key slot	0 V				
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V				
(W) 124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	Battery voltage  (V) 15 10 5 0 JPMIA0011GB 11.8 V				
					ON (Door open)	0 V				
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	(			
						леміа0013GB 10.2 V				
				Ignition switch OF	E or ACC	Battery voltage				

# < ECU DIAGNOSIS INFORMATION >

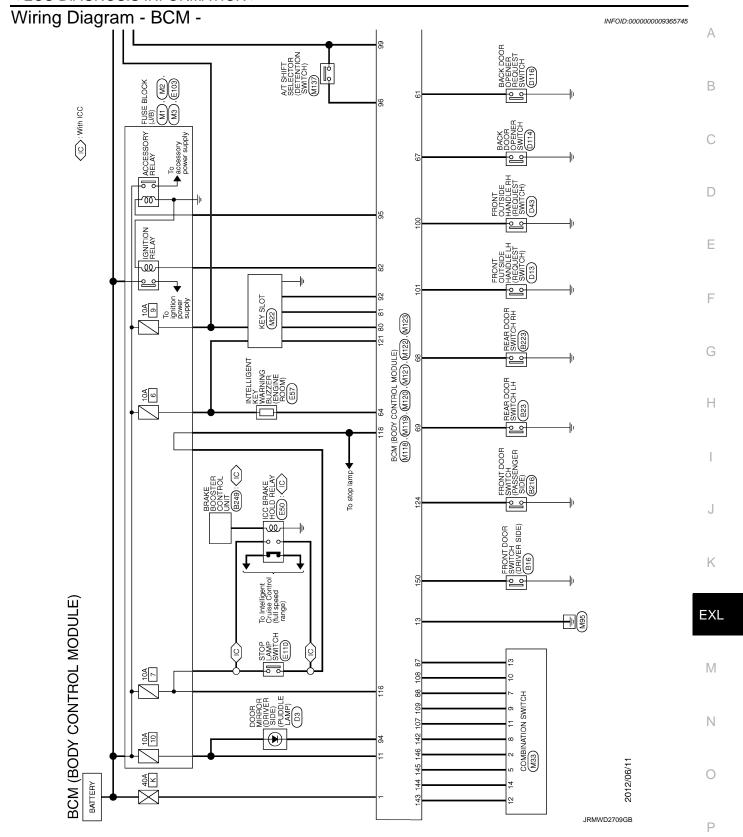
	inal No.	Description				Value						
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)						
					ON (Tail lamps OFF)	9.5 V						
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5 0  JPMIA0159GB						
					OFF	0 V						
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage						
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch ON	ON	0 V						
138		Receiver and sensor			OFF	0 V						
(Y)	Ground	power supply	Output	Ignition switch	ACC or ON	5.0 V						
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 ••• 0.2s						
(L)		er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 						
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	Battery voltage						
(GR)		position	-		Except P and N positions	0 V						
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	0 V  15 10 5 0 JPMIA0014GB 11.3 V						
					OFF	Battery voltage						

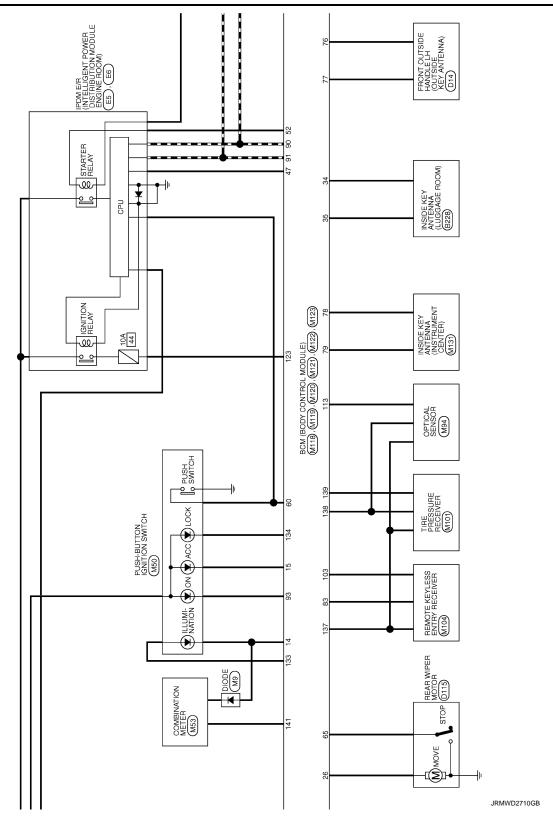
## < ECU DIAGNOSIS INFORMATION >

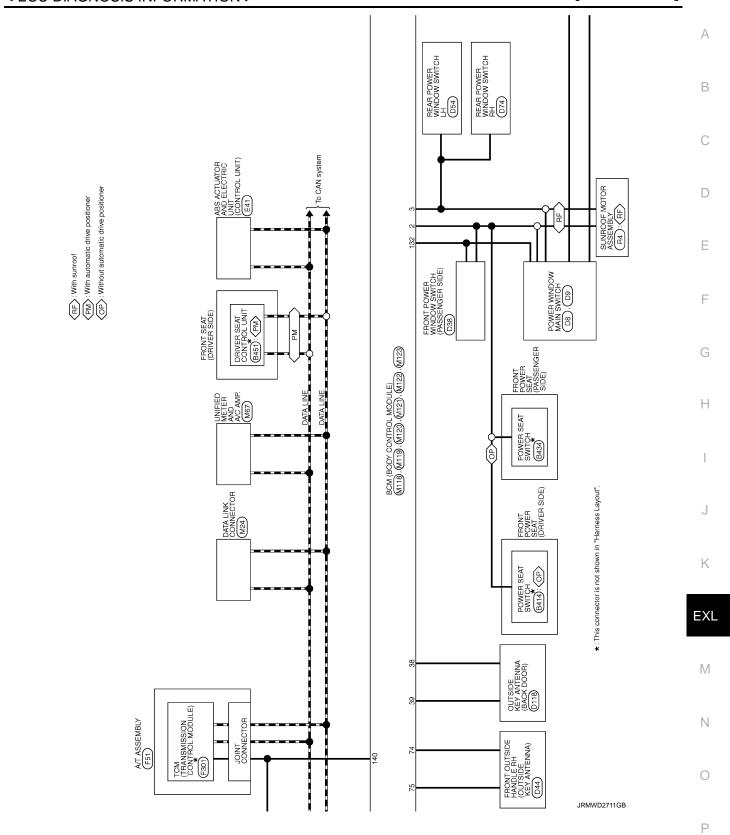
Terminal No.		Description				Value					
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)					
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	0 V  (V) 15 10 5 0 JPMIA0031GB					
					All switches OFF (Wiper intermittent dial 4) Front wiper switch HI	10.7 V 0 V					
143		Combination switch		Combination	(Wiper intermittent dial 4)  Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10					
143 (P)	Ground	OUTPUT 1	Output	switch	Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3  • Wiper intermittent dial 6  • Wiper intermittent dial 7	10 0 10 10.7 V 10.7 V					
					All switches OFF (Wiper intermittent dial 4)	0 V					
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Front washer switch ON (Wiper intermittent dial 4)  Rear wiper switch ON (Wiper intermittent dial 4)  Rear washer switch ON (Wiper intermittent dial 4)  Any of the conditions below	(V) 15 10 5					
					with all switches OFF  Wiper intermittent dial 1  Wiper intermittent dial 5  Wiper intermittent dial 6	2 ms JPMIA0033GB					
					All switches OFF Front wiper switch INT	0 V					
145	Ground	Combination switch	Output	Combination switch	Front wiper switch LO	(V) 15 10 5					
(L)	Ground	OUTPUT 3	Output	(Wiper intermit- tent dial 4)	Lighting switch AUTO	0					

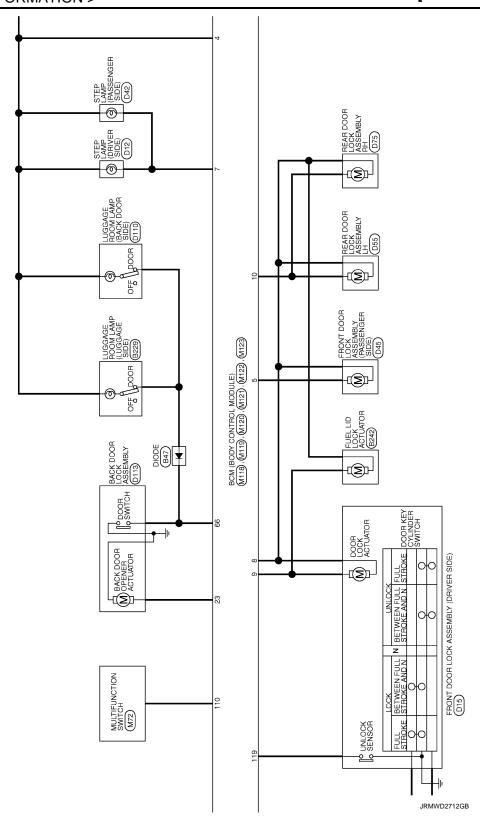
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	inal No.	Description				Value		
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)		
		All switches OFF		0 V				
					Front fog lamp switch ON			
				Combination	Lighting switch 2ND	(V)		
146	Ground	Combination switch	Output	switch	Lighting switch PASS	10		
(SB)		OUTPUT 4	o a . p a .	(Wiper intermit- tent dial 4)	Turn signal switch LH	0 2 ms JPMIA0035GB 10.7 V		
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB		
					ON (Door open)	0 V		
151	Ground	Rear window defog-	Output Rear window de-		Active	0 V		
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage		

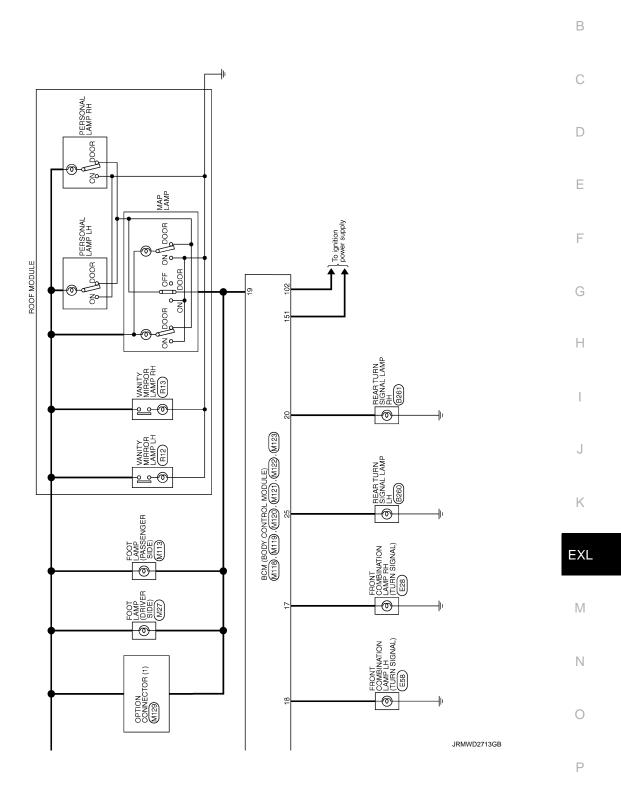








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	H.S.	Sgrat Name (Specification)  Terminal Color Of Sgrat Name (Specification)  No. Wire  1 R  2 V		H.S.	Terminal Color Of   Signal Name [Specification]   No. Wire   Signal Name [Specification]   33   BR   IGNTION   40   SB   IBA OFF SW	42 G IGNTTON 46 B GROUND 47 V BRAKE HOLD RLY DRIVE SIGNAL	
Cornector No.   E228	Connector No. B216 Connector Name FRONT DOOR SWITCH (PASSENGER SDE) Connector Type A03FW	Terminal Color Of Signal   No.   Wire   Signal	Cornector No.   Bazes	Connector No. R223 Connector Type REAR DOOR SWITCH RH Connector Type A03FW	Terminal Color Of Signal No. Wire Signal 1 GR	reminal Color Of Signal Name (Specification) No. Wire 2 BR	
BCM (BODY CONTROL MODULE)  Connector No. B16  Connector Name FRONT DOOR SWITCH (DRIVER SIDE)  Connector Type A03FW	H.S.	Terminal Color Of Sgnal Name (Specification) No. Wire 2 V		S.	Terminal Color Of No. Wire Signal Name (Specification) 2 LG	Connector No. B47  Connector Name DIODE  Connector Type 24335, 29900	Maria San

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Corrector No.         D3           Corrector Nype         TH2AMW-ANH           T2 11 10 10 10 10 10 10 10 10 10 10 10 10	No.   Wire   Signal Name (Specification)     No.   Wire   Signal Name (Specification)     2   0   SIDE CAMIERA LH COMM     5   Y   SIDE CAMIERA LH POWER SUPPLY     7   W   SIDE CAMIERA LH POWER SUPPLY     10   6   R   SIDE CAMIERA LH ROWER SUPPLY     11   P	1 2 3 4	
Corrector No.         B451           Corrector Name         DRIVER SEAT CONTROL UNIT           Corrector Type         THGZFW	Terminal Color Of Signal Name [Specification]   No. Whre   Nu. Whre   Str.   Nu.   Nu.		
Connector No. 8414  Connector Type NSIOPW.CS  2 1	Terminal Color Of No Ware   Signal Name   Specification   No Ware   Signal Name   Specification	Terminal Color Of   Signal Name (Specification)   No. Wire   No. Wire   No.   No.	
BCM (BODY CONTROL MODULE) Connector No. 18260 Connector Name REAR TURN SIGNAL LAMP LH Connector Type HSC2FG-W	Terminal Color Of No.   Signal Name [Specification]   No.   Wire   Signal Name [Specification]		E
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Connector No. D42	Connector Name STEP LAMP (PASSENGER SIDE)	Connector Type TB02FW					2		ā	No. Wire ogner remorphologopy	2 - 2 SB		Commodere No DA3	Т	Connector Name FRONT OUTSIDE HANDLE RH (REQUEST SWITCH)	Connector Type RK02FL		<		(12) H.S.			Terminal Color Of Signal Name [Specification]	+	2 B -		T								
Connector No. D15	Connector Name FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)	Connector Type E06FGY-RS					(1213141516)		E E	No. Wire	2 d	Н	m >	- >	+		Connector No. D38	Connector Name FROMT POWER WINDOW SWITCH (PASSENGER SIDE)	Connector Type NS16FW-CS	•		34	8 9 10 11 12 15 16			Terminal Color Of Signal Name [Specification]	+	4 6	8 W	. 9 6	10 W	$\dashv$	+	0 9	16 V -
Connector No. D13	Connector Name FRONT OUTSIDE HANDLE LH (REQUEST SWITCH)	Connector Type RK02FL		<			((1 2))		Ē	No. Wire ognerivative population	2 - 2 - 2		Connector No	COLLECTOR NO.	Connector Name FRONT CUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA)	Connector Type RK02MGY		<		H.S. (12)	)		Terminal Color Of Signal Name [Specification]	$^{+}$	2 SB -										
BCM (BODY CONTROL MODULE)	- \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	- No. 1	0 6	10 Y	Н	13 P	_	15 B -	Connector No. D9	Connector Name POWER WINDOW MAIN SWITCH	Connector Type NS03FW-CS				٦			Terminal Color Of	No. Wire Signal Name [Specification]	17 B	┨		Connector No. D12	Connector Name STEP LAMP (DRIVER SIDE)	Connector Type TB02FW	•			10				<u>a</u>	1	· -

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< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Corrector No. D110 Corrector Name   LVGGACE ROOMLANF (BACK DOOR SDE) Corrector Type   TKGSFW	Terminal   Color Of   Signal Name   Specification   No.   W/ve	
Corrector No. D74  Corrector Name REAR POWER WINDOW SWITCH RH  Corrector Type NS08FW.CS  L.S.  L.S.	Terminal   Color Of   Signal Name   Specification   No.   Wire   No.   Wire   No.   Wire   No.   Wire   No.   Wire   No.   N	
Connector No. 1094 Connector Type NSOBFW-CS  LLS.  LLS.  Connector Type NSOBFW-CS  LLS.	Terminal   Color Of   Signal Name   Specification   No.   Wire	
BCM (BODY CONTROL MODULE) Connector No. D44 Connector Name recorr contact revolute servariation Connector Type RR02MGY H.S.	Terminal Color Of Signal Name (Specification)  1	
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[XENON TYPE]

Connector No. F301  Connector Name Towl (TRANSMISSION CONTROL MODULE)  Connector Type SP10FG  (1 2 3 4 5)	Terminal Color Of   Signal Name (Specification)	
Corrector No. E110 Corrector Name STOP LAMP SWITCH Corrector Type MO4FW4.C    3 4     12	Terminal   Color Of   Signal Name   Specification	
Corrector No. E59  Corrector Name FRONT COMBINATION LAMP LH Corrector Type RSOBFB-PR	Terminal Color Of No. Wire Signal Name (Specification)  2	
=	Cornector No.   ESO	
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BCM (BODY CONTROL MODULE)	Connector No. 1M9	Connector No. M24	Connector No M33
Connector Name FUSE BLOCK (J/B)	g.	e e	g.
Connector Type NS10FW-CS	Connector Type 24335_C9900	Connector Type BD16FW	Connector Type TH16FW-NH
4434	12	14 16	1 2 3 4 5 6
	lis.	3 4 5 6 7 8	7 8 9 10 11 12 13 14
Terminal Color Of Signal Name [Specification]			
+	$^{+}$	+	t
4B G -	2 W -	Н	SB
58 BG		n -	3 GR FK WASHER(+)
+	Connector No. M22	+	) _
H	TO IS VEN	8 6	6 B GROUND
- BS B6	$\neg$	Ĥ	^ :
	Connector Type TH12FW-NH	14 P	BG
- N		- 10 Y	S P C
Т			۳ P
Connector Name FUSE BLOCK (J/B)		Connector No. M27	а
Connector Type NS12FW-CS	1 2 3 5 6	TOOT TOOL	BR
•	7	-	14 G OUTPUT 2
		1	
	lal	[ -	Connector No. M50
T.S.	No. Wire Ogna Name Lepomoacon		Connector Name PUSH-BUTTON IGNITION SWITCH
	GR		Connector Type TK08FBR
Terminal Color Of	3 W DATA	_	•
No. Wire Signal Name (Specification)	. 97		
10C L	7 B GROUND 11 BR KFY SWITCH SIGNAL	Terminal Color Of Signal Name [Specification]	
Н		Ħ	ᆌ
6C R - 7C B		2 BR .	
9C BG -			Terminal Color Of Signal Name [Specification]
			Ħ
			2 W
			+
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BCM (E	BCM (BODY CONTROI	ONTROL MODULE)						
	^		Connector No.	r No.	M67	Connector No.	M72	Connector No. M101
80	а.	-	Connecto	Connector Name	UNIFIED METER AND A/C AMP.	Connector Name	MULTIFUNCTION SWITCH	Connector Name TIRE PRESSURE RECEIVER
			Connector Type	r Type	TH32FW-NH	Connector Type	TH16FW-NH	Connector Type TK04FW
Connector No.	o. M53							
Connector Name		COMBINATION METER		7				
Connector Ty	Connector Type TH40FW-NH	HN-/	_	ĺ		•		
			4	κį	41 42 43 44 45 46 47     \$3 54 55 56       57 58 59 50 50 52 62     65 50 50 70 71 72	H.S.	4 6 8 14 16	H.S.
1							99	
ŧ	1 2 3	56 77	Torminol	orminal Color Of		Toronimal Color Of	ų	Torminal Color Of
?	21 22	N N N N N N N N N N N N N N N N N N	S S	Wire	Signal Name [Specification]	No. Wire	Signal Name [Specification]	No. Wire Signal Name [Specification]
			41	>	ACC POWER SUPPLY	- B	GROUND	1 BG GROUND
			42	<b>&gt;</b>	FUEL LEVEL SENSOR SIGNAL	3	ACC	2 L SIGNAL
- Ia		Signal Name [Specification]	43	œ S	INTAKE SENSOR SIGNAL	4 r	111	4 Y BATTERY
No.			44	P.C	IN-VEHICLE SENSOR SIGNAL	$\dashv$	ILL CONT	
$\dashv$	╛	BATTERY POWER SUPPLY	42	۵	AMBIENT SENSOR SIGNAL	$\dashv$	AV COMM (H)	- 1
2	┪	COMMUNICATION SIGNAL (METER-AMP.)	46	BG	SUNLOAD SENSOR SIGNAL	8 FG	AV COMM (L)	Connector No. M104
3 (	GR COMMU	COMMUNICATION SIGNAL (AMPMETER)	47	O	EXHAUST GAS / OUTSIDE COOR DETECTING SENSOR SIGNAL	9 B	SW GND	Connector Name DEMOTE KEYLESS ENTRY DECEMBED
2	В	GROUND	23	9	IGNITION POWER SUPPLY	14 Y	DISK EJECT SIGNAL	
9	Ь	ALTERNATOR SIGNAL	54	<b>\</b>	BATTERY POWER SUPPLY	16 G	HAZARD ON	Connector Type JAB04FB
7	BR	AIR BAG SIGNAL	22	۵	GROUND			
10	9	SECURITY SIGNAL	99	Ŀ	CANH			
15	В	GROUND	22	^	BRAKE FLUID LEVEL SWITCH SIGNAL	Connector No.	M94	
16	B METER	METER CONTROL SWITCH GROUND	28	R	FUEL LEVEL SENSOR GROUND		000000000000000000000000000000000000000	
19	В	ILL GND	29	GR	INTAKE SENSOR GROUND	Connector Name	OPTICAL SENSOR	2 E
20	æ	III	09	_	IN-VEHICLE SENSOR GROUND	Connector Type TK03FW	TK03FW	1.5
H	BG	IGNITION SIGNAL	61	BR	AMBIENT SENSOR GROUND			
22	В	GROUND	62	g	SUNLOAD SENSOR GROUND	_		
24 E	BR COMMI	COMMUNICATION SIGNAL (LCD-AMP.)	83	œ		,		Terminal Color Of
25	Y COMMI	COMMUNICATION SIGNAL (AMPLCD)	65	BG	ECV SIGNAL	•		No. Wire Ognal rathe [Specification]
H	R VEHIC	VEHICLE SPEED SIGNAL (8-PULSE)	69	_	A/C LAN SIGNAL	Ę	1 2 3	1 BG GROUND
27	V PAR	PARKING BRAKE SWITCH SIGNAL	20	œ	EACH DOOR MOTOR POWER SUPPLY		0 7 -	2 Y SIGNAL OUTPUT
28	W BRAKE	BRAKE FLUID LEVEL SWITCH SIGNAL	71	۵	GROUND			4 LG BATTERY
29	SB SEAT BEL	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	72	۵	CAN-L			
L	г	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)				Terminal Color Of		
31	L WAS	WASHER LEVEL SWITCH SIGNAL				No. Wire	Signal Name [Specification]	
33	B ILLUI	ILLUMINATION CONTROL SIGNAL				<b>-</b>	POWER	
1 98	97	SELECT SWITCH SIGNAL				2 P	OUTPUT	
37 8	SB	ENTER SWITCH SIGNAL				3 B	GROUND	
38	L TRIP	TRIP A/B RESET SWITCH SIGNAL						
	P ILLUMIN							
40 E	BG ILLUMIN	ILLUMINATION CONTROL SWITCH SIGNAL (+)						

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BCM (BODY CONTROL MODULE)	Connector No. M119	Connector No.	. M121	80	GR	NATS ANT AMP.
000000000000000000000000000000000000000	_		-	91	8	NATS ANT AMP.
Connector Name FOOT LAMP (PASSENGER SIDE)	Connector Name BCM (BODY CONTROL MODULE)	Connector Name	Ime BCM (BODY CONTROL MODULE)	82	ď	IGN RELAY (F/B) CONT
Connector Type A02FW	Connector Type NS16FW-CS	Connector Type	pe TH40FGY-NH	83	>	KEYLESS ENTRY RECEIVER COMM
				87	BR	COMBI SW INPUT 5
		_		88	>	COMBI SW INPUT 3
K		<b>1</b>		06	Ь	CAN-L
	4 5 7 6 8 9 10			91	_	CAN-H
25	14 13 14 15 17 18 10	Ě		92	97	KEY SLOT ILL CONT
	11 10	4	(2) (2) (2) (3) (3) (4) (4) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	93	>	<u> </u>
				94	<b>&gt;</b>	PUDDLE LAMP CONT
				95	BG	ACC RELAY CONT
al	nal (	nal	or Of Signal Name [Specification]	96	GR	A/T SHIFT SELECTOR POWER SUPPLY
	1	┪		66	~	SHIFT P
Α	9]	+	SB LUGGAGE ROOM ANT-	100	o į	PASSENGER DOOR REQUEST SW
2 BR -	5 L PASSENGER DOOR UNLOCK OUTPUT	+	3	101	S S	DRIVER DOOR REQUEST SW
	/ SIEP LAMP CON	88 8	B BACK DOOR ANI-	102	9	BLOWER FAN MOTOR RELAY CON
ſ	> 0	+	1	50 5	2 .	KEYLESS ENIRY RECEIVER POWER SUPPLY
Connector No. M118	D E	+	2	/01	3 6	I IDANI MS IRANO
Connector Name BCM (BODY CONTROL MODULE)	KEAK DO	+	SIAK	801	¥	COMBI SW INPUL 4
	æ	$\dashv$	$\dashv$	109	>	COMBI SW INPUT 2
Connector Type M03FB-LC	B	$\dashv$	_	110	ග	HAZARD SW
	W PUSHBUTTON	$\dashv$	-			
	>	$\dashv$	REAR		- 1	
Ī	Α	+		Connector No.		M123
1 3	BG T	Н	BA	Connect	Connector Name	BCW (BODY CONTROL MOBILE)
	19 V INT ROOM LAMP CONT	_			o realities	BOW (BOD) CONTROL MODOLE)
7		69	R REAR LH DOOR SW	Connector Type	or Type	TH40FG-NH
]	ſ				,	
-	Connector No. M120		- 1		1	
<u>a</u>	Connector Name BCM (BODY CONTROL MODULE)	Connector No.	). M122		•	
NO. WIFE	Connector Tune NS12EM-CS	Connector Name	Ime BCM (BODY CONTROL MODULE)	_	Ī	2 2 2 3
T	┑.	Connector Type	De TH40FB-NH		<i>i</i>	25 E
+			7			
		_	•			
	20 0			Terminal	O	Signal Name [Specification]
	86 86	ŧ	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	NO.	wire	dOSM33 NOTIGO
		\(\frac{1}{2}\)		5 6	2 م	OFFICAL SENSOR
				9	200	SLOP LAWP SW 1
				198	۵ 5	STOP LAMP SW 2
	<u>a</u>			2	2	DR DOOR UNLOCK SENSOR
	Wire	ğ	Color Of Signal Name (Specification)	121	æ	KEY SLOT SW
	4	┪		123	≥	IGN F/B
	e e	-		124	PC	PASSENGER DOOR SW
	G T	-	GR PASSENGER DOOR ANT+	132	BR	POWER WINDOW SW COMM
	26 G REAR WIPER OUTPUT	$\dashv$		133	>	PUSH-BUTTON IGNITION SW ILL POWER
		$\dashv$	LG DRIVER DOOR ANT+	134	GR	LOCK IND
		78		137	BG	ωI
		70	BOOM ANT1+	420	>	VIDE SEVERISENSOR POWER SLIPPLY

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Corrector No. R12 Corrector Name VANITY MIRROR LAMP LH Corrector Type MCAVZFW	Terminal Color Of Signal Name [Specification]  2 2 2 2 Corrector Na. R13 Corrector Name VANITY MIRROR LAMP RH Corrector Type MCA0ZFW  Terminal Color Of Signal Name [Specification]  1 1 2	
No. M137 Name Art SHIFT SELECTOR Type TH12FW-MH  T 2 3 4 5 T 8 9 10 11	Nure   Signal Name [Specification]   W   W   W   W   W   W   W   W   W	Ador Of Wee         Signal Name (Specification)           VAR         SW-BIT1           P         SW-BIT0           P         SW-BIT0           +BR         +B           I         SPEED SENSOR(2P)           Y         TINNER(+ION)           GROUND         GROUND
Corrector No. Corrector Type	Terminal Calor Of No. Wire No. Wire No. Wire No. 2 1 V V 2 2 V V 2 2 V V 2 2 V V V Carrector No. Corrector No. Corrector No. Corrector Type	Terminal Color Of Wire No. Wire 1 GR 5 P P 7 BR 8 L 9 9 Y 10 G G G 10 C 10 C 10 C 10 C 10 C 10 C
SECONTROL MODULE   139   L   THE PRESSURE RECEIVER COMM   140   GR   SHFT ND LAMP CONT   142   B   COMBI SW OUTPUT   143   C   COMBI SW OUTPUT   144   C   COMBI SW OUTPUT   144   C   COMBI SW OUTPUT   145   C   COMBI SW OUTPUT   145   C   C   C   C   C   C   C   C   C	M129 OPTION CONNECTOR (1) TH-GIGMW-N4H  Signal Name [Specification]  Signal Name [Specification]  M131  RSDE KEY ANTERNA, INSTRUMENT CENTER)  RROZEGY	Sgrai Name [Specification]
BCM (BOD 138 L 140 GR 141 G 142 BG 143 P 144 C 145 L 146 SB 146 SB 146 SB	Connector No.  Connector Name  Connector Type  Terminal Color Of  No.  Solution  Connector Name  Connector Name  Connector Name  Connector Name  Connector Name  Connector Name	H.S. Terminal Color Of No. Wire 1 BR 2 Y

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#### FAIL-SAFE CONTROL BY DTC

Fail-safe

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

[XENON TYPE]

Display contents of CONSULT	Fail-safe	Cancellation
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 → OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent  • Starter control relay signal  • Starter relay status signal
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent  Starter motor relay control signal  Starter relay status signal (CAN)
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 (Battery voltage)</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 position attained at the time of DTC detection	When any of the following conditions are fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	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 becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

#### REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

#### Condition of cancellation

- 1. More than 1 minute is passed after the rear wiper stops.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

#### 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 CIRCUIT     U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING

#### < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Priority	DTC	Λ
	<ul> <li>B2553: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> </ul>	В
	<ul> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SW</li> <li>B2605: PNP SW</li> </ul>	С
4	<ul> <li>B2608: STARTER RELAY</li> <li>B260A: IGNITION RELAY</li> <li>B260F: ENG STATE SIG LOST</li> <li>B2614: ACC RELAY CIRC</li> </ul>	D
	<ul> <li>B2615: BLOWER RELAY CIRC</li> <li>B2616: IGN RELAY CIRC</li> <li>B2617: STARTER RELAY CIRC</li> <li>B2618: BCM</li> </ul>	Е
	<ul> <li>B261A: PUSH-BTN IGN SW</li> <li>B261E: VEHICLE TYPE</li> <li>B26EA: KEY REGISTRATION</li> <li>C1729: VHCL SPEED SIG ERR</li> </ul>	F
	U0415: VEHICLE SPEED SIG	G
	<ul> <li>C1704: LOW PRESSURE FL</li> <li>C1705: LOW PRESSURE FR</li> <li>C1706: LOW PRESSURE RR</li> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> </ul>	Н
5	<ul> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> <li>C1716: [PRESSDATA ERR] FL</li> </ul>	I
	<ul> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RL</li> <li>C1734: CONTROL UNIT</li> </ul>	J
6	B2621: INSIDE ANTENNA     B2623: INSIDE ANTENNA	K

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>EXL-33</u>, "<u>COM-MON ITEM</u>: CONSULT Function (<u>BCM - COMMON ITEM</u>)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	_	BCS-41
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-42
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-43
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-40

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CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-43
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-44
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-45
B2195: ANTI SCANNING	×	_	_	_	SEC-46
B2553: IGNITION RELAY	_	×	_	_	PCS-48
B2555: STOP LAMP	_	×	_	_	SEC-47
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-49
B2557: VEHICLE SPEED	×	×	×	_	SEC-51
B2560: STARTER CONT RELAY	×	×	×	_	SEC-52
B2562: LOW VOLTAGE	_	×	_	_	BCS-44
B2601: SHIFT POSITION	×	×	×	_	SEC-53
B2602: SHIFT POSITION	×	×	×	_	SEC-56
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-59
B2604: PNP SW	×	×	×	_	SEC-62
B2605: PNP SW	×	×	×	_	SEC-64
B2608: STARTER RELAY	×	×	×	_	SEC-66
B260A: IGNITION RELAY	×	×	×	_	PCS-50
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-68
B2614: ACC RELAY CIRC	_	×	×	_	PCS-52
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-55
B2616: IGN RELAY CIRC	_	×	×	_	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-71
B2618: BCM	×	×	×	_	PCS-61
B261A: PUSH-BTN IGN SW	_	×	×	_	SEC-73
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	SEC-76
B2621: INSIDE ANTENNA	_	×	_	_	DLK-58
B2623: INSIDE ANTENNA	_	×	_	_	DLK-60
B26E1: ENG STATE NO RES	×	×	×	_	SEC-69
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-70</u>
C1704: LOW PRESSURE FL	_	_	_	×	
C1705: LOW PRESSURE FR	_	_	_	×	M/T 00
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-23</u>
C1707: LOW PRESSURE RL	_	_	_	×	1
C1708: [NO DATA] FL	_	_	_	×	
C1709: [NO DATA] FR	_	_	_	×	VACT OF
C1710: [NO DATA] RR	_	_	_	×	<u>WT-25</u>
C1711: [NO DATA] RL	_	_	_	×	-

## < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-28
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u>VV 1-20</u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	_	×	WT-32

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< ECU DIAGNOSIS INFORMATION >

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE

# ROOM)

Reference Value INFOID:0000000009365749

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

Monitor Item	(	Condition	Value/Status
RAD FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 – 100 %
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
III I O BEO	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND HI or AUTO	) (Light is illuminated)	On
UI UI DEO	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
		Front fog lamp switch OFF	Off
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	<ul> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Canada)</li> </ul>	On
		Front wiper switch OFF	Stop
FR WIP REQ	Ignition switch ON	Front wiper switch INT	1LOW
FR WIP REQ		Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
IGN KLTT-KEQ	Ignition switch ON	On	
ICN DI V	Ignition switch OFF or ACC	Off	
IGN RLY	Ignition switch ON	On	
PUSH SW	Release the push-button ignition	Off	
1 0011 000	Press the push-button ignition s	On	
INTER/NP SW	Ignition switch ON	Selector lever in any position other than P or N	Off
		Selector lever in P or N position	On
ST RLY CONT	Ignition switch ON		Off
OT INEL OOM	At engine cranking		On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Cor	ndition	Value/Status		
IHBT RLY -REQ	Ignition switch ON	Off			
	At engine cranking				
	Ignition switch ON		Off		
	At engine cranking		INHI ON $\rightarrow$ ST ON		
ST/INHI RLY		control relay cannot be recognized by be when the starter relay is ON and the	UNKWN		
DETENT SW	Ignition switch ON	Press the selector button with selector lever in P position     Selector lever in any position other than P	Off		
	Release the selector button with se	elector lever in P position	On		
S/L RLY -REQ	NOTE: The item is indicated, but not monitor	tored.	Off		
S/L STATE	NOTE: The item is indicated, but not monitor	UNLOCK			
DTRL REQ	NOTE: The item is indicated, but not monitor	Off			
OIL P SW	Ignition switch OFF, ACC or engine	running	Open		
OIL P SVV	Ignition switch ON		Close		
HOOD SW	Close the hood		Off		
HOOD 244	Open the hood		On		
HL WASHER REQ	NOTE: The item is indicated, but not monitor	tored.	Off		
	Not operation		Off		
THFT HRN REQ	Panic alarm is activated     Horn is activated with VEHICLE S TEM	On			
LIODAL OLIIDD	Not operating	Off			
HORN CHIRP	Door locking with Intelligent Key (ho	On			
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitor	tored.	Off		

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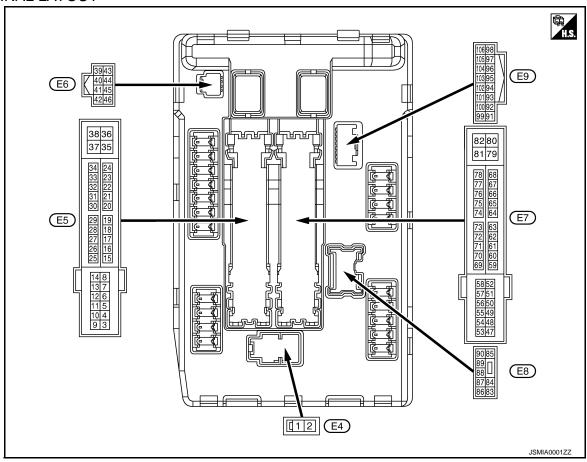
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< ECU DIAGNOSIS INFORMATION >

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	inal No.	Description				Value	
+ (Wire	e color)	Signal name	Input/ Output	Condition		(Approx.)	
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
4	Craund	Frant win as I O	Outnut	Ignition	Front wiper switch OFF	0 V	
(V)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage	
5	Cround	Foretainentii	0.4.4	Output Ignition switch ON	Front wiper switch OFF	0 V	
(L)	Ground Front wiper HI	Front wiper mi	Output		Front wiper switch HI	Battery voltage	
7	Craund	Tail, license plate lamps &	Outnut	Ignition	Lighting switch OFF	0 V	
(R)	Ground	interior lamps	Output	Output switch ON	Lighting switch 1ST	Battery voltage	
12 (B/W)	Ground	Ground	_	Ignition switch ON		0 V	
13					tely 1 second or more after ignition switch ON	0 V	
(Y)	Ground	Fuel pump power supply	Output	<ul> <li>Approximately 1 second after turning the ignition switch ON</li> <li>Engine running</li> </ul>		Battery voltage	
16		Ground Front wiper auto stop Inpu		lamitia n	Front wiper stop position	0 V	
(LG)	Ground		Input Ignition switch ON		Any position other than front wiper stop position	Battery voltage	

< ECU DIAGNOSIS INFORMATION >

	Terminal No. (Wire color)				• ""	Value
+ (vvire	- COIOF)	Signal name	Input/ Output		Condition	(Approx.)
19	Cravind	lanition relevance comple	Outnut	Ignition swi	tch OFF	0 V
(W)	Ground	Ignition relay power supply	Output	Ignition switch ON		Battery voltage
25	0	I maidi an and an an ann an an an an	0	Ignition swi	tch OFF	0 V
(G)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
26*	0	I maidi an and an an ann an an an an an	0	Ignition swi	tch OFF	0 V
(R)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
27	0	In this control of the control of th	la a cat	Ignition swi	tch OFF or ACC	Battery voltage
(BG)	Ground	Ignition relay monitor	Input	Ignition swi	tch ON	0 V
28	0	Push-button ignition	la a cot	Press the p	ush-button ignition switch	0 V
(L)	Ground	switch	Input	Release the	e push-button ignition switch	Battery voltage
30 (GR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
36 (G)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
39 (P)	_	CAN-L	Input/ Output	_		
40 (L)	_	CAN-H	Input/ Output	_		_
41 (B/W)	Ground	Ground	_	Ignition swi	tch ON	0 V
42	Ground	Cooling fan relay control	Input	Ignition switch OFF or ACC		0 V
(Y)	Cround	Cooming fair roley control	Input	Ignition switch ON		0.7 V
43 (SB)	Ground	A/T shift selector (Detention switch)	Input	Ignition switch ON	<ul> <li>Press the selector button (Selector lever P)</li> <li>Selector lever in any position other than P</li> </ul>	Battery voltage
					Release the selector but- ton (selector lever P)	0 V
44	Ground	Horn relay control	Input	The horn is	deactivated	Battery voltage
(BR)	Giodila	Hom relay control	Input	The horn is	activated	0 V
45	Ground	Anti thoft harn roles, central	Innut	The horn is	deactivated	Battery voltage
(G)	Ground	Anti theft horn relay control	Input	The horn is	activated	0 V
46 (R)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
(N)				SWILCH OIN	Selector lever P or N	Battery voltage
					A/C switch OFF	0 V
48 (L)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage
40				Ignition swi (More than ignition swi	a few seconds after turning	0 V
49 (BG)	Ground	ECM relay power supply	Output	<ul> <li>Ignition switch ON</li> <li>Ignition switch OFF         (For a few seconds after turning ignition switch OFF)</li> </ul>		Battery voltage

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		Description	Description			Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
51			_	Ignition sw	itch OFF	0 V	
(Y)	(Y) Ground Ignition relay power		Output	Ignition sw	itch ON	Battery voltage	
F2				Ignition swi (More than ignition swi	a few seconds after turning	0 V	
53 (W)	Ground	ECM relay power supply	Output	Ignition s	w seconds after turning igni-	Battery voltage	
54		Throttle central meter re-		Ignition swi (More than ignition swi	a few seconds after turning	0 V	
54 (P) Ground	Throttle control motor re- lay power supply	Output	Ignition s	w seconds after turning igni-	Battery voltage		
55 (SB)	Ground	ECM power supply	Output	Ignition sw	itch OFF	Battery voltage	
56	56 Cround	Ignition relay power supply	Output	Ignition switch OFF		0 V	
(LG)	Ground			Ignition switch ON		Battery voltage	
57	Ground	Ignition rolay nower supply	Outnut	Ignition switch OFF		0 V	
(G)	Giodila	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage	
58	Ground	Ignition relay power supply	Output	Ignition sw	itch OFF	0 V	
(V)	Ground	ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage	
69				Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage	
(BR)	Ground	ECM relay control	Output	Ignition switch ON     Ignition switch OFF     (For a few seconds after turning ignition switch OFF)		0 – 1.5 V	
70 (BG)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON $ ightarrow$ OFF		0 − 1.0 V ↓ Battery voltage ↓ 0 V	
				Ignition switch ON		0 – 1.0 V	
74	Crowns	Ignition relay news and all	Out-	Ignition sw	itch OFF	0 V	
(P)	Ground	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage	
75	Ground	Oil pressure switch	lan::4	Ignition	Engine stopped	0 V	
(SB) Ground		On pressure switch	Input	switch ON	Engine running	Battery voltage	

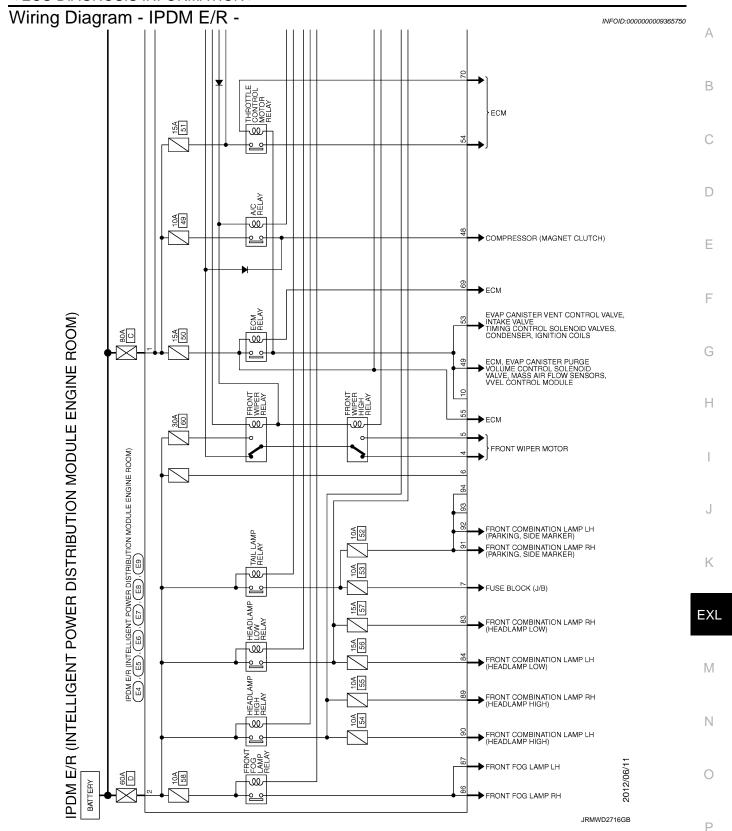
< ECU DIAGNOSIS INFORMATION >

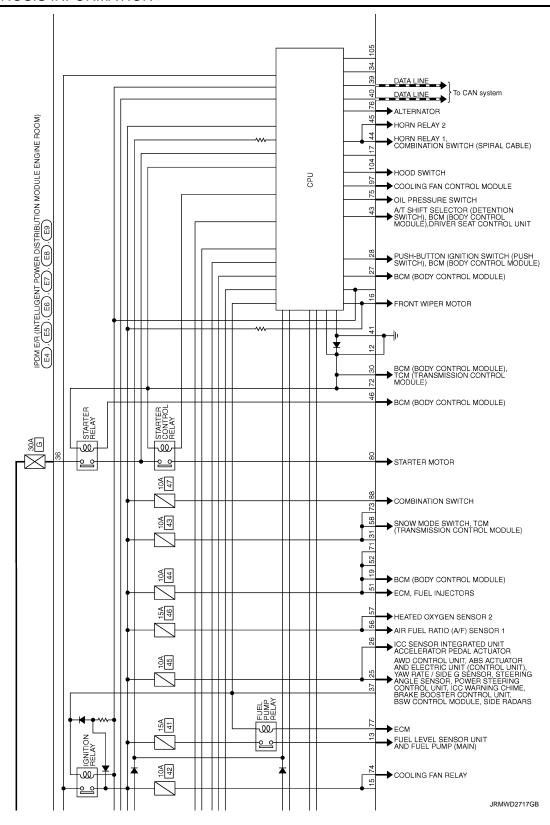
Terminal No. (Wire color)		Description				Value	۸
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
		Power generation command signal	Ignition switch ON		tch ON	(V) 6 4 2 0 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	В
76 (Y)			Output	40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		6.3 V  (V) 6 4 2 0 42 2ms	D E
						JPMIA0002GB 3.8 V	G
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0	Н
						JPMIA0003GB 1.4 V	I
77 (R)	Ground Fuel pump relay control		Output	<ul> <li>Approximately 1 second after turning the ignition switch ON</li> <li>Engine running</li> </ul>		0 – 1.0 V	J
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage	K
80 (W)	Ground	Starter motor	Output	At engine of	ranking	Battery voltage	
83 (BG)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V	EX
84 (V)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch 2ND Lighting switch OFF Lighting switch 2ND	Battery voltage  0 V  Battery voltage	M
86 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	<ul> <li>Front fog lamp switch OFF</li> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Canada)</li> </ul>	0 V  Battery voltage	N
-					Front fog lamp switch OFF	0 V	
87 (L)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	<ul> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Canada)</li> </ul>	Battery voltage	Р
88 (GR)	Ground	Washer pump power supply	Output	Ignition swi	tch ON	Battery voltage	

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	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
89	00		Output Ignition switch ON	Laura iti aura	Lighting switch OFF	0 V
(BR)	Ground	Headlamp HI (RH)		Lighting switch HI     Lighting switch PASS	Battery voltage	
00		I Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
90 (P)	Ground				Lighting switch HI     Lighting switch PASS	Battery voltage
91	0	Darking Jama (DH)	l Ignition	Ignition	Lighting switch OFF	0 V
(P)	Ground	Parking lamp (RH)	Output	Output switch ON	Lighting switch 1ST	Battery voltage
92	Ground	Parking Jamp (LU)	Output	Ignition	Lighting switch OFF	0 V
(BG)	Giodila	Ground Parking lamp (LH) Output switch O	switch ON	Lighting switch 1ST	Battery voltage	
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 – 5 V
104	Ground	Secund Hood quiteb	lan. it	Close the hood		Battery voltage
(LG)	Giodila	Ground Hood switch Input		Open the hood		0 V

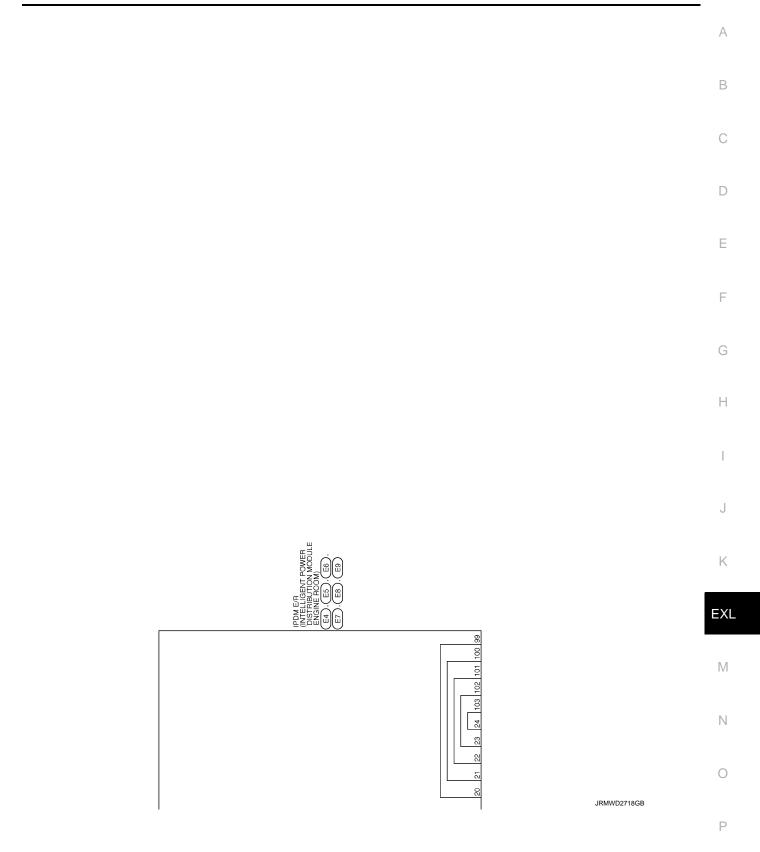
<sup>\*:</sup> Only for the models with ICC system



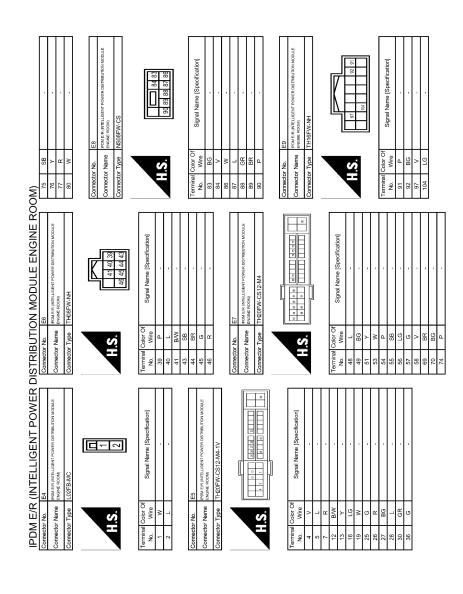


# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

[XENON TYPE] < ECU DIAGNOSIS INFORMATION >



**EXL-181** Revision: 2013 March 2014 QX50



JRMWD8171GB

Fail-safe INFOID:0000000009365751

### CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

## IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [XENON TYPE]

< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe operation
Cooling fan	<ul> <li>Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON</li> <li>Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF</li> </ul>
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

#### If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
Headlamp	<ul> <li>Turns ON the headlamp low relay when the ignition switch is turned ON</li> <li>Turns OFF the headlamp low relay when the ignition switch is turned OFF</li> <li>Headlamp high relay OFF</li> </ul>
<ul><li>Parking lamps</li><li>License plate lamps</li><li>Side maker lamps</li><li>Illuminations</li><li>Tail lamps</li></ul>	<ul> <li>Turns ON the tail lamp relay when the ignition switch is turned ON</li> <li>Turns OFF the tail lamp relay when the ignition switch is turned OFF</li> </ul>
Front wiper	<ul> <li>The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed.</li> <li>The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.</li> </ul>
Front fog lamps	Front fog lamp relay OFF
Horn	Horn relay OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF

### IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Voltage	udgment		
Ignition relay contact side	Ignition relay excitation coil side	IPDM E/R judgment	Operation
ON	ON	Ignition relay ON normal	_
OFF	OFF	Ignition relay OFF normal	_
ON	OFF	Ignition relay ON stuck	Detects DTC "B2098: IGN RELAY ON"     Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"

#### FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper stop position signal.

When a front wiper stop position signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 seconds activation and 20 seconds stop five times.

Ignition switch	Front wiper switch	Front wiper stop position signal
ON	OFF	The front wiper stop position signal (stop position) cannot be input for 10 seconds.
ON	ON	The front wiper stop position signal does not change for 10 seconds.

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## IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [XENON TYPE]

< ECU DIAGNOSIS INFORMATION >

#### NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

#### STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index INFOID:0000000009365752

#### 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 FFD (Freeze Frame data).
- The number is 0 when is detected now.
- The number increases like 1 ightarrow 2  $\cdots$  38 ightarrow 39 after returning to the normal condition whenever IGN OFF ightarrow
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

×: Applicable

CONSULT display	Fail-safe	Reference
No DTC is detected. further testing may be required.	_	_
U1000: CAN COMM CIRCUIT	×	PCS-14
B2098: IGN RELAY ON	×	PCS-15
B2099: IGN RELAY OFF	_	PCS-16
B210B: START CONT RLY ON	_	<u>SEC-77</u>
B210C: START CONT RLY OFF	_	SEC-78
B210D: STARTER RELAY ON	_	SEC-79
B210E: STARTER RELAY OFF	_	SEC-80
B210F: INTRLCK/PNP SW ON	_	<u>SEC-82</u>
B2110: INTRLCK/PNP SW OFF	<del></del>	SEC-84

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## **AFS CONTROL UNIT**

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

CONSULT MONITOR ITEM

Monitor Item	Condition	on	Value/Status
STR ANGLE SIG	Staaring	Straight-forward	Approx. 0°
STR ANGLE SIG	Steering	Steering	Approx900° - +900°
VHCL SPD	Driving at 40 km/h (25 MPH)		40 km/h
SLCT LVR POSI	Selector lever operation		P - 1
HEAD LAMP	Light quitab	2ND	On
HEAD LAWP	Light switch	Other than 2ND	Off
AFS SW	NOTE: The item is indicated, but not monitored	d.	On
		Unloaded vehicle condition	Approx. 2.5 V
HI SEN OTP RR	Vehicle rear height	Low (Leveling operation downward edge)	Approx. 1.6 V
		Unloaded vehicle condition	Approx. 70.0%
LEV ACTR VLTG	Headlamp leveling	Low (Leveling operation	Approx. 35.4% (With 17-inch wheel)
		downward edge)	Approx. 32.1% (With 18-inch wheel)
SWVL SEN RH	Dight has diagon suring activation	Standard position	Approx. 0°
SWVL SEN KH	Right headlamp swivel activation	Activation	Positive degree (+°)
SWVL SEN LH	Left headlemp aviival activation	Standard position	Approx. 0°
SWYL SEIN LIT	Left headlamp swivel activation	Activation	Positive degree (+°)
SWVL ANGLE RH	Right headlamp swivel activation	Standard position	Approx. 0°
SWAL AINGLE KIT	right headiamp swiver activation	Activation	Positive degree (+°)
SWVL ANGLE LH	Left headlamp swivel activation	Standard position	Approx. 0°
OVV VL ANGLE LIT	Len neadiamp swiver activation	Activation	Positive degree (+°)

**TERMINAL LAYOUT** 

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

PHYSICAL VALUES

	nal No. e color)	Description				Value
+	-	Signal name	Input/ output	Condition	on	(Approx.)
1 (Y)	Ground	Ignition power supply	Input	The ignition switch ON	N	Battery voltage
2 (LG)	Ground	Right swivel position sensor ground	Input	The ignition switch ON	N	0 V
4 (Y)	Ground	Right swivel position sensor power supply	Output	The ignition switch ON	N	5 V
6 (W)	Ground	Height sensor power supply	Output	The ignition switch ON	N	5 V
7 (P)	Ground	CAN-L	Input/ output	_		_
8 (B)	Ground	Height sensor ground	Input	The ignition switch ON	١	0 V
9	Ground	Right swivel position sensor	Output	Right headlamp	0°	0.7 V
(GR)	Ground	signal	Output	swivel angle	15°	2.8 V
11 (R)	Ground	Right swivel motor 1-phase (–)	Output	Right headlamp swivel	Activation	Reference waveform  (V) 15 10 5 0 SKIB2408J 8 - 12 V
13 (B)	Ground	Right swivel motor 2-phase (–)	Output	Right headlamp swivel	Stopped	9.5 - 11.5 V
15 (G)	Ground	Left swivel motor 1-phase (+)	Output	Left headlamp swivel	Activation	Reference waveform  (V) 15 0  +100µs SKIB2408J 8 - 12 V
17 (W)	Ground	Left swivel motor 2-phase (+)	Output	Left headlamp swivel	Stopped	9.5 - 11.5 V
					Unloaded vehicle condition	8.8 V
19 (SB)	Ground	Right levelizer signal	Output	Right headlamp lev- eling	Leveling operation down-	4.4 V (With 17-inch wheel)
					ward edge	4.0 V (With 18-inch wheel)
24 (V)	Ground	Left swivel position sensor power supply	Output	The ignition switch ON	N	5 V
25 (B)	Ground	Ground	_	The ignition switch ON	N	0 V
27 (BR)	Ground	Left swivel position sensor ground	Input	The ignition switch ON	N	0 V

## **AFS CONTROL UNIT**

## < ECU DIAGNOSIS INFORMATION >

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	inal No. e color)	Description		Conditio	20	Value
+	_	Signal name	Input/ output	Condition	on	(Approx.)
					Unloaded vehicle condition	2.5 V
28 (SB)	Ground	Height sensor signal	Output	Vehicle rear height	Low (Leveling operation downward edge)	1.6 V
29	Ground	Left swivel position sensor sig-	Output	Left headlamp swivel	0°	0.7 V
(O)		nal		angle	17°	3.0 V
30 (L)	Ground	CAN-H	Input/ output	_		_
32 (G)	Ground	Right swivel motor 2-phase (+)	Output	Right headlamp swivel	Activation	Reference waveform  (V) 15 10 5 0 SKIB2408J 8 - 12 V
34 (W)	Ground	Right swivel motor 1-phase (+)	Output	Right headlamp swivel	Stopped	9.5 - 11.5 V
36 (R)	Ground	Left swivel motor 2-phase (-)	Output	Left headlamp swivel	Activation	Reference waveform  (V) 15 0  +-100µs  SKIB2408J  8 - 12 V
38 (B)	Ground	Left swivel motor 1-phase (-)	Output	Left headlamp swivel	Stopped	9.5 - 11.5 V
					Unloaded vehicle condition	8.8 V
40 (L)	Ground	Left levelizer signal	Output	Right headlamp lev- eling	Leveling oper- ation down-	4.4 V (With 17-inch wheel)
					ward edge	4.0 V (With 18-inch wheel)

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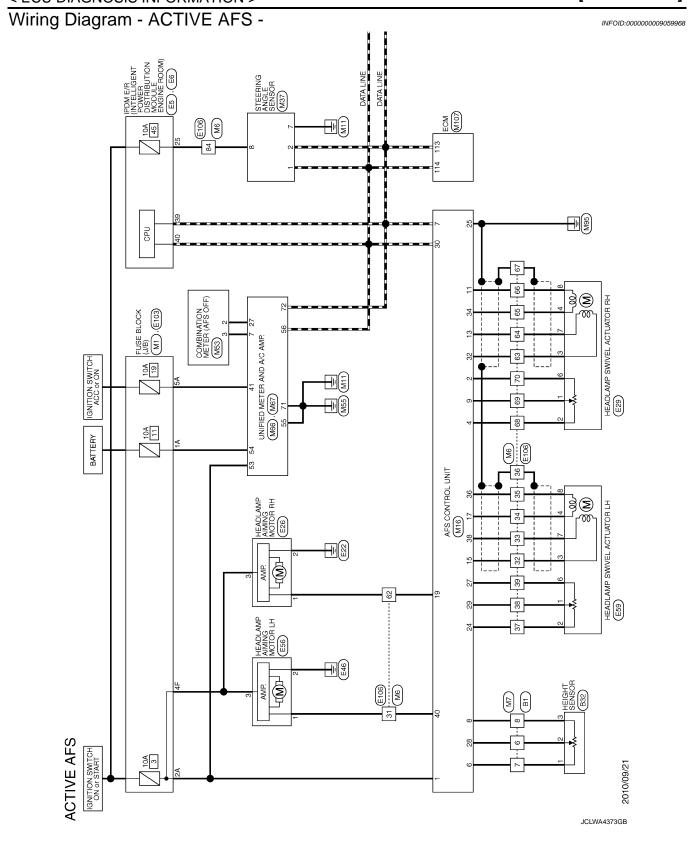
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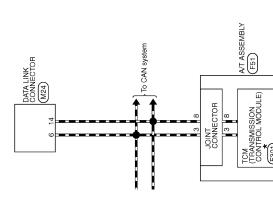
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\*: This connector is not shown in "Harness Layout".

**EXL-189** Revision: 2013 March 2014 QX50

ACTIVE AFS	AFS					
Connector No.	B1	09	Д	•	Connector No. B32	Connector No. E6
Connector Name	e WIRE TO WIRE	62	CHELD		Connector Name HEIGHT SENSOR	Connector Name FINGHE ROOM!
Connector Type	B TH80FW-CS16-TM4	63	ď		Connector Type RH03FB	Connector Type TH08FW-NH
	ļ	64	g		-	•
		92	SHELD	1		
\		67	\$ >			
Ę		89	SB		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	41 40 39
1		69	SHIELD		シ -	100 AND
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	70	Μ			
		73	SB			
Terminal Color Of	Of Signal Name [Specification]	74	۸ ۸	1	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]
t		278	9		+	+
2 2		77	á		2 SB	ł
H	-	78	а		3 -	41 B/W -
┝		79	GR			43 SB -
8 L		83	BG			H
Н		85	۸		Connector No. E5	Н
-		86	LG	-	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE	ULE 46 R -
Н		87	٨	-		
15 LG		88	œ		Connector Type TH20FW-CS12-M4-1V	- 1
-	-	88	В	-		Connector No.   E26
18 SB		90	BG			Connector Name HEAD! AMP AIMING MOTOR RH
Н		91	g	-		
		92	BR		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Connector Type HS03FGY
21 SHIELD	- · D	93	9			8
	-	94	SB			
24 P	•	98	9			
27 B	-	96	Υ	-		((1 2))
Н		86	W		nal	
		66	GR	-	No. Wire Signal wante [Specification]	_
	Jan				4 V	)
S	- · D				- · ·	
32 W	-				7 R	la I
33 SE					12 B/W -	
$\dashv$					$\dashv$	$\dashv$
35 P					$\dashv$	2 B -
4	-				$\dashv$	3 6
-					25 G -	
38 BR					26 R -	
39 Y	-				27 BG -	
44 Y					28 L	
45 GR					Ĥ	
$\dashv$					36 G -	
	-					
49 G						
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## **AFS CONTROL UNIT**

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			- (With ICC) - (Without ICC)	
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449 49 50	52 54 55 61 62 62 63 63 63 63 63 63 63 63 63 63 63 63 63	66 66 67 67 77 77 73	74 75 75 76 77 77 77 77 78 78 78 79 79	96 99 99 99 99 99 99 99 99 99 99 99 99 9
E106 WIRE TO WIRE TH80FW-CS16-TM4		Signal Name (Specification)		
Connector No.   Connector Name   Connector Type   Connect	H.S.	Color Of Wire   Wire   W   W   W   W   W   W   W   W   W	<del></del>	
Conne		Terminal No. 2 2 2 4 4 5 5 5 9 9 9 9 9 10	11 13 14 16 16 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	24 25 27 27 27 27 27 27 31 31 31 31 31 31 31 31 31 31 31 31 31
Connector No. E59 Connector Name HEADLAMP SWIVEL ACTUATOR LH Connector Type RS08FGY-PR	H.S. (878)	Terminal Color Of   Signal Name [Specification]   No. Wire   BR	Connector No. E103  Connector Name FUSE BLOCK (J/B)  Connector Type NS16FW-CS  H.S.	Terminal Color Of   Signal Name [Specification]   No. Wire   Signal Name [Specification]     1
Connector No. E29  Connector Name HEADLAMP SWIVEL ACTUATOR RH  Connector Type RS08FGY-PR	H.S. (4321)	Terminal Color Of Wine   Signal Name   Specification   1 LG   2 Y	Connector No. E56  Connector Name HEADLAMP ANMING MOTOR LH Connector Type HS03FGY  H.S.	No.   Wire   Signal Name   Specification    No.   Wire

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	97	. 91	· ·	SB -	BR - [With ICC]	L - [Without ICC]		GR - [Without ICC]	W - [With ICC]	P - [Without ICC]	R - [With ICC]	L - [With ICC]	R - [Without ICC]	W - [Without ICC]	Y - [With ICC]	SB	SB .	SB .		9	. 1			GR -	SHIELD -		Υ .	BR .	- d	GR .			SHIELD -	> 3	- 28														
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	2	∞	6	9	7	12	13	14	15	16	17	18	20	21	22	23	24	52	26	27	78	31	32	33	34	32	36	37	38	33	41	42	43	42	g 6	2 2	2 2	22	29	09	61	62	63	64	65	99	67	99	9
		6 - IGNITION POWER SUPPLY	- BACK-U	8 - CAN-L	9 - STARTER RELAY	10 - GROUND			Connector No. M1	(a) (b) (a) (a) (b) (b) (a) (b) (b) (b) (b) (b) (b) (b) (b) (b) (b		Connector Type NS06FW-M2				3A 1A	2 P	8A 17 87 87	]		Terminal Color Of	No. Wire Signal Name [Specification]	1A GR -	2A G .	3A L	4A P .	5A V -	× × × 9	7A R	8A L .			Connector No. M6	Connector Name WIRE TO WIRE	CONT. T. T. DOWN AND COOK TAKE	nector type   TH8UMW-CS16-1M4		× 100 00 00 00 00 00 00 00 00 00 00 00 00	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	S				Terminal Color Of Signal Nama (Sacatification)	0	- M	$\dashv$	3 B -	0.00
	1	_	1	<u> </u>		_			ទី	[ .	3	S					_	٦			Terr	z		2	e e	4	5	9	_	~			ទី	S	Į	5	_			_	٦			Ter	z				_
AFS		. ·					F51	V IGNES AVE ASSEMBLY	ACI ASSEMBLT	Connector Type RK10FG-DGY	*	<b>«</b>			0 4 3 2	109876					IGNITION POWER SUPPLY	BATTERY POWER SUPPLY		K-LINE	GROUND	IGNITION POWER SUPPLY				GROUND			F301	Connector Name TCM (TRANSMISSION CONTROL MODULE)	0100	SPIULG	<b>≪</b>		,		(0   8   2   9   10	1		TC Simple Manual Specification	oighai nai	IGNITION POWER SUPPLY	BATTERY POWER SUPPLY	CAN-H	ZIVI I ZI
≥⊦	_	98 SHIELD	96 L	Ц			Connector No.	Connector Name	Collinector INSTITE	Connector Type		_			Ų E				Terminal Color Of	No. Wire	7	2 BR	H	4	5 B	. J	7 R	97 8	H	10 B			Connector No.	Connector Name	H	Connector Type	_			Š	Ž.			Terminal Color Of	No. Wire	+	2 -	3	,

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Signal Name   Specification   Signal Name   Specification	Connector No. M7  Connector Type TH80MW-CS16-TM  Connector Type TH80MW-CS16-TM									
Numerical Control of Marie   Numerical Cont	WIRE TO WIR		9	۵	=	Termina	O	Signal Name [Specification]	Connector No.	M37
Signature   Sign	TH80MW-CS1		9	_		ė Ž	Wire		Connector Name	
Signate   Corrector Name   Corrector N	TH80MW-CS1		62	SHELD		-	>	NSI		_
1		**	83	œ		7	g P	PSG-R	Connector Type	TH08FW-NH
Signature   Checker   Ch			49	G		4	>	PSV-R		
Signal Name   Specification    1			92	SHIELD		9	Μ	HSV-R		
Signat Name   Secretar Properties   Convector Name   Co		8 5	99	SB		7	Ь	CAN-L		<u>K</u>
System Name   System   Syste	1	7	29	>	•	80	ω	H-9SH		<u> </u>
Signal Manual Carrier and Paris   Signal Name   Signal N		1	89	97	•	6	GR	H-Sd	<b>E</b>	7 2 8
Signal Name   Specification    77   W   W   Specification    77   W	-		69	SHELD		Ξ	œ	SMR-1 (-)		T
15   C   SML-1 (+)   New Signal Name   Sig			02	*		13	-	SMR-2 (-)		
Signal Name (Specification)         74         R         17         R         Terminal Color Off C			73	C		15	U	(+) L-TWS		
Signation   775   W	L		74	2		1	3	(+) <i>C</i> -IWS	Terminal Color (	
176   W   176   W   177		[Specification]	75	×		- 6	S	A-SUDS-R	No. Wire	
1	L	ic drive positioner	9/	3		24	>	T-/ASA	-	CAN-H
10   10   10   10   10   10   10   10	Ľ	atic drive positioner]	11	6		25	œ	GROUND	ŀ	CANE
179   GR   180   E   E   E   E   E   E   E   E   E	╀		78	۵		27	ä	I-58d		GROLIND
Sign   BC   CANA     Sign	BG		62	ä		%	S.	8-SH	<u> </u>	NEI
Signature   Sign	3		æ	S.		g	ű	I-Sd	1	
Sign   No	: 00		2	2		S	-	Z OANH		
Signate   Corrector Name   Signate   Corrector Type	as		98	œ		32	C	SMB-2 (+)	Connector No.	M53
Sign   W   SML2 (-)   Corrector Name   SML2 (-)   Correc	97		87	>		35	*	SMR-1 (+)		
Signate   Sign	<b>.</b>		88	*		36	œ	SML-2 (-)	Connector Name	COMBINATION METER
Signate Name   Corrector No.   Wisa	9		88	æ		38	a	SML-1 (-)	Connector Type	TH40FW-NH
10   Corrector No.   M24   Corrector No.   M24     10   11   Corrector No.   M24     11   12   13   15   17     12   13   13   13   13   13   13     13   13	W		06	BG		40	L	AMDS-L		
Signature   Sign	SB		91	O					_	
Signature   Sign	97		95	>						
10   10   10   10   10   10   10   10	BR		93	BR		Connec		M24		
96   G   Corrector Type   BD16FW   Corrector Type   BD16FW   Corrector No.   M16   Corrector No.   M16   Corrector Type   T14.0FW.NH	SHIELD		94	>	1	į		COTOLINACO VIVI I VIVO	SE SE	7 % 15 16
Secondary   Seco	>		92	g		Connec		DATA LINA CONNECTOR		27 28 28 38 31 35 38
Signature   Convector No.   M16   Convecto	>		96	>	1	Connec	or Type	BD16FW		
Corrector Na.   M16	В		86	Μ						
Corrector Name   AFS CONTROL UNIT   Corrector Type   TH40FW-MH   TH40	w		66	ď	•		7		Terminal Color (	
Corrector No. M16  Corrector No. M16  Corrector Type TH40PW-NH  Th40PW-	R						•			orginal varine [opecification]
Corrector No. M16  Corrector Name AFS CONTROL UNIT  Corrector TH40PWANH  Terminal Color Of Signal Name (Specification)  H.S. (1)	SHIELD					_	Ī	11 14 18	1 GR	BATTERY POWER SUPPLY
Connector Name   AFS CONTROL UNIT   Terrminal Color Off   Signal Name   Specification   Terrminal Color Off   Signal Name   Specification   To   Signal Name   To   Signal Na	7		Connecto		M16		<u> </u>		H	COMMUNICATION SIGNAL (METER-AMP.)
Corrector Type   TH40FWANT   Terminal Color Of   Signal Name (Specification)   10   6   P   P   P   P   P   P   P   P   P	Ь		Connect	own Momo	TIME TOOLINGS 339	1	1	4 5	-	COMMUNICATION SIGNAL (AMPMETER)
Corrector Type   TH40FWNN1   Terminal Color Of   Signal Name (Specification)   10   G   P	SB			alle i	ATG COINING ONLY					GROUND
Terminal Color Of Signal Name [Specification]   T	٦		Connecto	or Type	TH40FW-NH					ALTERNATOR SIGNAL
No. Wire   Systematic Lipochination   10   G	Ь					Termina	Il Color Of	[acitolitors] cond/ [conis	7 BR	AIR BAG SIGNAL
15   15   15   15   15   15   15   15	7			1		ž	Wire	olgna ivanie [opecincation]		SECURITY SIGNAL
H.S.	۵			•		e	ΘŢ		H	GROUND
1.2     1.2     1.3	BB		_	Į		4	ď		╀	METER CONTROL SWITCH GROUND
No.	<b>X</b>		۲	e	8 9 11 15 15	r.C	60		╁	ILL GND
1   1   2   2   3   4   4   5   5   5   5   5   5   5   5	1			Ž	2 2 3 3 3 3 3 3 3 3 40	۰	_	•	┞	111
8   G     22   B	GR					_	>		H	IGNITION SIGNAL
11 SB	97					∞	o		H	GROUND
7 25 7 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	SB					7	SB		H	COMMUNICATION SIGNAL (LCD-AMP.)
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \						14	۵		╀	COMMINICATION SIGNAL (AMP - LCD)
	> (					± 9	. ;	-	+	COMMUNICATION SIGNAL (AMPL-LCD)

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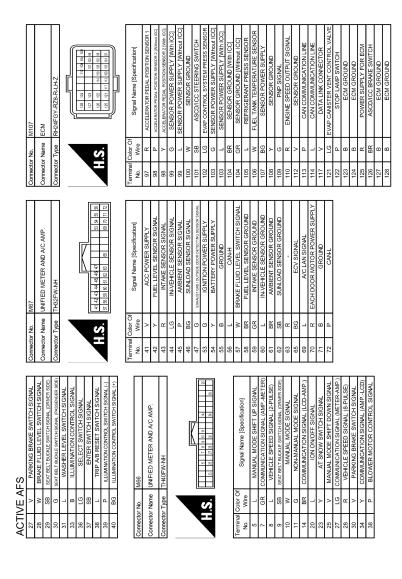
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Fail-safe INFOID:00000000009059969

DTC	Fail-safe	AFS OFF indica- tor lamp	Cancellation
CAN COMM CIRCUIT [U1000]	<ul> <li>Right and left swivel motors stop at the position when DTC is detected.</li> <li>Right and left aiming motors stop at the position when DTC is detected.</li> </ul>	Blinks 1 second each.	Ignition switch OFF
CONTROL UNIT (CAN) [U1010]	<ul> <li>Right and left swivel motors stop at the position when DTC is detected.</li> <li>Right and left aiming motors stop at the position when DTC is detected.</li> </ul>	Blinks 1 second each.	Ignition switch OFF
SWIVEL ACTUATOR [RH, LH] [B2503, B2504]	<ul> <li>Right and left swivel motors stop at the position when DTC is detected.</li> <li>The signal, approximately 2 V decreased from the levelizer signal when DTC detected, is output.</li> </ul>	Blinks 1 second each.	Ignition switch OFF
HI SEN UNUSUAL [RR] [B2514]	Right and left aiming motors stop at the position when DTC is detected.	_	Ignition switch OFF
ST ANG SEN SIG [C0126]	Right and left swivel motor swivel angle returns to 0° and fixed.	Blinks 1 second each.	Ignition switch OFF
SHIFT SIG [P, R] [B2516]	Right and left swivel motor swivel angle returns to 0° and fixed.	Blinks 1 second each.	Ignition switch OFF
VEHICLE SPEED SIG [B2517]	<ul> <li>Right and left swivel motor swivel angle returns to 0° and fixed.</li> <li>Right and left aiming motors stop at the position when DTC is detected.</li> </ul>	Blinks 1 second each.	Ignition switch OFF
LEVELIZER CALIB [B2519]	Right and left aiming motors stop at the position when DTC is detected.	_	When the levelizer adjustment is completed.
ST ANGLE SEN CALIB [C0428]	Right and left swivel motor swivel angle returns to 0° and fixed.	Blinks 1 second each.	When the steering angle sensor neutral position registration is competed
ECU CIRC [B2521]	<ul> <li>Right and left swivel motors stop at the position when DTC is detected.</li> <li>Right and left aiming motors stop at the position when DTC is detected.</li> </ul>	Blinks 1 second each.	Ignition switch OFF

## **DTC Inspection Priority Chart**

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

### NOTE:

- If DTC U1000 is displayed with other DTC, first perform the trouble diagnosis for DTC U1000.
- If DTC U1010 is displayed with other DTC, first perform the trouble diagnosis for DTC U1010.

Priority	Detected items (DTC)
1	U1000 CAN COMM CIRCUIT     U1010 CONTROL UNIT (CAN)
2	B2519 LEVELIZER CALIB     B2521 ECU CIRC     C0428 ST ANG SEN CALIB
3	B2503 SWIVEL ACTUATOR [RH]     B2504 SWIVEL ACTUATOR [LH]     B2514 HI SEN UNUSUAL [RR]     B2516 SHIFT SIG [P, R]     B2517 VEHICLE SPEED SIG     C0126 ST ANG SEN SIG

**EXL-195** Revision: 2013 March 2014 QX50

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INFOID:00000000009059970

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## **AFS CONTROL UNIT**

## < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

DTC Index

×: Applicable

CONSULT indication	Fail-safe	AFS OFF indicator lamp	Reference
U1000: CAN COMM CIRCUIT	×	×	EXL-62, "DTC Logic"
U1010: CONTROL UNIT (CAN)	×	×	EXL-63, "DTC Logic"
B2503, B2504: SWIVEL ACTUATOR [RH, LH]	×	×	EXL-45, "DTC Logic"
B2514: HI SEN UNUSUAL [RR]	×		EXL-51, "DTC Logic"
B2516: SHIFT SIG [P, R]	×	×	EXL-54, "DTC Logic"
B2517: VEHICLE SPEED SIG	×	×	EXL-55, "DTC Logic"
B2519: LEVELIZER CALIB	×		EXL-56, "DTC Logic"
B2521: ECU CIRC	×	×	EXL-57, "DTC Logic"
C0126: ST ANG SEN SIG	×	×	EXL-60, "DTC Logic"
C0428: ST ANGLE SEN CALIB	×	×	EXL-61, "DTC Logic"

## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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# SYMPTOM DIAGNOSIS

## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

Symptom Table

#### **CAUTION:**

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

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON.	One side	Fuse     Halogen bulb (HI)     Harness between IPDM E/R and the headlamp high     IPDM E/R	Headlamp (HI) circuit Refer to <u>EXL-67</u> .
	Both sides	Symptom diagnosis	
Headlamp (HI) is not	When ignition switch is turned ON.	"BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to EXL-200.	
turned OFF.	When ignition switch is turned OFF.	IPDM E/R	_
High beam indicator lam [The headlamp (HI) is tu		Combination meter	Combination meter     Data monitor "HI-BEAM IND"     BCM (HEAD LAMP)     Active test "HEADLAMP"
Headlamp (LO) is not turned ON.	One side	Fuse     Xenon bulb (LO)     Harness between IPDM E/R and the headlamp low     IPDM E/R	Headlamp (LO) circuit Refer to EXL-69.
	Both sides	Symptom diagnosis	
Headlamp (LO) is not	When ignition switch is turned ON.	"BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-201.	
turned OFF.	When ignition switch is turned OFF.	IPDM E/R	_
Headlamp is not turned ON/OFF with the lighting switch AUTO.		Combination switch     Harness between the combination switch and BCM     BCM	Combination switch Refer to BCS-93.
		Optical sensor     Harness between the optical sensor and BCM     BCM	Optical sensor Refer to EXL-80.
Front fog lamp is not turned ON.	One side	Front fog lamp bulb     Harness between IPDM E/R and the front combination lamp     Front combination lamp     IPDM E/R	Front fog lamp circuit Refer to EXL-74.
	Both side	Symptom diagnosis	A DE MOT TUDMED ON
Front fog lamp is not turned ON.		"BOTH SIDE FRONT FOG LAMPS Refer to <u>EXL-203</u> .	S ARE NOT TURNED ON"
Parking lamp is not turned ON.		<ul> <li>Fuse</li> <li>Parking lamp bulb</li> <li>Harness between IPDM E/R and the front combination lamp</li> <li>Front combination lamp</li> <li>IPDM E/R</li> </ul>	Parking lamp circuit Refer to EXL-76.

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## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

Symp	tom	Possible cause	Inspection item
Tail lamp is not turned ON.		Harness between IPDM E/R and the rear combination lamp     Rear combination lamp	Tail lamp circuit Refer to EXL-85.
License plate lamp is not to	urned ON.	Harness between IPDM E/R and the license plate lamp     License plate lamp	License plate lamp circuit Refer to EXL-87.
Tail lamp and the license p ON.	late lamp are not turned	Fuse     Harness between IPDM E/R and the rear combination lamp     IPDM E/R	Tail lamp circuit Refer to <u>EXL-85</u> .
<ul> <li>Parking lamp, the tail lan lamp are not turned ON.</li> <li>Parking lamp, the tail lan lamp are not turned OFF (Each illumination is turned)</li> </ul>	np and the license plate	Symptom diagnosis "PARKING, LICENSE PLATE AND ON" Refer to EXL-202.	TAIL LAMPS ARE NOT TURNED
Turn signal lamp does not	Indicator lamp is nor- mal. (The applicable side performs the high flash- er activation.)	Harness between BCM and each turn signal lamp     Turn signal lamp bulb	Turn signal lamp circuit Refer to EXL-78.
blink.	Indicator lamp is included	Combination switch     Harness between the combination switch and BCM     BCM	Combination switch Refer to BCS-93.
	One side	Combination meter	_
Turn signal indicator lamp does not blink. (The turn signal indicator	Both sides (Always)	<ul> <li>Turn signal indicator lamp signal</li> <li>Unified meter and A/C amp.</li> <li>BCM</li> <li>Combination meter</li> </ul>	Unified meter and A/C amp. Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
lamp is normal.)	Both sides (Only when activating the hazard warning lamp with the ignition switch OFF)	The combination meter power supply and the ground circuit Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-55.
Hazard warning lamp do     Hazard warning lamp co (Turn signal is normal.)		Hazard switch     Harness between the hazard switch and BCM     BCM	Hazard switch Refer to <u>EXL-83</u> .
Headlamp auto aiming doe normal.)	es not activate. (AFS is	Harness between AFS control unit and aiming motor     Front combination lamp (Aiming motor)     AFS control unit	Headlamp levelizer circuit Refer to EXL-72.
AFS OFF indicator lamp is	not turned ON.	<ul> <li>AFS OFF indicator lamp signal</li> <li>Unified meter and A/C amp.</li> <li>AFS control unit</li> <li>Combination meter</li> </ul>	Unified meter and A/C amp. Data monitor "AFS OFF IND"

### NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS > [XENON TYPE]

## NORMAL OPERATING CONDITION

Description A

#### XENON HEADLAMP

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

#### **AUTO LIGHT SYSTEM**

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

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

< SYMPTOM DIAGNOSIS > [XENON TYPE]

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

Description INFOID:00000000009059974

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

## Diagnosis Procedure

INFOID:0000000009059975

## 1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-93, "Symptom Table".

#### Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

## (E) CONSULT DATA MONITOR

- 1. Select "HL HI REQ" of IPDM E/R data monitor item.
- 2. With operating the lighting switch, check the monitor status.

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

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-96, "Exploded View".

## 3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-67, "Component Function Check".

#### Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

**BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON** [XENON TYPE] < SYMPTOM DIAGNOSIS > BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON Α Description INFOID:0000000009059976 The headlamps (both sides) are not turned ON in any condition. В Diagnosis Procedure INFOID:0000000009059977 CHECK COMBINATION SWITCH Check the combination switch. Refer to BCS-93, "Symptom Table". Is the combination switch normal? D YES >> GO TO 2. NO >> Repair or replace the malfunctioning part. 2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT Е **©CONSULT DATA MONITOR** Select "HL LO REQ" of IPDM E/R data monitor item. With operating the lighting switch, check the monitor status. F Monitor item Condition Monitor status 2ND On **HL LO REQ** Lighting switch OFF Off Is the item status normal? Н YES >> GO TO 3. NO >> Replace BCM. 3.HEADLAMP (LO) CIRCUIT INSPECTION Check the headlamp (LO) circuit. Refer to EXL-69, "Description". Is the headlamp (LO) circuit normal? YES >> Replace IPDM E/R. NO >> Repair or replace the malfunctioning part.

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## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

# PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description INFOID:0000000009059978

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

## Diagnosis Procedure

INFOID:0000000009059979

## 1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-93, "Symptom Table".

#### Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

## 2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

## PCONSULT DATA MONITOR

- 1. Select "TAIL & CLR REQ" of IPDM E/R data monitor item.
- 2. With operating the lighting switch, check the monitor status.

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

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM.

## 3. TAIL LAMP CIRCUIT INSPECTION

Check the tail lamp circuit. Refer to EXL-85, "Component Function Check".

#### Is the tail lamp circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON [XENON TYPE] < SYMPTOM DIAGNOSIS > BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON Α Description INFOID:0000000009059980 The front fog lamps are not turned ON in any condition. В Diagnosis Procedure INFOID:00000000009059981 1.COMBINATION SWITCH INSPECTION Check the combination switch. Refer to BCS-93, "Symptom Table". Is the combination switch normal? D YES >> GO TO 2. NO >> Repair or replace the malfunctioning part. 2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT Е (P)CONSULT DATA MONITOR Select "FR FOG REQ" of IPDM E/R data monitor item. With operating the front fog lamp switch, check the monitor status. F Monitor item Condition Monitor status ON On Front fog lamp switch FR FOG REQ (Lighting switch 2ND) OFF Off Is the item status normal? Н YES >> GO TO 3. NO >> Replace BCM. 3.FRONT FOG LAMP CIRCUIT INSPECTION Check the front fog lamp circuit. Refer to EXL-74, "Component Function Check". Is the front fog lamp circuit normal? YES >> Replace IPDM E/R. NO >> Repair or replace the malfunctioning part.

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### **PRECAUTIONS**

< PRECAUTION > [XENON TYPE]

## **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.

INFOID:0000000009059983

Precautions For Xenon Headlamp Service

#### **WARNING:**

Comply with the following warnings to prevent any serious accident.

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

### **CAUTION:**

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

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

[XENON TYPE]

## PERIODIC MAINTENANCE

## HEADLAMP AIMING ADJUSTMENT

Description INFOID:00000000009059984 В

#### PREPARATION BEFORE ADJUSTING

#### NOTE:

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

Before performing aiming adjustment, check the following.

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

#### NOTE:

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

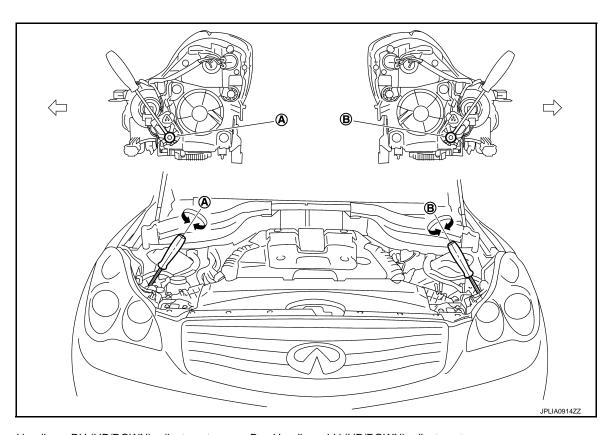
Wipe out dirt on the headlamp.

#### **CAUTION:**

**Never use organic solvent (thinner, gasoline etc.)** 

Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW



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

#### NOTE:

The figure is the vehicle without AFS. Each adjustment screw is applied to the vehicle with AFS.

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	Adjustment screw	Screw driver rotation	Facing direction
A	Headlamp RH (UP/DOWN)	Clockwise	UP
^	Headiamp KH (OF/DOWN)	Counterclockwise	DOWN
В	Headlamp LH (UP/DOWN)	Clockwise	UP
Ь	neadianip En (OP/DOWN)	Counterclockwise	DOWN

## Aiming Adjustment Procedure

INFOID:0000000009059985

Place the screen.

#### NOTE:

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

#### NOTE:

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

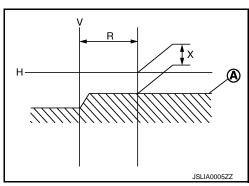
#### **CAUTION:**

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

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

#### Light axis measurement range (R) : 350 $\pm$ 175 mm (13.78 $\pm$ 6.89 in)

Low beam distribution on the screen

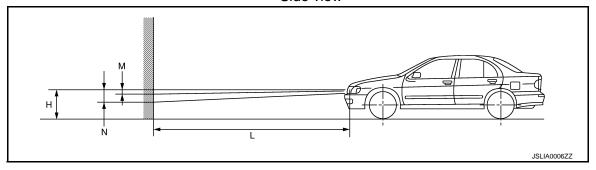


 Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

unit: mm (in)

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

#### Side view



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

### FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

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## FRONT FOG LAMP AIMING ADJUSTMENT

Description INFOID:0000000009059986

#### PREPARATION BEFORE ADJUSTING

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

Before performing aiming adjustment, check the following.

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

#### NOTE:

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

Wipe out dirt on the headlamp.

#### **CAUTION:**

Never use organic solvent (thinner, gasoline etc.)

Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW

Turn the aiming adjusting screw for adjustment.

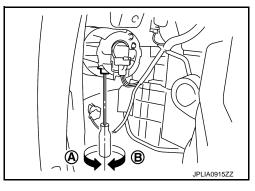
A: UP

**B: DOWN** 

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

#### NOTE:

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



INFOID:00000000009059987

## Aiming Adjustment Procedure

1. Place the screen.

#### NOTE:

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

#### NOTE:

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

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

4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 200 mm (7.87 in).

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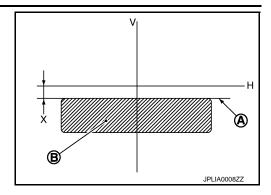
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## FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

Front fog lamp light distribution on the screen



A : Cutoff line

B : High illuminance area

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

X : Cutoff line height

[XENON TYPE]

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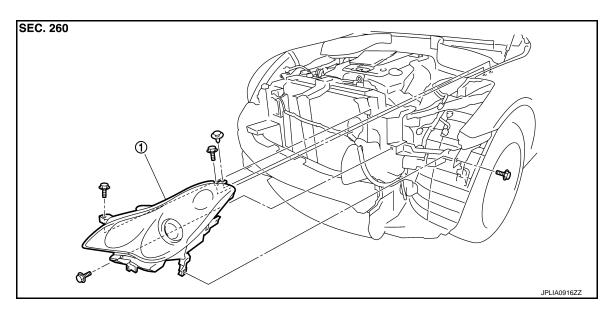
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# REMOVAL AND INSTALLATION

## FRONT COMBINATION LAMP

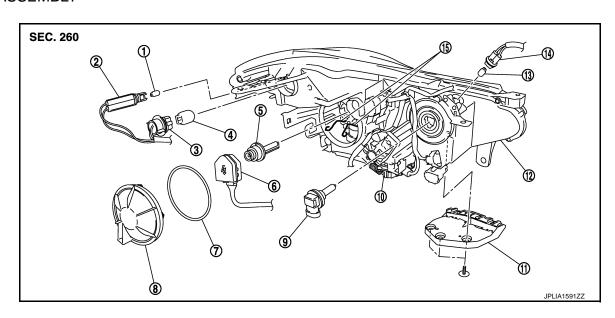
Exploded View

**REMOVAL** 



1. Front combination lamp

#### DISASSEMBLY



- Front side marker lamp bulb
- 4. Front turn signal lamp bulb
- 7. Seal packing
- 10. HID control unit
- 13. Parking lamp bulb

- 2. Front side marker lamp bulb socket
- 5. Xenon bulb
- 8. Resin cap
- 11. Bumper bracket
- 14. Parking lamp bulb socket
- 3. Front turn signal lamp bulb socket
- 6. Xenon bulb socket
- 9. Headlamp (HI) bulb
- 12. Headlamp housing assembly
- 15. Retaining spring

### **CAUTION:**

HID control unit and xenon bulb socket cannot be disassembled.

#### Removal and Installation

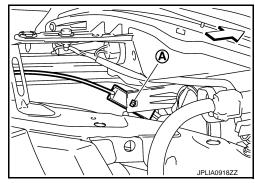
#### INFOID:0000000009059989

#### **REMOVAL**

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

- Remove the front bumper fascia. Refer to <u>EXT-12</u>, "<u>Exploded View</u>".
- Remove the headlamp mounting bolts and clips.
- Remove the harness clip and the holding clip (A)\*.
   \*: Left side only.
  - : Vehicle front
- 4. Pull out the headlamp assembly forward the vehicle.
- 5. Disconnect the connector before removing the headlamp assembly.



#### **INSTALLATION**

Install in the reverse order of removal.

#### NOTE:

After installation, perform aiming adjustment. Refer to EXL-205, "Description".

Replacement

#### **CAUTION:**

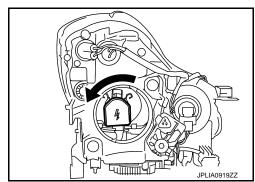
- · Disconnect the battery negative terminal or remove the fuse.
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it. Never touch bulb by hand while it is 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.

#### **HEADLAMP BULB (LO)**

- 1. Remove the fender rubber protector in the engine room. Keep a service area.
- 2. Rotate the resin cap counterclockwise and unlock it.
- Rotate the bulb socket counterclockwise and unlock it.
- 4. Remove the retaining spring lock. And then remove the bulb from the headlamp housing assembly.

#### **CAUTION:**

Never break the xenon bulb ceramic tube when replacing the bulb.



### **HEADLAMP BULB (HI)**

- Remove the washer tank inlet<sup>\*</sup>. Refer to <u>WW-112, "Exploded View"</u>.
   \*:When replace a right.
- 2. Disconnect the headlamp (HI) bulb connector.
- 3. Rotate the bulb socket counterclockwise and unlock it.
- 4. Remove the bulb socket from the headlamp housing assembly.

#### PARKING LAMP BULB

Rotate the bulb socket counterclockwise and unlock it.

FRONT COMBINATION LAMP	<u> </u>
< REMOVAL AND INSTALLATION >	[XENON TYPE]
Remove the bulb from the bulb socket.	
FRONT TURN SIGNAL LAMP BULB	
1. Remove the fender rubber protector in the engine room. Keep a service a	rea.
2. Rotate the bulb socket counterclockwise and unlock it.	
Remove the bulb from the bulb socket.	
FRONT SIDE MARKER LAMP BULB	
1. Remove the fender rubber protector in the engine room. Keep a service a	irea.
Rotate the bulb socket counterclockwise and unlock it.	
3. Remove the bulb from the bulb socket.	
Disassembly and Assembly	INFOID:0000000009059991
CAUTION:	
HID control unit and xenon bulb socket cannot be disassembled.	
DISASSEMBLY	
Rotate the resin cap counterclockwise and unlock it.	
2. Rotate the xenon bulb socket counterclockwise and unlock it.	
<ol><li>Remove the retaining spring lock. Remove the xenon bulb.</li></ol>	
4. Remove the bumper bracket.	
5. Rotate the parking lamp bulb socket counterclockwise and unlock it.	
<ol><li>Remove the bulb from the parking lamp bulb socket.</li></ol>	
7. Rotate the front turn signal lamp bulb socket counterclockwise and unlock	c it.
8. Remove the bulb from the front turn signal lamp bulb socket.	1.9
Rotate the front side marker lamp bulb socket counterclockwise and unlocated the bulb from the front side marker lamp bulb applied.	CK IT.
10. Remove the bulb from the front side marker lamp bulb socket.	
<ul><li>11. Rotate the headlamp (HI) bulb socket counterclockwise and unlock it.</li><li>12. Remove the bulb socket from the headlamp housing assembly.</li></ul>	
ASSEMBLY Assemble in the reverse order of disassembly.	
CAUTION:	
After installing the bulb, install the resin cap and the bulb socket secure	ly for watertightness.

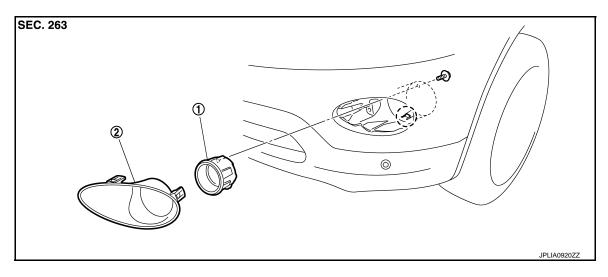
Revision: 2013 March **EXL-211** 2014 QX50

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## FRONT FOG LAMP

Exploded View



- Front fog lamp
- (^) : Pawl

Front fog lamp finisher

## Removal and Installation

INFOID:00000000009059993

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### **REMOVAL**

- Remove the front fender protector. Keep a service area. Refer to <u>EXT-25</u>, "<u>FENDER PROTECTOR</u>: Exploded View".
- 2. Remove the front fog lamp finisher.
- 3. Remove the front fog lamp connector.
- 4. Remove the screw.
- 5. Disengage the pawl. And then remove the front fog lamp.

#### **INSTALLATION**

Installation is the reverse order of removal.

### NOTE:

After installation, perform aiming adjustment. Refer to EXL-207, "Description"

Replacement

#### **CAUTION:**

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

#### FRONT FOG LAMP BULB

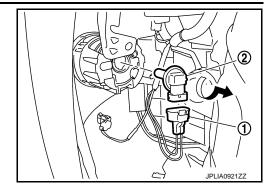
Remove the front fender protector. Keep the service area. Refer to <u>EXT-25</u>, "<u>FENDER PROTECTOR</u>: <u>Exploded View</u>".

## **FRONT FOG LAMP**

## < REMOVAL AND INSTALLATION >

[XENON TYPE]

- 2. Remove the front fog lamp bulb connector (1).
- 3. Rotate the bulb (2) counterclockwise and unlock it.



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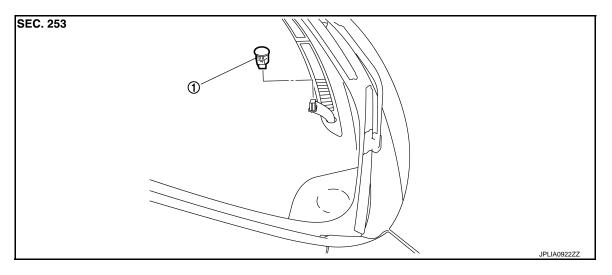
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## **OPTICAL SENSOR**

Exploded View



1. Optical sensor

### Removal and Installation

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### **REMOVAL**

- 1. Insert an appropriate tool between the optical sensor and the instrument upper panel. Pull out the optical sensor upward.
- 2. Disconnect the optical sensor connector. And then remove the optical sensor.

### **INSTALLATION**

Install in the reverse order of removal.

## LIGHTING AND TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## **LIGHTING AND TURN SIGNAL SWITCH**

Exploded View

Lighting and turn signal switch is integrated in the combination switch. <u>BCS-97</u>, "Exploded View".

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## **HAZARD SWITCH**

[XENON TYPE]

# HAZARD SWITCH

Exploded View

The hazard warning switch is integrated in the multifunction switch. Refer to AV-135, "Exploded View".

[XENON TYPE]

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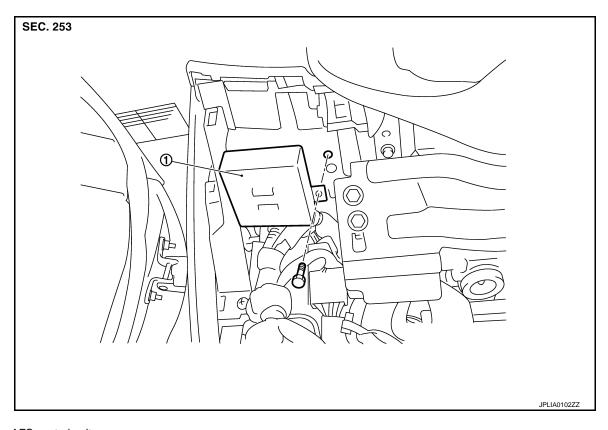
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## AFS CONTROL UNIT

Exploded View



1. AFS control unit

### Removal and Installation

### **REMOVAL**

- 1. Remove the instrument lower panel LH. Refer to IP-12, "Exploded View".
- 2. Remove the AFS control unit mounting bolt.
- 3. Disconnect the AFS control unit connector.
- 4. Remove the AFS control unit.

### **INSTALLATION**

Install in the reverse order of removal.

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### STEERING ANGLE SENSOR

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## STEERING ANGLE SENSOR

Removal and Installation

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Refer to SR-13, "Removal and Installation".

[XENON TYPE]

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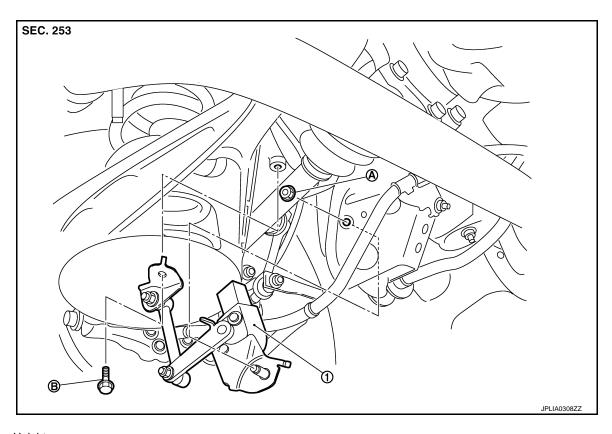
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### **HEIGHT SENSOR**

Exploded View



- 1. Height sensor
- A Height sensor mounting nut
- Height sensor lever link bracket mounting bolt

### Removal and Installation

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### **REMOVAL**

- 1. Remove the height sensor mounting nut.
- 2. Remove the height sensor lever link bracket mounting bolt.
- 3. Disconnect the height sensor connector.
- 4. Remove the height sensor.

### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Perform the levelizer adjustment when removing the height sensor. Refer to <u>EXL-10</u>, "<u>LEVELIZER ADJUSTMENT</u>: Special Repair Requirement".

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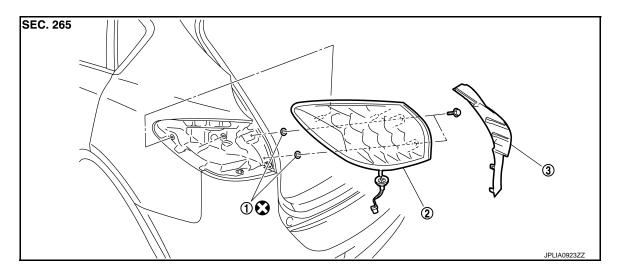
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### REAR COMBINATION LAMP

Exploded View



Seal packing

- 2. Rear combination lamp
- 3. Rear combination lamp finisher

Refer to GI-4, "Components" for symbols in the figure.

#### Removal and Installation

### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### **REMOVAL**

- 1. Remove the luggage side finisher lower. Refer to <a href="INT-36">INT-36</a>, "Exploded View".
- 2. Remove the rear combination lamp finisher.
- 3. Remove the rear combination lamp mounting bolts.
- 4. Disconnect the rear combination lamp connector.
- 5. Pull the rear combination lamp toward outside of the vehicle. Remove the rear combination lamp.

### **INSTALLATION**

Install in the reverse order of removal.

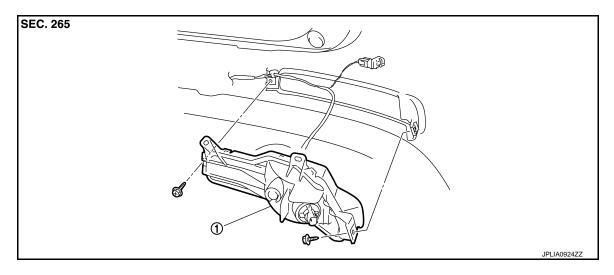
#### **CAUTION:**

Seal packing cannot be reused.

[XENON TYPE]

### **REAR TURN SIGNAL LAMP**

Exploded View



Rear turn signal lamp

#### Removal and Installation

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### REMOVAL

- Remove the rear bumper fascia. Refer to <u>EXT-16</u>, "<u>Exploded View</u>".
- 2. Remove the rear turn signal lamp.

### **INSTALLATION**

Install in the reverse order of removal.

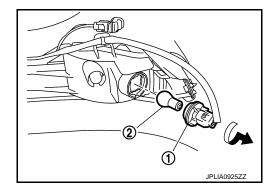
Replacement

#### **CAUTION:**

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

### REAR TURN SIGNAL LAMP BULB

- 1. Turn the bulb socket (1) counterclockwise and unlock it.
- 2. Remove the bulb (2) from the socket.



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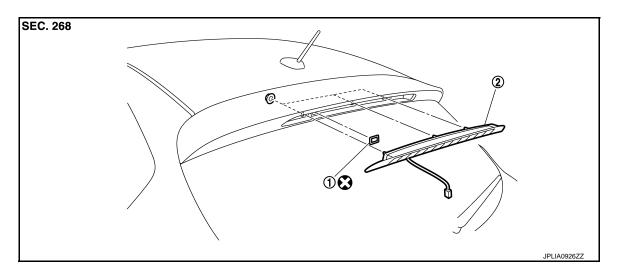
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### HIGH-MOUNTED STOP LAMP

Exploded View



1. Seal packing

2. High-mounted stop lamp

Refer to GI-4, "Components" for symbols in the figure.

#### Removal and Installation

**REMOVAL** 

- 1. Remove the back door finisher inner. Refer to <a href="INT-40">INT-40</a>, "Exploded View".
- 2. Remove the high-mounted stop lamp mounting nuts.
- 3. Disconnect the high-mounted stop lamp connector. And then remove the rear washer tube.
- 4. Pull the high-mounted stop lamp toward rear of the vehicle.
- 5. Remove the high-mounted stop lamp.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

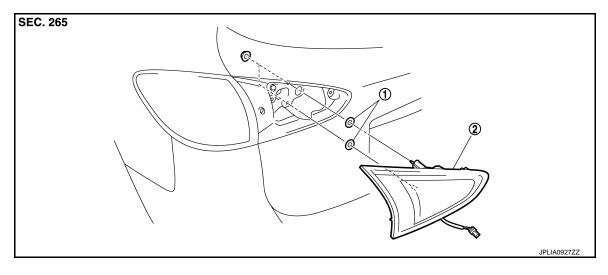
Seal packing cannot be reused.

#### [XENON TYPE]

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### **BACK-UP LAMP**

**Exploded View** 



Seal packing

Back-up lamp

### Removal and Installation

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### REMOVAL

- Remove the back door finisher inner. Refer to INT-40, "Exploded View".
- 2. Remove the back-up lamp mounting nuts.
- 3. Disconnect the back-up lamp connector. And then remove the back-up lamp.

#### INSTALLATION

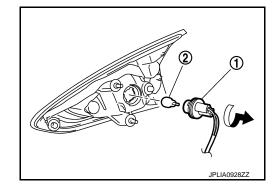
Install in the reverse order of removal.

#### **CAUTION:**

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

#### **BACK-UP LAMP BULB**

- Remove the back-up lamp. Refer to <u>EXL-223</u>, "Exploded View".
- 2. Turn the bulb socket (1) counterclockwise and unlock it.
- Remove the bulb (2) from the socket.



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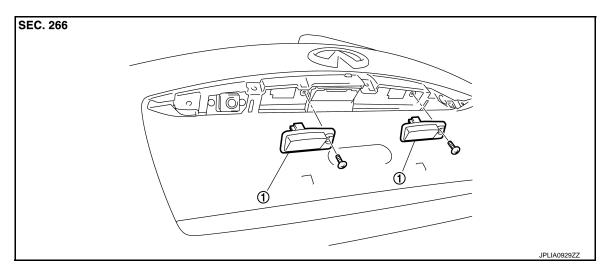
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### LICENSE PLATE LAMP

Exploded View



License plate lamp

### Removal and Installation

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#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### REMOVAL

- 1. Remove the door handle cover. Refer to EXT-48, "Exploded View".
- 2. Remove the screw. And then remove the license plate lamp.
- 3. Disconnect the license plate lamp connector.

#### INSTALLATION

Install in the reverse order of removal.

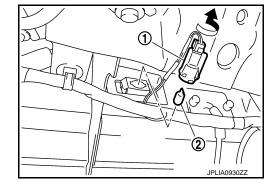
Replacement

#### **CAUTION:**

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

#### LICENSE PLATE LAMP BULB

- 1. Remove the back door finisher inner. Refer to <a href="INT-40">INT-40</a>, "Exploded View".
- 2. Turn the bulb socket (1) counterclockwise and unlock it.
- 3. Remove the bulb (2) from the socket.



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

< SERVICE DATA AND SPECIFICATIONS (SDS)

[XENON TYPE]

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# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

## **Bulb Specifications**

Item		Туре	Wattage (W)	
	Headlamp (HI)	H9 (Halogen)	65	
	Headlamp (LO)	D2S (XENON)	35	
Front combination lamp	Front turn signal lamp	W21W	21	
	Parking lamp	W5W	5	
	Front side marker lamp	W5W	5	
Front fog lamp		H8	35	
Door combination lamp	Stop lamp/Tail lamp	LED	_	
Rear combination lamp	Rear side marker lamp	LED	_	
Rear turn signal lamp		PY21W (Amber)	21	
Back-up lamp		W16W	16	
License plate lamp		W5W	5	
High-mounted stop lamp		LED	_	

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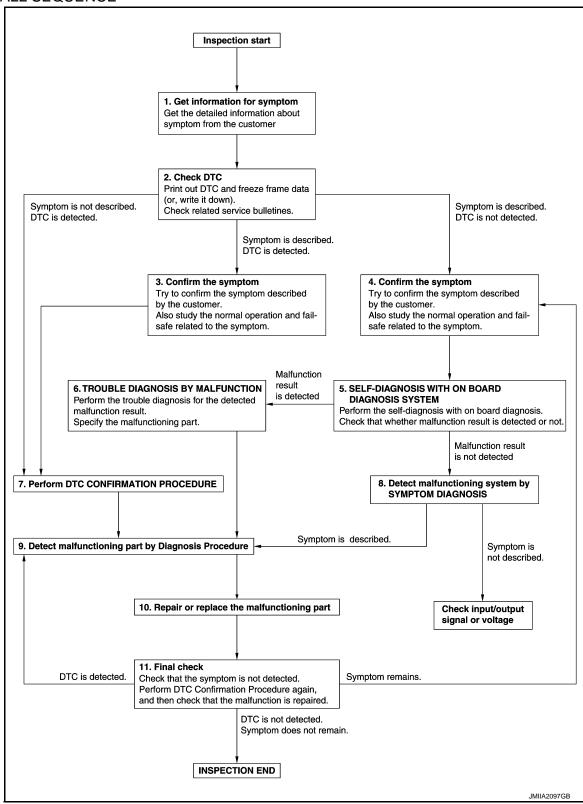
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## **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

#### **OVERALL SEQUENCE**



### DIAGNOSIS AND REPAIR WORK FLOW

[HALOGEN TYPE] < BASIC INSPECTION > 1.GET INFORMATION FOR SYMPTOM

1 Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).

Check operation condition of the function that is malfunctioning.

>> GO TO 2.

## 2. CHECK DTC

1. Check DTC.

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

### Are any symptoms described and any DTC detected?

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

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

Symptom is not described, DTC is detected>>GO TO 7.

### ${f 3.}$ CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 7.

### f 4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

### ${f 5.}$ SELF-DIAGNOSIS WITH ON BOARD DIAGNOSIS SYSTEM

Perform the self-diagnosis with on board diagnosis. Check that whether malfunction result is detected or not. Is malfunction result detected?

YES >> GO TO 6.

NO >> GO TO 8.

### **6.**TROUBLE DIAGNOSIS BY MALFUNCTION

Perform the trouble diagnosis for the detected malfunction result. Specify the malfunctioning part.

>> GO TO 9.

### 7. PERFORM DTC CONFIRMATION PROCEDURE

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

#### NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

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

### Is DTC detected?

**EXL-227** Revision: 2013 March 2014 QX50

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### **DIAGNOSIS AND REPAIR WORK FLOW**

### < BASIC INSPECTION > [HALOGEN TYPE]

YES >> GO TO 9.

NO >> Check according to GI-42, "Intermittent Incident".

### f 8.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

### Is the symptom described?

YES >> GO TO 9.

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

## 9. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

#### Is malfunctioning part detected?

YES >> GO TO 10.

NO >> Check according to GI-42, "Intermittent Incident".

## 10. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 11.

### 11. FINAL CHECK

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

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

#### Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 9.

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

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

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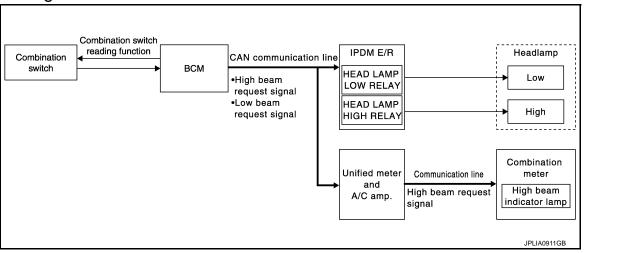
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## SYSTEM DESCRIPTION

### **HEADLAMP SYSTEM**

System Diagram



## System Description

INFOID:0000000009060020

**OUTLINE** 

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

### HEADLAMP (LO) OPERATION

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

#### Headlamp (LO) ON condition

- Lighting switch 2ND
- IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp ON according to the low beam request signal.

### **HEADLAMP (HI) OPERATION**

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

#### Headlamp (HI) ON condition

- Lighting switch HI with the lighting switch 2ND
- Lighting switch PASS
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

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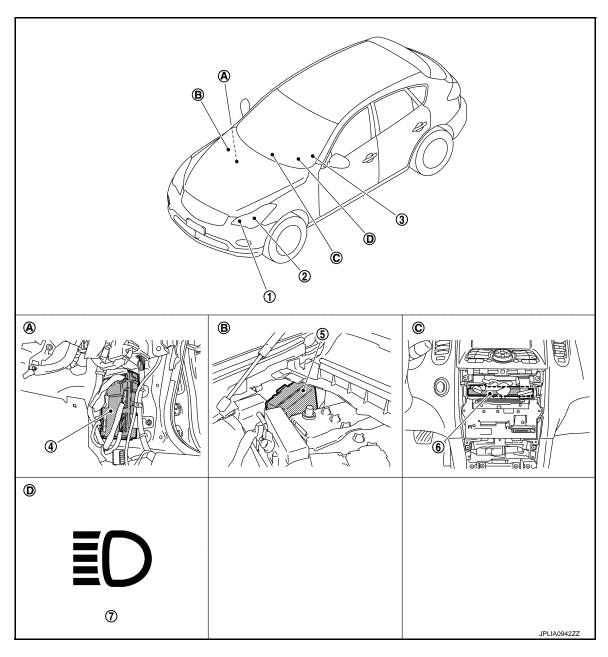
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## **Component Parts Location**

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- 1. Headlamp (HI)
- 4. BCM
- 7. High beam indicator lamp
- A. Dash side lower (Passenger side)
- D. On the combination meter
- 2. Headlamp (LO)
- 5. IPDM E/R
- B. Engine room dash panel (LH)
- 3. Combination switch
- 6. Unified meter and A/C amp.
- C. Behind the cluster lid c

### **HEADLAMP SYSTEM**

### < SYSTEM DESCRIPTION >

## [HALOGEN TYPE]

Component	Description
Component	Description

INFOID:0000000009060022

Part	Description  Detects each switch condition by the combination switch reading function.  Judges that the headlamp is turned ON according to the vehicle condition.  Requests the headlamp relay (HI/LO) ON to IPDM E/R (with CAN communication).  Requests the high beam indicator lamp ON to the combination meter (with CAN communication).		
ВСМ			
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).		
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".		
Combination meter (High beam indicator lamp)	Turns the high beam indicator lamp ON according to the request from BCM [(with CAN communication (through unified meter and A/C amp.)].		

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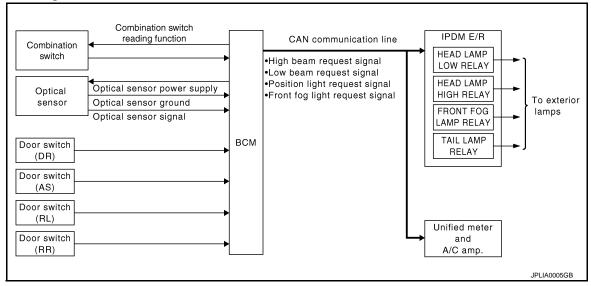
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### **AUTO LIGHT SYSTEM**

### System Diagram

INFOID:0000000009060023



### System Description

INFOID:0000000009060024

#### **OUTLINE**

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

#### Control by BCM

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

#### Control by IPDM E/R

- Relay control function
- Auto light system has the auto light function and the delay timer function.
- Auto light function turns the exterior lamps\* and each illumination ON/OFF automatically according to the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns
  the exterior lamps OFF depending on the vehicle condition with the auto light function after a certain period
  of time.
- \*: Headlamp (LO/HI), parking lamp, tail lamp, and front fog lamp (Headlamp HI and front fog lamp depend on the combination switch condition.)

#### AUTO LIGHT FUNCTION

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

#### NOTE:

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to EXL-247, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP) (Halogen Type)".

### **DELAY TIMER FUNCTION**

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

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

- Turns the exterior lamp OFF with the ignition switch ACC or the light switch OFF.
- \*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>EXL-247</u>, <u>"HEADLAMP : CONSULT Function (BCM HEAD LAMP) (Halogen Type)"</u>.

#### NOTE:

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

### **Component Parts Location**

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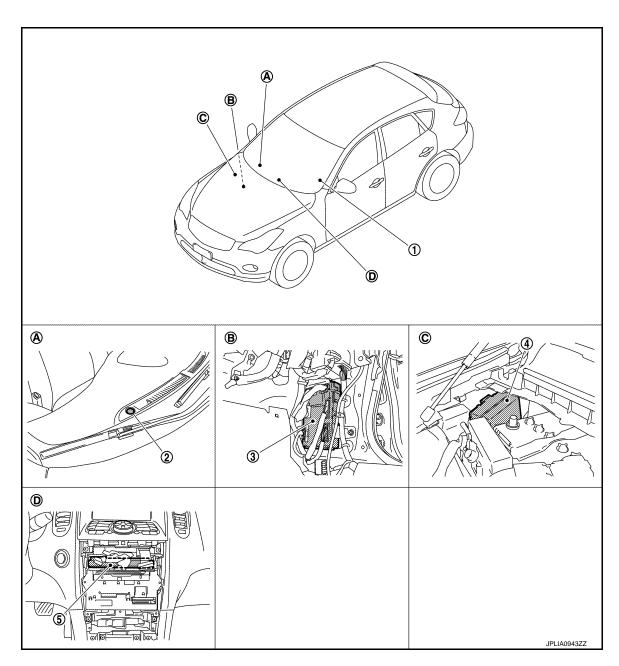
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- 1. Combination switch
- 4. IPDM E/R
- A. Instrument upper panel (RH)
- D. Behind the cluster lid C
- 2. Optical sensor
- 5. Unified meter and A/C amp.
- B. Dash side lower (Passenger side)
- 3. BCM
- C. Engine room dash panel (RH)

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Revision: 2013 March EXL-233 2014 QX50

### **AUTO LIGHT SYSTEM**

### < SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## Component Description

INFOID:0000000009060026

Part	Description		
ВСМ	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the outside brightness from the optical sensor signal.</li> <li>Judges the OFF timing according to the vehicle condition.</li> <li>Judges the ON/OFF status of the exterior lamp and each illumination according to the outside brightness and the vehicle condition.</li> <li>Requests ON/OFF of each relay to IPDM E/R (with CAN communication).</li> </ul>		
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).		
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".		
Optical sensor	Refer to EXL-268, "Description".		

[HALOGEN TYPE]

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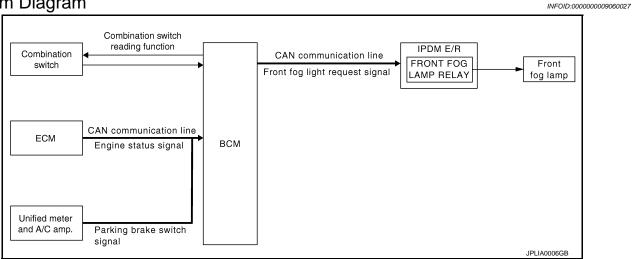
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### DAYTIME RUNNING LIGHT SYSTEM

System Diagram



### System Description

INFOID:0000000009060028

#### **OUTLINE**

- Turns the front fog lamp ON as the daytime running light.
- Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and relay control function of IPDM E/R.

#### DAYTIME RUNNING LIGHT OPERATION

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

Daytime running light ON condition

While the engine running with the parking brake released

### Daytime running light OFF condition

- Engine stopped
- Headlamp ON (Passing included)
- IPDM E/R turns the integrated front fog lamp relay ON and turns the front fog lamp ON according to the front fog light request signal.

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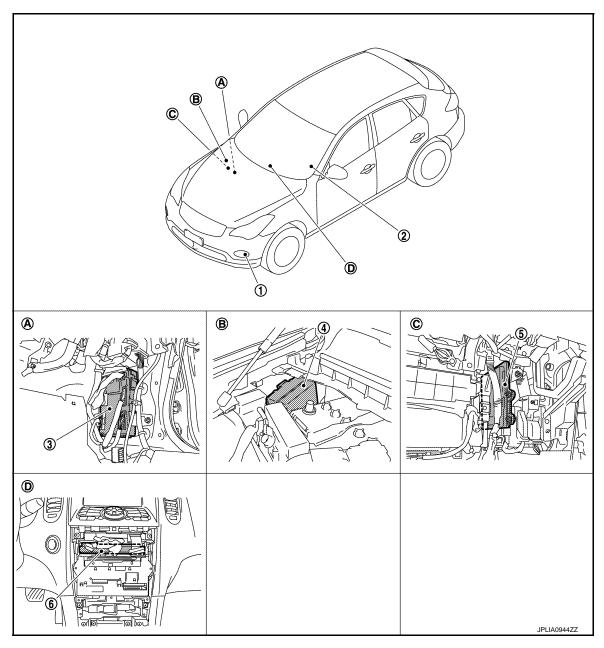
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## **Component Parts Location**

INFOID:0000000009060029



- 1. Daytime running light (Front fog lamp)
- 4. IPDM E/R
- A. Dash side lower (Passenger side)
- D. Behind the cluster lid C
- 2. Combination switch
- 5. ECM
- B. Engine room dash panel (RH)
- 3. BCM
- 6. Unified meter and A/C amp.
- C. Behind the glove box

## Component Description

INFOID:0000000009060030

Part	Description	
BCM	<ul> <li>Judges each switch condition with the combination switch reading function.</li> <li>Judges the headlamp ON/OFF status according to the vehicle condition. Requests the front fog lamp relay ON to IPDM E/R (with CAN communication).</li> </ul>	
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).	

### **DAYTIME RUNNING LIGHT SYSTEM**

### < SYSTEM DESCRIPTION >

[HALOGEN TYPE]

Part	Description	
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".	
ECM	Transmits the engine condition signal to BCM with CAN communication.	
Unified meter and A/C amp.	Transmits the parking brake switch signal to BCM with CAN communication.	

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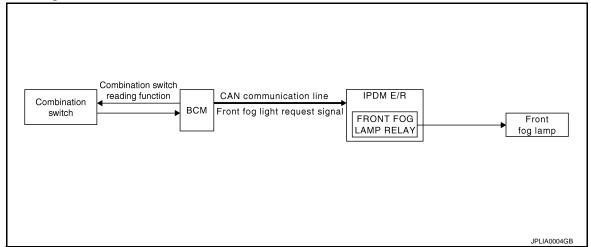
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[HALOGEN TYPE]

### FRONT FOG LAMP SYSTEM

### System Diagram

INFOID:0000000009060031



### System Description

INFOID:0000000009060032

#### **OUTLINE**

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

#### NOTE:

For Canada models, the front fog lamp is turned ON as the daytime running light. Refer to <u>EXL-235</u>, "System <u>Diagram"</u> for the detail.

#### FRONT FOG LAMP OPERATION

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

#### Front fog lamp ON condition

- Front fog lamp switch ON with the headlamp ON (except for the high beam ON)
- IPDM E/R turns the integrated front fog lamp relay ON, and turns the front fog lamp ON according to the front fog light request signal.

### [HALOGEN TYPE]

## **Component Parts Location**

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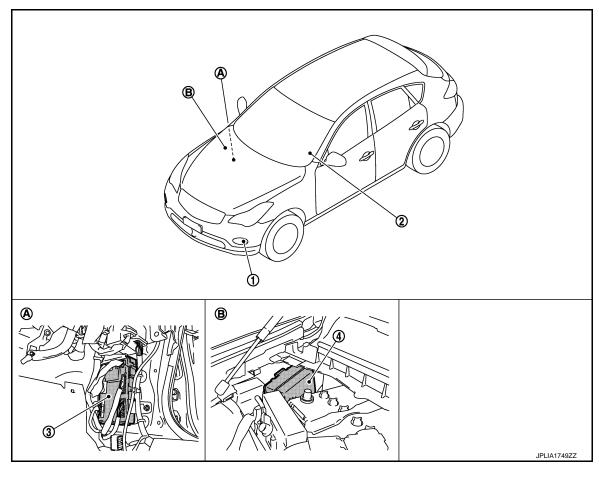
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- 1. Front fog lamp
- 4. IPDM E/R
- A. Dash side lower (Passenger side)
- 2. Combination switch
- 3. BCM
- B. Engine room dash panel (RH)

## Component Description

INFOID:0000000009060034

Part	Description
ВСМ	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the front fog lamp ON/OFF status according to the vehicle condition.</li> <li>Requests the front fog lamp relay ON to IPDM E/R (with CAN communication).</li> </ul>
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-10. "System Diagram".

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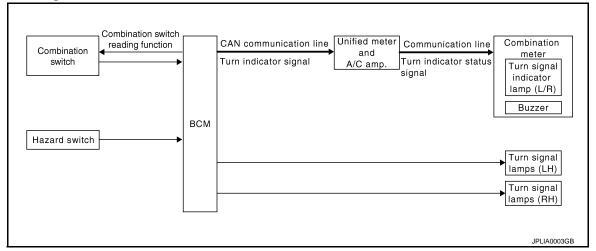
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### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

### System Diagram

INFOID:0000000009060035



### System Description

INFOID:0000000009060036

### **OUTLINE**

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

#### TURN SIGNAL LAMP OPERATION

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

#### HAZARD WARNING LAMP OPERATION

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

#### TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION

- BCM transmits the turn signal indicator lamp signal to the combination meter (through the unified meter and A/C amp.) with CAN communication while the turn signal lamp and the hazard warning lamp operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn signal indicator lamp signal.

### HIGH FLASHER OPERATION (FAIL-SAFE)

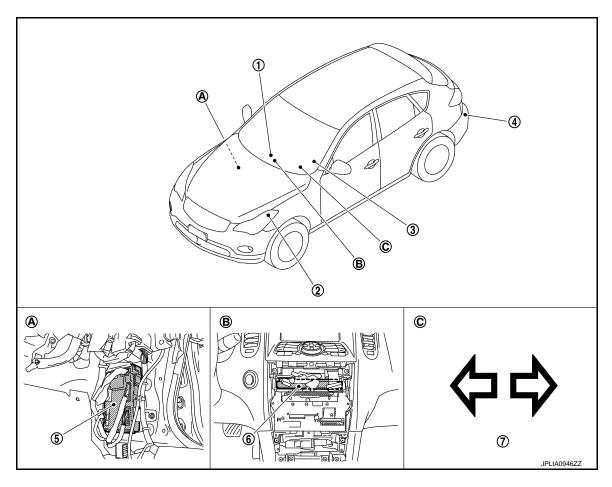
- BCM detects the turn signal lamp circuit status from the current value.
- BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

#### NOTE:

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

## **Component Parts Location**

INFOID:0000000009060037



- 1. Hazard warning switch
- 4. Rear turn signal lamp
- 7. Turn signal indicator lamp
- A. Dash side lower (Passenger side)
- 2. Front turn signal lamp
- 5. BCM
- B. Behind the cluster lid C
- 3. Combination switch
- 6. Unified meter and A/C amp.
- C. On the combination meter

## Component Description

INFOID:0000000009060038

Part	Description		
ВСМ	Judges each switch condition by the combination switch reading function.     Judges the blinks of the turn signal lamp and the hazard warning lamp from each switch status. The applicable turn signal lamp blinks.     Requests the turn signal indicator lamp blink to the combination meter (with CAN communication).		
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".		
Hazard switch (Multifunction switch)	Refer to EXL-271, "Description".		
Combination meter (Turn signal indicator lamp & buzzer)	Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM [with CAN communication (through unified meter and A/C amp.)].		

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[HALOGEN TYPE]

### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

System Diagram

INFOID:0000000009060039 Combination switch IPDM E/R reading function CAN communication line Combination **BCM** TAIL LAMP swicth Position light RELAY Parking lamp request signal License plate lamp Tail lamp Side marker lamp To illuminations Combination Communication line Unified meter meter and A/C amp. Position light Tail lamp indicator lamp request signal

## System Description

INFOID:0000000009060040

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#### **OUTLINE**

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

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

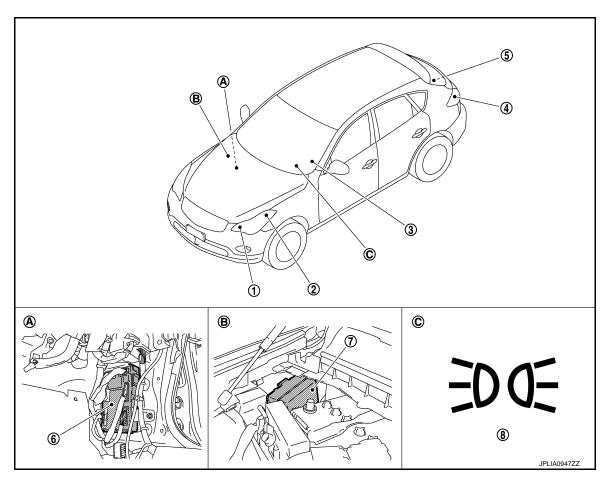
- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the position light request signal to IPDM E/R with CAN communication according to the ON/ OFF condition of the parking, license plate, side marker and tail lamps.

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

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

## **Component Parts Location**

INFOID:0000000009060041



- Parking lamp
- 4. Tail lamp and side marker lamp
- 7. IPDM E/R
- A. Dash side lower (Passenger side)
- 2. Side marker lamp
- License plate lamp
- 8. Tail lamp indicator lamp
- B. Engine room dash panel (RH)
- 3. Combination switch
- 6. BCM
- C. On the combination meter

## Component Description

INFOID:0000000009060042

Part	Description
ВСМ	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the ON/OFF status of the clearance, license plate, side marker and tail lamps according to the vehicle condition. Requests the tail lamp relay ON to IPDM E/R (with CAN communication).</li> </ul>
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".
Combination meter (Tail lamp indicator lamp)	Turns the tail lamp indicator lamp ON according to the request from BCM [with CAN communication (through the unified meter and A/C amp.)].

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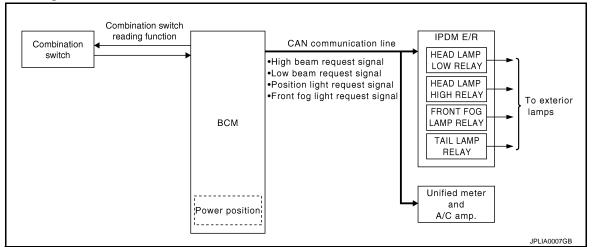
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[HALOGEN TYPE]

### EXTERIOR LAMP BATTERY SAVER SYSTEM

### System Diagram

INFOID:0000000009060043



### System Description

INFOID:0000000009060044

#### **OUTLINE**

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

#### Control by BCM

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

### Control by IPDM E/R

- Relay control function
- BCM turns the exterior lamp\* OFF after a period of time to prevent the battery from over-discharge when the ignition switch is turned OFF with the exterior lamp ON.
- \*: Headlamp (LO/HI), parking lamp, tail lamp, side marker lamp, license plate lamp and front fog lamp **NOTE:**

When the lighting switch is turned AUTO, the exterior lamp battery saver switches to the auto light system. Refer to EXL-232, "System Description".

### **EXTERIOR LAMP BATTERY SAVER ACTIVATION**

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

#### NOTE:

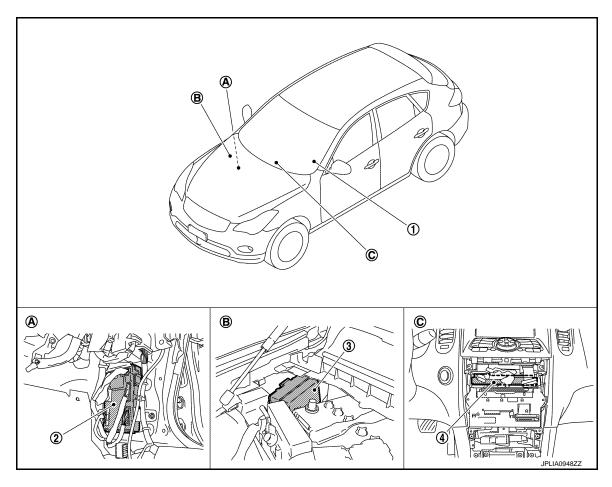
- Headlamp control function turns the exterior lamps ON normally when the ignition switch is turned ACC or the engine started (both before and after the exterior lamp battery saver is turned OFF).
- The timer starts at the time that the lighting switch is turned from OFF → 1ST or 2ND with the exterior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

### **EXTERIOR LAMP BATTERY SAVER SYSTEM**

### [HALOGEN TYPE]

## **Component Parts Location**

INFOID:0000000009060045



- 1. Combination switch
- 4. Unified meter and A/C amp.
- A. Dash side lower (Passenger side)
- 2. BCM
- B. Engine room dash panel (RH)
- 3. IPDM E/R
- C. Behind the cluster lid C

## Component Description

INFOID:0000000009060046

Part	Description	
BCM	<ul> <li>Judges each switch condition by the combination switch reading function.</li> <li>Judges the exterior lamp OFF according to the vehicle condition. Requests each relay OFF to IPDM E/R (with CAN communication).</li> </ul>	
IPDM E/R	Controls the integrated relay according to the request from BCM (with CAN communication).	
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".	

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[HALOGEN TYPE]

## **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000009365753

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

#### 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.

x: Applicable item

System	Sub system selection item	Diagnosis mode		
System		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*			
Intelligent Key system     Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

#### NOTE

### FREEZE FRAME DATA (FFD)

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

<sup>\*:</sup> This item is displayed, but is not used.

### **DIAGNOSIS SYSTEM (BCM)**

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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" (Except emergency stop operation)		
	CRANK>RUN	Power supply position status of the moment a particular DTC is detected*	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" (Emergency stop operation)		
	ACC>OFF		While turning power supply position from "ACC" to "OFF"		
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*		
Vehicle Condition	OFF>ACC		ar DTC is de- 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 position is "OFF".) to low power consumption mode		
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode		
	LOCK		Power supply position is "LOCK"*		
	OFF		Power supply position is "OFF" (Ignition switch OFF)		
	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>			

#### NOTE:

\*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.

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

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

### **HEADLAMP**

HEADLAMP: CONSULT Function (BCM - HEAD LAMP) (Halogen Type)

**WORK SUPPORT** 

Service item	Setting item	Setting			
BATTERY SAVER SET	On*	With the exterior lamp battery saver function			
BATTERT SAVER SET	Off	Without the exterior lamp battery saver function			
	MODE 1*	45 sec.			
	MODE 2	Without the function			
	MODE 3	30 sec.	Sets delay timer function timer operation time.		
ILL DELAY SET	MODE 4	60 sec.			
	MODE 5	90 sec.	(All doors closed)		
	MODE 6	120 sec.			
	MODE 7	150 sec.			
	MODE 8	180 sec.			
	MODE 1*	Normal			
CUSTOM A/LIGHT SET-	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)			
TING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)			
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)			

<sup>\*:</sup> Initial setting

### **DATA MONITOR**

### NOTE:

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

Monitor item [Unit]	Description		
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.		
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates [STOP/START/CRANK/RUN] condition of engine states.		
VEH SPEED 1 [km/h]	Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].		
KEY SW-SLOT [On/Off]	Indicates [ON/OFF] condition of key slot.		
TURN SIGNAL R [On/Off]			
TURN SIGNAL L [On/Off]			
TAIL LAMP SW [On/Off]			
HI BEAM SW [On/Off]			
HEAD LAMP SW1 [On/Off]	Each switch status that BCM judges from the combination switch reading function		
HEAD LAMP SW2 [On/Off]			
PASSING SW [On/Off]			
AUTO LIGHT SW [On/Off]			
FR FOG SW [On/Off]			

### **DIAGNOSIS SYSTEM (BCM)**

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Monitor item [Unit]	Description		
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored.		
DOOR SW-DR [On/Off]	Indicated [ON/OFF] condition of front door switch (driver side).		
DOOR SW-AS [On/Off]	Indicated [ON/OFF] condition of front door switch (passenger side).		
DOOR SW-RR [On/Off]	Indicated [ON/OFF] condition of rear door switch RH.		
DOOR SW- RL [On/Off]	Indicated [ON/OFF] condition of rear door switch LH.		
DOOR SW-BK [On/Off]	Indicated [ON/OFF] condition of back door switch.		
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor		

### **ACTIVE TEST**

Test item	Operation	Description			
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.			
	Off	Stops the position light request signal transmission.			
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).			
HEAD LAMP	Low	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).			
	Off	Stops the high & low beam request signal transmission.			
FR FOG LAMP	On	Transmits the front fog light request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.			
	Off	Stops the front fog light request signal transmission.			
RR FOG LAMP	On	NOTE:			
RR FOG LAWIF	Off	The item is indicated, but cannot be tested.			
DAYTIME RUNNING LIGHT	On	NOTE:			
DAT TIME RONNING LIGHT	Off	The item is indicated, but cannot be tested.			
	RH				
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.			
	Off				
ILL DIM SIGNAL	On	NOTE:			
ILL DIW SIGNAL	Off	The item is indicated, but cannot be tested.			

## FLASHER

FLASHER : CONSULT Function (BCM - FLASHER) (Halogen Type)

INFOID:0000000009060049

### **WORK SUPPORT**

Service item	Setting item	Setting			
	Lock Only*	With locking only			
HAZARD ANSWER	Unlk Only With unlocking only		Sets the hazard warning lamp answer back function when the door is lock/unlock with the request switch o		
BACK	Lock/Unlk	With locking/unlocking	the key fob.		
	Off	Without the function			

### **DIAGNOSIS SYSTEM (BCM)**

[HALOGEN TYPE]

### **DATA MONITOR**

### NOTE:

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

Monitor item [Unit]	Description		
REQ SW-DR [On/Off]	Indicated [ON/OFF] condition of door request switch (driver side).		
REQ SW-AS [On/Off]	Indicated [ON/OFF] condition of door request switch (passenger side).		
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.		
TURN SIGNAL R [On/Off]	Each quitab condition that DCM judges from the combination switch reading fund		
TURN SIGNAL L [On/Off]	Each switch condition that BCM judges from the combination switch reading function		
HAZARD SW [On/Off]	The switch status input from the hazard switch		
RKE-LOCK [On/Off]	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.		
RKE-UNLOCK [On/Off]	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.		
RKE-PANIC [On/Off]	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.		

### **ACTIVE TEST**

Test item	Operation	Description	
	RH	Outputs the voltage to blink the right side turn signal lamps.	
FLASHER	LH	Outputs the voltage to blink the left side turn signal lamps.	
	Off	Stops the voltage to turn the turn signal lamps OFF.	

<sup>\*:</sup> Initial setting

### **DIAGNOSIS SYSTEM (IPDM E/R)**

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## DIAGNOSIS SYSTEM (IPDM E/R)

### **Diagnosis Description**

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### **AUTO ACTIVE TEST**

#### Description

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

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- License plate lamps
- Side maker lamps
- Tail lamps
- Front fog lamps
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan (cooling fan control module)

#### Operation Procedure

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)

#### NOTE:

When auto active test is performed with hood opened, sprinkle water on windshield beforehand.

- Turn the ignition switch OFF.
- 3. Turn the ignition switch ON, and within 20 seconds, press the front door switch (driver side) 10 times. Then turn the ignition switch OFF.

#### **CAUTION:**

#### Close passenger door.

- 4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
- The oil pressure warning lamp starts blinking when the auto active test starts.
- 6. After a series of the following operations is repeated 3 times, auto active test is completed.

#### NOTE:

When auto active test mode has to be cancelled halfway through test, turn the ignition switch OFF. **CAUTION:** 

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-63</u>, <u>"Component Function Check"</u>.
- Do not start the engine.

Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 6 steps are repeated 3 times.

Operation sequence	Inspection location	Operation		
1	Oil pressure warning lamp	Blinks continuously during operation of auto active test		
2	Front wiper	LO for 5 seconds → HI for 5 seconds		
3	<ul> <li>Parking lamps</li> <li>License plate lamps</li> <li>Side maker lamps</li> <li>Tail lamps</li> <li>Front fog lamps</li> </ul>	10 seconds		
4	Headlamps	LO 10 seconds     HI ON ⇔ OFF 5 times		
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times		
6*	Cooling fan	MID for 5 seconds → HI for 5 seconds		

 $<sup>^*</sup>$ : Outputs duty ratio of 50% for 5 seconds o duty ratio of 100% for 5 seconds on the cooling fan control module.

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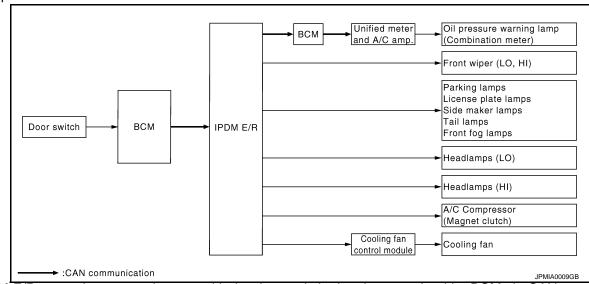
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Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause	
Any of the following components do not operate		YES	BCM signal input circuit	
<ul> <li>Parking lamps</li> <li>License plate lamps</li> <li>Side maker lamps</li> <li>Tail lamps</li> <li>Front fog lamps</li> <li>Headlamp (HI, LO)</li> <li>Front wiper (HI, LO)</li> </ul>	Perform auto active test.  Does the applicable system operate?		Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R	
A/C compressor does not operate	Perform auto active test.  Does the magnet clutch operate?	YES	<ul> <li>Unified meter and A/C amp. signal input circuit</li> <li>CAN communication signal between unified meter and A/C amp. and ECM</li> <li>CAN communication signal between ECM and IPDM E/R</li> </ul>	
			Magnet clutch     Harness or connector between IPDM E/R and magnet clutch     IPDM E/R	
	Perform auto active test.	YES	Harness or connector between IPDM E/R and oil pressure switch     Oil pressure switch     IPDM E/R	
Oil pressure warning lamp does not operate	Does the oil pressure warning lamp blink?	NO	CAN communication signal between IPDM E/R and BCM CAN communication signal between BCM and unified meter and A/C amp. Combination meter	

# **DIAGNOSIS SYSTEM (IPDM E/R)**

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

# CONSULT Function (IPDM E/R)

INFOID:0000000009365755

#### APPLICATION ITEM

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

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

### SELF DIAGNOSTIC RESULT

Refer to EXL-372, "DTC Index".

#### **DATA MONITOR**

#### NOTE:

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

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

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# DIAGNOSIS SYSTEM (IPDM E/R)

# < SYSTEM DESCRIPTION >

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Monitor Item [Unit]	MAIN SIG- NALS	Description
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the A/T shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		Displays the status of the steering lock relay request received from BCM via CAN communication.  NOTE:
		For models without steering lock unit, this item is not monitored.  Displays the status of the steering lock judged by IPDM E/R.
S/L STATE [LOCK/UNLOCK/UNKWN]		NOTE:
DTRL REQ		For models without steering lock unit, this item is not monitored.  NOTE:
[Off/On]		The item is indicated, but not monitored.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.
HL WASHER REQ [Off/On]		NOTE: The item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.
CRNRNG LMP REQ [Off/On]		NOTE: The item is indicated, but not monitored.

### **ACTIVE TEST**

Test item

Test item	Operation	Description	
	Off		
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.	
	RH		
HORN	On	Operates horn relay 1 and horn relay 2 for 20 ms.	
	Off	OFF	
FRONT WIPER	Lo	Operates the front wiper relay.	
	Hi	Operates the front wiper relay and front wiper high relay.	

# DIAGNOSIS SYSTEM (IPDM E/R)

# < SYSTEM DESCRIPTION >

# [HALOGEN TYPE]

Test item	Operation	Description
	1	OFF
MOTOR FAN	2	Outputs 50% pulse duty signal (PWM signal) to the cooling fan control module.
WOTOK FAIN	3	Outputs 80% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Outputs 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	NOTE: The item is indicated, but cannot be tested.
	Off	OFF
	TAIL	Operates the tail lamp relay.
EXTERNAL LAMPS	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

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### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

# DTC/CIRCUIT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000009365756

# 1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	К
Battery power suppry	10

#### 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.
- Check voltage between BCM harness connector and ground.

(+) (-)			Voltage
BCM			(Approx.)
Connector	Terminal	Ground	
M118	1	Glound	Battery voltage
M119	11		Dattery 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.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M119	13		Existed

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

# 1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible links are not blown.

### POWER SUPPLY AND GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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Signal name	Fuses and fusible link No.	
	С	
Battery power supply	50	
	51	

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 the ignition switch OFF.
- 2. Disconnect IPDM E/R connector.
- 3. Check voltage between IPDM E/R harness connector and the ground.

Terminals			
(+)		(-)	Voltage
IPDN	/I E/R	(-)	(Approx.)
Connector	Terminal	Ground	
E4	1	Giodila	Battery voltage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair the harness or connector.

# 3. CHECK GROUND CIRCUIT

Check continuity between IPDM E/R harness connectors and the ground.

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E5	12		Existed
E6	41		LXISIGU

### Does continuity exist?

YES >> INSPECTION END

NO >> Repair the harness or connector.

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# **HEADLAMP (HI) CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

# HEADLAMP (HI) CIRCUIT

# Component Function Check

#### INFOID:0000000009060054

# 1. CHECK HEADLAMP (HI) OPERATION

#### **RIPDM E/R AUTO ACTIVE TEST**

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 2. Check that the headlamp switches to the high beam.

#### (P)CONSULT ACTIVE TEST

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, check that the headlamp (HI) is turned ON.

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

#### NOTE:

ON/OFF is repeated 1 second each.

### Is the headlamp (HI) turned ON?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-258, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000009060055

# 1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

### **®CONSULT ACTIVE TEST**

- 1. Turn the ignition switch OFF.
- 2. Disconnect the headlamp high connector.
- 3. Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 5. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

	T	erminals		Condition		
(+)			(-)	Condition	Voltage	
IPDM E/R				External	(Approx.)	
Cor	nnector	Terminal		lamp		
RH		89 E8	Ground	Hi	Battery voltage	
	EΩ			Off	0 V	
LH	LO			Hi	Battery voltage	
				Off	0 V	

#### Is the measurement value normal?

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

# 2.CHECK HEADLAMP (HI) OPEN CIRCUIT

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

# **HEADLAMP (HI) CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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IPDM E/R		Front combin	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E8	89	E28	7	Existed
LH	LO	90	E58	7	LAISIEU

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

# 3.CHECK HEADLAMP (HI) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp HI (LH)	IPDM E/R	#54	10 A

### Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

# 4.CHECK HEADLAMP (HI) SHORT CIRCUIT

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

IPDM E/R				Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E8	89	Ground	Not existed
LH	БО	90		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

# 5.check headlamp (HI) ground open circuit

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

Front combination lamp				Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E28	2	Ground	Existed
LH	E58	2		LAISIEU

### Does continuity exist?

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

NO >> Repair the harnesses or connectors.

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[HALOGEN TYPE]

INFOID:0000000009060056

INFOID:0000000009060057

# HEADLAMP (LO) CIRCUIT

# Component Function Check

# 1. CHECK HEADLAMP (LO) OPERATION

#### **RIPDM E/R AUTO ACTIVE TEST**

- Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the headlamp is turned ON.

#### (R)CONSULT ACTIVE TEST

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the headlamp (LO) is turned ON.

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

#### Is the headlamp (LO) turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to EXL-260, "Diagnosis Procedure".

# Diagnosis Procedure

# 1. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

### **(P)CONSULT ACTIVE TEST**

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector.
- Turn the ignition switch ON.
- 4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

Terminals			Test item		
(+)		(-)	iest item	Voltage	
IPDN	PDM E/R		External	(Approx.)	
ector	Terminal	lamp			
F8	83	Ground	Lo	Battery voltage	
		Oloulia	Off	0 V	
LO	9.4		Lo	Battery voltage	
	04		Off	0 V	
	IPDN	(+)  IPDM E/R ector Terminal  83	(+) (-)  IPDM E/R ector Terminal  83 Ground E8	(+)         (-)         Test item           IPDM E/R         External lamp           ector         Terminal         Lo           B3         Ground         Off           Lo         Lo	

#### Is the measurement value normal?

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

2.CHECK HEADLAMP (LO) OPEN CIRCUIT

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

IPDM E/R		Front comb	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E8	83	E28	5	Existed
LH	LO	84	E58	5	LAISIGU

Does continuity exist?

# **HEADLAMP (LO) CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

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YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

3.CHECK HEADLAMP (LO) FUSE

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

Unit	Lotion	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	#57	15 A
Headlamp LO (LH)	IPDM E/R	#56	15 A

#### Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

4. CHECK HEADLAMP (LO) SHORT CIRCUIT

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

IPDM E/R				Continuity
Coni	nector	Terminal	Ground	Continuity
RH	E8	83	Glound	Not existed
LH		84		Not existed

### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

# 5. CHECK HEADLAMP (LO) GROUND OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect the front combination lamp connector. 2.
- Check continuity between the front combination lamp harness connector and ground.

Front combination lamp				Continuity
Coni	nector	Terminal	Ground	Continuity
RH	E28	3	Glound	Existed
LH	E58	3		LXISTEG

#### Does continuity exist?

YES >> Replace the headlamp (LO) bulb. (Bulb socket is abnormally.)

NO >> Repair the harnesses or connectors. **EXL** 

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#### FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

INFOID:0000000009060058

INFOID:0000000009060059

# FRONT FOG LAMP CIRCUIT

# Component Function Check

# 1. CHECK FRONT FOG LAMP OPERATION

# RIPDM E/R AUTO ACTIVE TEST

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 2. Check that the front fog lamp is turned ON.

#### (P)CONSULT ACTIVE TEST

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, Check that the front fog lamp is turned ON.

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

#### Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-262, "Diagnosis Procedure".

# Diagnosis Procedure

# 1. CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	#58	10 A

#### Is the fuse fusing?

YES >> GO TO 2.

NO >> GO TO 3.

# 2.CHECK FRONT FOG LAMP SHORT CIRCUIT

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

	IPDM E	/R		Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E8	86	Glound	Not existed
LH	EO	87		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

# 3.CHECK FRONT FOG LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

# 4. CHECK FRONT FOG LAMP OUTPUT VOLTAGE

#### **PCONSULT ACTIVE TEST**

- Disconnect the front fog lamp connector.
- Turn the ignition switch ON.
- 3. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

### FRONT FOG LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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

	Т	erminals	Test item		
(+)			(-)	163t Item	Voltage
IPDM E/R			EXTERNAL	(Approx.)	
Cor	nector	Terminal		LAMP	
RH	4 8		Ground	Fog	Battery voltage
	E8	Off		0 V	
LH	LO	87		Fog	Battery voltage
				0 V	

#### Is the measurement value normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R.

# 5. CHECK FRONT FOG LAMP OPEN CIRCUIT

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

Continuity	g lamp	Front foo	IPDM E/R		
Continuity	Connector Terminal		Terminal	Connector Termina	
Existed	1	E34	86	E8	RH
LXISIEU	1	E64	87	LO	LH

### Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

### **6.**CHECK FRONT FOG LAMP GROUND CIRCUIT OPEN CIRCUIT

Check continuity between the front fog lamp harness connector and the ground.

	Front fog la	amp		Continuity
Connector		Terminal	Ground	Continuity
RH	E34	2	Giodila	Existed
LH	E64	2		Existed

### Does continuity exist?

YES >> Replace the front fog lamp.

NO >> Repair the harnesses or connectors.

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### PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

INFOID:0000000009060060

INFOID:0000000009060061

# PARKING LAMP CIRCUIT

# Component Function Check

# 1. CHECK PARKING LAMP OPERATION

#### **PIPDM E/R AUTO ACTIVE TEST**

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the parking lamp is turned ON.

#### **PCONSULT ACTIVE TEST**

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON
Off : Parking lamp OFF

#### Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-264, "Diagnosis Procedure".

# Diagnosis Procedure

# 1. CHECK PARKING LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Parking lamp	IPDM E/R	#52	10 A

#### Is the fuse fusing?

YES >> GO TO 2.

NO >> GO TO 3.

# 2.CHECK PARKING LAMP SHORT CIRCUIT

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

IPDM E/R				Continuity
Connector		Terminal	Ground	Continuity
RH	E9	91	Giodila	Not existed
LH	<b>⊑</b> 9	92		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if fusing is found again.)

# 3.CHECK PARKING LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

# 4. CHECK PARKING LAMP OUTPUT VOLTAGE

#### (R)CONSULT ACTIVE TEST

- Disconnect the front combination lamp connector.
- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.

### PARKING LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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

Terminals				Test item		
	(+)			iest item	Voltage	
IPDM E/R				EXTERNAL	(Approx.)	
Cor	nnector	Terminal		LAMP		
RH	91	Ground	TAIL	Battery voltage		
	E9		Off	0 V		
LH		92		TAIL	Battery voltage	
				Off	0 V	

#### Is the measurement value normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R.

# 5. CHECK PARKING LAMP OPEN CIRCUIT

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

IPDM E/R		Front combin	Continuity		
Conr	Connector Terminal		Connector Terminal		Continuity
RH	E9	91	E28	8	Existed
LH	<b>E</b> 9	92	E58	8	LAISIGU

# Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

# **6.**CHECK PARKING LAMP GROUND OPEN CIRCUIT

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

Fro	nt combinat	ion lamp		Continuity
Connector		Terminal	Ground	Continuity
RH	E28	4	Giodila	Existed
LH	E58	4		Existed

#### Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

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[HALOGEN TYPE]

# TURN SIGNAL LAMP CIRCUIT

Description

BCM performs the high flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.

#### NOTE:

Turn signal lamp blinks at normal speed when using the hazard warning lamp.

# Component Function Check

INFOID:0000000009060063

# 1. CHECK TURN SIGNAL LAMP

### **PCONSULT ACTIVE TEST**

- 1. Select "FLASHER" of BCM (FLASHER) active test item.
- 2. With operating the test items, check that the turn signal lamp blinks.

LH : Turn signal lamp LH blinkingRH : Turn signal lamp RH blinkingOff : The turn signal lamp OFF

### Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-266, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000009060064

# 1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

# 2. CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

#### (P)CONSULT ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector or the rear combination lamp connector.
- Turn the ignition switch ON.
- Select "FLASHER" of BCM (FLASHER) active test item.
- 5. With operating the turn signal switch, check the voltage between the BCM harness connector and the ground.

Terminals				Test item		
(+)			(-)		Voltage (Approx.)	
	BCM			FLASHER	Voltage (Approx.)	
Conne	Connector Terminal			FLASHER		
Front RH		17			(V) 15	
Front LH	M119	18	Ground	LH or RH	5 0 1 1 s PKID0926E	
Rear RH	M120	20		Off	0.1/	
Rear LH	M120	25		Oll	0 V	

Is the measurement value normal?

### TURN SIGNAL LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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YES >> GO TO 3.

NO >> Replace BCM.

# 3.check turn signal lamp open circuit

- Turn the ignition switch OFF.
- Disconnect BCM connector. 2.
- 3. Check the continuity between the BCM harness connector and the front combination lamp or the rear combination lamp harness connector.

всм			Front comb Rear comb	Continuity	
Connector		Terminal	Connector	Terminal	
Front RH	M119	17	E28	6	
Front LH	IVITIE	18	E58	6	Existed
Rear RH	M120	20	B261	1	Existed
Rear LH	M120	25	B260	1	

#### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

### 4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and the ground.

	BCM			Continuity
Con	nector	Terminal		Continuity
Front RH	M119	17	Ground	Not existed
Front LH	WITTS	18		
Rear RH	M120	20		
Rear LH	WITZU	25		

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5.

# 5. CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

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

	t combinatior r combination			Continuity
Con	nector	Terminal		
Front RH	E28	4	Ground	Existed
Front LH	E58	4		
Rear RH	B261	2		
Rear LH	B260	2		

### Does continuity exist?

YES >> Replace the front combination lamp or the rear combination lamp.

NO >> Repair the harnesses or connectors. **EXL** 

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[HALOGEN TYPE]

# **OPTICAL SENSOR**

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

# Component Function Check

INFOID:0000000009060066

# 1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

### (P)CONSULT DATA MONITOR

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

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

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

### Is the item status normal?

YES >> Optical sensor is normal.

NO >> Refer to EXL-268, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000009060067

# 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(-	+)	(-)	Voltage (Approx.)
Optica	sensor		(Approx.)
Connector	Terminal	Ground	
M94	1		5 V

#### Is the measurement value normal?

YES >> GO TO 2.

NO >> GO TO 4.

# 2.CHECK OPTICAL SENSOR GROUND INPUT

Check the voltage between the optical sensor harness connector and the ground.

(-	+)	(-)	Voltage (Approx.)
Optica	sensor		(Approx.)
Connector	Terminal	Ground	
M94	3		0 V

### Is the measurement value normal?

YES >> GO TO 3.

NO >> GO TO 6.

# 3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

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### < DTC/CIRCUIT DIAGNOSIS >

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

Terminals		Condition				
(+)	(+)		(+)		Condition	Voltage
Optical s	ensor	Optical sensor		(Approx.)		
Connector	Terminal		Optical serisor			
		Ground	When illuminating	3.1 V or more *		
M94	2		When shutting off light	0.6 V or less		

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

#### Is the measurement value normal?

YES >> GO TO 7.

NO >> Replace the optical sensor.

# 4. CHECK OPTICAL SENSOR OPEN CIRCUIT

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

Optical sensor		ВСМ		Continuity
Connector	Terminal	Connector Terminal		Continuity
M94	1	M123	138	Existed

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

# 5.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M94	1		Not existed

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

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

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

Optical sensor		ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M94	3	M123	137	Existed

### Does continuity exist?

YES >> Replace BCM.

NO >> Repair the harnesses or connectors.

# 7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

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# **OPTICAL SENSOR**

[HALOGEN TYPE]

Optical sensor		В	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M94	2	M123	113	Existed

### Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

# 8.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optical sensor			Continuity	
Connector	Terminal	Ground	Continuity	
M94	2		Not existed	

# Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

### **HAZARD SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

# HAZARD SWITCH

Description

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Hazard switch is integrated in the multifunction switch. Hazard switch inputs the signals to BCM when pressing the switch.

# Component Function Check

INFOID:0000000009060069

# 1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

# (E)CONSULT DATA MONITOR

- 1. Turn the ignition switch ON.
- 2. Select "HAZARD SW" of BCM (FLASHER) data monitor item.
- 3. With operating the hazard switch, check the monitor status.

Monitor item	С	Monitor status	
HAZARD SW	Hazard switch	While pressing the switch	On
TIAZARD OW	Tiazaiu Switch	While not pressing the switch	Off

#### Is the item status normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-271, "Diagnosis Procedure".

# Diagnosis Procedure

#### INFOID:0000000009060070

# 1. CHECK HAZARD SWITCH SIGNAL INPUT

With operating the hazard switch, check the voltage between the BCM harness connector and the ground.

	Terminals		Condition		
(+	·)	(-)	Condition	Voltage (Approx.)	
ВС	M		Hazard switch	voltage (Approx.)	
Connector	Terminal		Hazaru Switch		
			While pressing the switch	0 V	
M122	110	Ground	While not pressing the switch	(V) 15 10 5 0 JPMIA0012GB	

#### Is the measurement value normal?

YES >> Replace BCM.

NO >> GO TO 2.

# 2. CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect the multifunction switch connector and BCM connector.
- 3. Check continuity between the multifunction switch harness connector and the BCM harness connector.

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#### < DTC/CIRCUIT DIAGNOSIS >

Multifunction switch		В	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M72	16	M122	110	Existed

### Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

# 3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between the multifunction switch harness connector and the ground.

Multifunc	tion switch		Continuity
Connector	Terminal	Ground	Continuity
M72	16		Not existed

### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 4.

# 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between the multifunction switch harness connector and the ground.

Multifunc	tion switch		Continuity
Connector	Terminal	Ground	Continuity
M72	1		Existed

#### Does continuity exist?

YES >> Replace the hazard switch (multifunction switch).

NO >> Repair the harnesses or connectors.

### TAIL LAMP CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

### [HALOGEN TYPE]

### TAIL LAMP CIRCUIT

# Component Function Check

### INFOID:0000000009060071

# 1. CHECK TAIL LAMP OPERATION

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#### **■IPDM E/R AUTO ACTIVE TEST**

- Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the tail lamp is turned ON.

#### (P)CONSULT ACTIVE TEST

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the tail lamp is turned ON.

TAIL : Tail lamp ON Off : Tail lamp OFF

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#### Is the tail lamp turned ON?

YES >> Tail lamp circuit is normal.

>> Refer to EXL-273, "Diagnosis Procedure". NO

# Diagnosis Procedure

# 1. CHECK TAIL LAMP FUSE

INFOID:0000000009060072

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

Unit	Location	Fuse No.	Capacity
<ul><li> Tail lamp</li><li> Rear side marker lamp</li><li> License plate lamp</li></ul>	IPDM E/R	#53	10 A

#### Is the fuse fusing?

YES >> Repair the malfunctioning part before replacing the fuse.

NO >> GO TO 2.

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# 2.CHECK TAIL LAMP OUTPUT VOLTAGE

### ©CONSULT ACTIVE TEST

- Disconnect the rear combination lamp connector.
- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

	Terminals		Test item	
(-	+)	(-)	rest item	Voltage
IPDN	I E/R		EXTERNAL	(Approx.)
Connector	Terminal	Ground	LAMP	
E5	7	Ground	TAIL	Battery voltage
	,		Off	0 V

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#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R.

# 3.CHECK TAIL LAMP OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector.

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**EXL-273** Revision: 2013 March 2014 QX50

### TAIL LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

3. Check continuity between the IPDM E/R harness connector and the rear combination lamp harness connector.

	IPDM E	/R	Rear comb	ination lamp	Continuity
C	Connector	Terminal	Connector	Terminal	Continuity
RH	E5	7	B232	1	Existed
LH	E3	,	B60	1	Existed

#### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK TAIL LAMP GROUND OPEN CIRCUIT

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

	Rear combinat	ion lamp		Continuity
	Connector	Terminal	Ground	Continuity
RH	B232	4	Glound	Existed
LH	B60	4		Existed

# Does continuity exist?

YES >> Replace the rear combination lamp.

NO >> Repair the harnesses or connectors.

### LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

### LICENSE PLATE LAMP CIRCUIT

# Component Function Check

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#### NOTE:

Check the tail lamp circuit if the tail lamp and the license plate lamp are not turned ON.

### CHECK LICENSE PLATE LAMP OPERATION

### 

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the license plate lamp is turned ON.

#### (P)CONSULT ACTIVE TEST

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the lighting switch, check that the license plate lamp is turned ON.

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

#### Is the license plate lamp turned ON?

YES >> License plate lamp circuit is normal.

NO >> Refer to EXL-275, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000009060074

# 1. CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

#### Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

# 2.CHECK LICENSE PLATE LAMP OPEN CIRCUIT

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

Continuity	late lamp	License p	/R	IPDM E	
Continuity	Terminal	Connector	Terminal	onnector	С
Existed	1	D117	7	E5	RH
Existed	1	D112	,	E3	LH

#### Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

# 3.check license plate lamp ground open circuit

Check continuity between the license plate lamp harness connector and the ground.

	License plate	alamp		Continuity
	Connector	Terminal	Ground	Continuity
RH	D117	2	Ground	Existed
LH	D112	2		LAISIEU

#### Does continuity exist?

YES >> Replace the license plate lamp.

NO >> Repair the harnesses or connectors.

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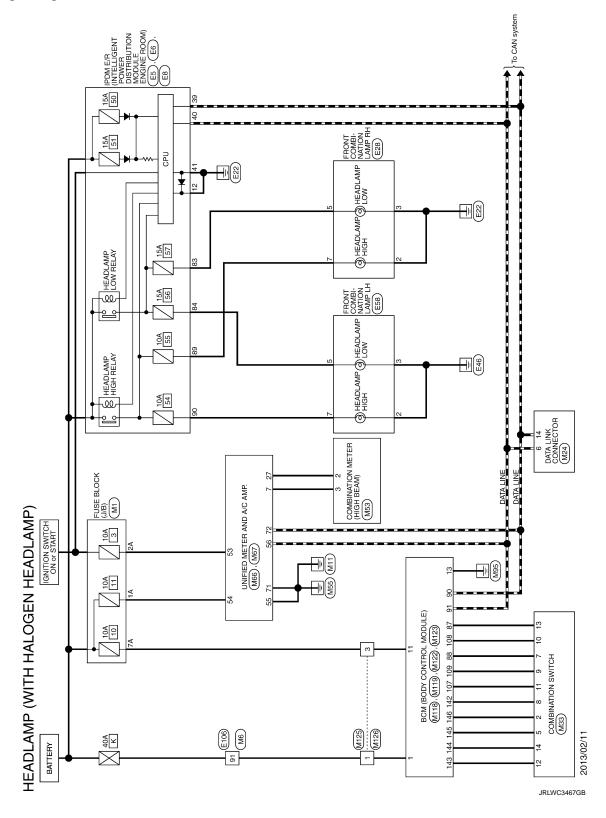
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# **HEADLAMP SYSTEM**

Wiring Diagram - HEADLAMP -



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9 34	4	> 8		+	20 BG	4	22 V -	23 G	24 P	25 Y	^ 9c	. >	: 0	2	23.8		+		35 G	36 SHIELD -	>	H	39 BG	╁	╀	) (	43 BK		- C+	-	+	+	$\dashv$			-	-	63 W	64 B -	. es	B	67 SHIELD -	-	. 97 69	╀	: 0	۷ :	+	В	BR	. 1	75 G - [With ICC]	
Connector No   F.E.0	1	Connector Name FRONT COMBINATION LAMP LH	Т	Connector Type RSUSFE-PR	•					(5678)			Torminal Color Of	No Wire Signal Name [Specification]	+	+	+	4 B/W	- ·	9 9	7 P	8 BG -			Connector No 1E106	ı	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS16-TM4	7			y 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		8			Terminal Color Of Signal Name (Secondary)	No. Wire ognien reame [opecimoning]	ж.	2 W	3 B	4 GR	5 GR	╁	- 0	\alpha \cdot	+	$\dashv$	12 BG -	H	14 R	$\frac{1}{2}$
DLAMP)	4		C	Ī	Connector Name Program Power DISTRIBUTION MODULE		Connector Type NS08FW-CS						90 89 88 87 86				<u>a</u>	Wire	83 BG -	- × × × × × × × × × × × × × × × × × × ×	- M 98	- T 28		+	╀	1		Connector No E28	Т	Connector Name FRONT COMBINATION LAMP RH	┱	Connector Type KSU8FB-PK					(# fo   7   )	(2 6 7 8)			Terminal Color Of	No. Wire Signal Name Specincation	2 B	3 B/Y	4 Brw		+	· ·		8 P			
HEADLAMP (WITH HALOGEN HEADLAMP)	C.3	Connector Name Provide Provide Distribution Module	CONTRACTOR OF THE PROPERTY OF	CONTRECTOR LIYPE THEORYW-CSTZ-IW4-TV	•			2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					Torminal Color Of	No Mine Signal Name [Specification]	+	· ·	- L	-	12 B/W -	13 Y		H	25 G	26 R	ļ	+	+	5 9	┨			Connector No. E6	Connector Name POM E/R (NTELLIGENT POWER DISTRIBUTION MODULE	ENGINE ROOM)	Connector Type TH08FW-NH			K	- 1	41 40 38	77 57 57	5+ h+ 5+ b+		Terminal Color Of	No Wire Signal Name [Specification]	200	+	+	$\dashv$		44 BR -	H	4

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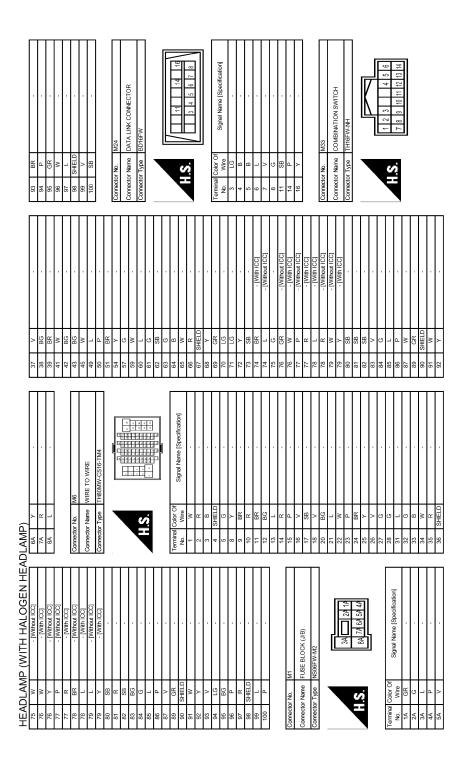
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HE	DLA	HEADLAMP (WITH HALOGEN HEADLAMP	DLAN	$\sim$						
Terminal	Color Of	Of Signal Name [Specification]	29	SS C	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SDE)  Connector No.	No. M6	57	Connector No.	M118	
-	4	FR WASHER(-)	3 8	+	$\top$		UNIFIED METER AND A/C AMP.	Connector Name	BCM (BODY CONTROL MODULE)	
2	SB	OUTPUT 4	33	Ф	ILLUMINATION CONTROL SIGNAL Connector Type	Т	TH32FW-NH	Connector Type	M03FB-LC	
က	GR	FR WASHER(+)	36	91	SELECT SWITCH SIGNAL					
4	9	NDI	37	SS	ENTER SWITCH SIGNAL	7		_		
2	1	OUTPUT 3	38	Н	TRIP A/B RESET SWITCH SIGNAL	Ţ			Ī	
9	В	GROUND	33	+	ILLUMINATION CONTROL SWITCH SIGNAL (-)	L		•	-1	
7	>	INPUT 3	40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)			۷ :	ŀ	
œ	BG	OUTPUT 5				_	57 58 59 60 61 62 63 65 6 68 70 71 72		7	
6	>	INPUT 2				l			]	
10	œ	INPUT 4	Conn	Connector No.		}				
11	P	INPUT 1	Conne	Connector Name	INIFIED METER AND A/C AMP	Color Of	Signal Name [Specification]	Za C	Signal Name [Specification]	
12	_	~ I			No.	Wire	figure and discount and figure	No. Wire	licanomodol oma musico	
13	BR	INPUT 5	Conne	Connector Type	TH40FW-NH 41 \	>	ACC POWER SUPPLY	1	BAT (F/L)	
14	g	OUTPUT 2			42 Y	_	FUEL LEVEL SENSOR SIGNAL	2 W	POWER WINDOW POWER SUPPLY(BAT)	
					43	œ	INTAKE SENSOR SIGNAL	3	POWER WINDOW POWER SUPPLY(RAP)	
				•	144	PT	IN-VEHICLE SENSOR SIGNAL			
Connector No.	or No.	M53			45	۵	AMBIENT SENSOR SIGNAL			
	:			É	5 7 8 9 10 ft 14 20 A	BG	SUNLOAD SENSOR SIGNAL	Connector No.	M119	
Connec	Connector Name	COMBINATION METER	•	2	H	H	EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL		т	
Connect	Connector Type	TH40FW-NH			ł	c.	IGNITION POWER SUPPLY	Connector Name	BCM (BODY CONTROL MODULE)	
		7			+	· >	RATTERY POWER SLIPPLY	Connector Type	NS16FW-CS	
_	7				33		041000	odf. populoo		
	•		erminal		Signal Name [Specification]	۵.	GNOONS	•		
	•		2	+	OC	+	CANT			
1	Ī	1	ഹ	+	MANUAL MODE SHIFT UP SIGNAL 57	+	BRAKE FLUID LEVEL SWITCH SIGNAL	•		
1	<u>'</u>	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	_	GR	COMMUNICATION SIGNAL (AMPMETER) 58	æ	FUEL LEVEL SENSOR GROUND	•	]	
1	į	2	∞	$\dashv$	VEHICLE SPEED SIGNAL (2-PULSE) 59	S.	INTAKE SENSOR GROUND	٧ :	11 13 14 15 17 18 19	
			0	*	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) 60	_	IN-VEHICLE SENSOR GROUND			
			10	×	MANUAL MODE SIGNAL 61	R	AMBIENT SENSOR GROUND			
Terminal	al Color Of	Of Control Monte (Controlled)	1	G	NON-MANUAL MODE SIGNAL 62	SB	SUNLOAD SENSOR GROUND			
ō N	Wire	oldini valle [2	14	BR	COMMUNICATION SIGNAL (LCD-AMP.) 63	ď		Terminal Color Of		
-	GR	_	20	-	99	BG	ECV SIGNAL	No. Wire	Signal Name [Specification]	
2	97	COMMUNICATION SIGNAL (METER-AMP.)	23	<b>\</b>	AT SNOW SWITCH SIGNAL 69 L	7	A/C LAN SIGNAL	4 LG	INTERIOR ROOM LAMP POWER SUPPLY	
က	GR	COMMUNICATION SIGNAL (AMPMETER)	25	>	MANUAL MODE SHIFT DOWN SIGNAL 70 F	R	EACH DOOR MOTOR POWER SUPPLY	2 2	PASSENGER DOOR UNLOCK OUTPUT	
9	۵	GROUND	27	97	COMMUNICATION SIGNAL (METER-AMP.)	ω	GROUND	\ 	STEP LAMP CONT	
9	۵	ALTERNATOR SIGNAL	28	H	VEHICLE SPEED SIGNAL (8-PULSE) 72	۵	CAN-L	8	ALL DOOR, FUEL LID LOCK OUTPUT	
7	æ	AIR BAG SIGNAL	8	>	PARKING BRAKE SWITCH SIGNAL			(J)	DRIVER DOOR, FUEL LID UNLOCK OUTPUT	
10	O	SECURITY SIGNAL	34	>	COMMUNICATION SIGNAL (AMPLCD)			10 BR	REAR DOOR UNLOCK OUTPUT	
15	œ	GROUND	8	۵	t			7	BAT (FLISE)	
9	ď	METER CONTROL SWITCH GROLIND						ł	GROLIND	
2 2	,	III CND						$^{+}$	CNO THAIS NOT INCITING HOLD	
9	ا د	ILL GIND						+	PUSH-BUILDIN IGNITION SWITE GIND	
20	¥	ILL						+	ACC IND	
21	2							+	TURN SIGNAL RH (FRONT)	
22	ω							18 BG	TURN SIGNAL LH (FRONT)	
24	BR	COMMUNICATION SIGNAL (LCD-AMP.)						۱9 ۷	INT ROOM LAMP CONT	
25	>	COMMUNICATION SIGNAL (AMPLCD)								
56	В	VEHICLE SPEED SIGNAL (8-PULSE)								
27	^									
28	Μ	BRAKE FLUID LEVEL SWITCH SIGNAL								

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HEADL	DLAN	HEADLAMP (WITH HALOGEN HEADLAMP)	LAMP)	- 9	M123	Connector No M125	
Connecte	e e		Connecto	9	BCM (BODY CONTROL MODULE)	je je	
Connector Type	or Type	TH40FB-NH	Connector Type	r Type	TH40FG-NH	Connector Type M03FW-LC	
	7			1			
7	V.	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7	Ų.	E11   681   812   827	- 6	
		11 (10) (10) (11) (10) (10) (10) (10) (1	1	į	[5] [60] [1] [10] [10] [10] [10] [10] [10] [10	36	
Terminal	Ferminal Color Of	Signal Momo [Consideration]	Terminal	erminal Color Of	Cional Mama [Secontination]	Jal C	
ō N	Wire	ognal value [opecinication]	No	Wire	ogna name [opecincation]		
74	SB	PASSENGER DOOR ANT-	113	Ь	OPLICAL SENSOR		
75	R.	PASSENGER DOOR ANT+	116	SB	STOP LAMP SW 1	+	
76	> .	DRIVER DOOR ANT-	118	Ь	STOP LAMP SW 2	3 8	
11	9 :	DRIVER DOOR ANI +	119	SB	DR DOOR UNLOCK SENSOR		
28	>	ROOM ANT1-	121	BR	KEY SLOT SW	ſ	
79	BR	ROOM ANT1+	123	×	IGN F/B	Connector No. M126	
80	GR	NATS ANT AMP.	124	LG	PASSENGER DOOR SW	Connector Name IMIDE TO MIDE	
81	W	NATS ANT AMP.	132	BR	POWER WINDOW SW COMM		
82	ĸ	IGN RELAY (F/B) CONT	133	W	PUSH-BUTTON IGNITION SW ILL POWER	Connector Type M03MW-LC	
83	Υ.	KEYLESS ENTRY RECEIVER COMM	134	GR	LOCK IND		
87	BR	COMBI SW INPUT 5	137	BG	RECEIVER/SENSOR GND		
88	^	COMBI SW INPUT 3	138	Υ	RECEIVER/SENSOR POWER SUPPLY		
06	Ь	CAN-L	139	L	TIRE PRESSURE RECEIVER COMM		
91	ן ן	CAN-H	140	GR	SHIFT N/P	٠	
95	LG	KEY SLOT ILL CONT	141	G	SECURITY IND LAMP CONT	67	
93	>	ON IND	142	BG	COMBI SW OUTPUT 5		
94	Υ	PUDDLE LAMP CONT	143	Р	COMBI SW OUTPUT 1		
96	BG	ACC RELAY CONT	144	g	COMBI SW OUTPUT 2	Terminal Color Of Singl News (Specification)	
96	GR	A/T SHIFT SELECTOR POWER SUPPLY	145	L	COMBI SW OUTPUT 3	No. Wire Ogna range Operatorij	
66	R	SHIFT P	146	SB	COMBI SW OUTPUT 4		
100	9	PASSENGER DOOR REQUEST SW	150	PT.	DRIVER DOOR SW	2 Y	
101	SB	DRIVER DOOR REQUEST SW	151	9	REAR WINDOW DEFOGGER RELAY CONT	3 B	
102	BG	BLOWER FAN MOTOR RELAY CONT					
103	ΓG	KEYLESS ENTRY RECEIVER POWER SUPPLY					
107	LG	COMBI SW INPUT 1					
108	В	COMBI SW INPUT 4					
109	≻	COMBI SW INPUT 2					
110	9	HAZARD SW					

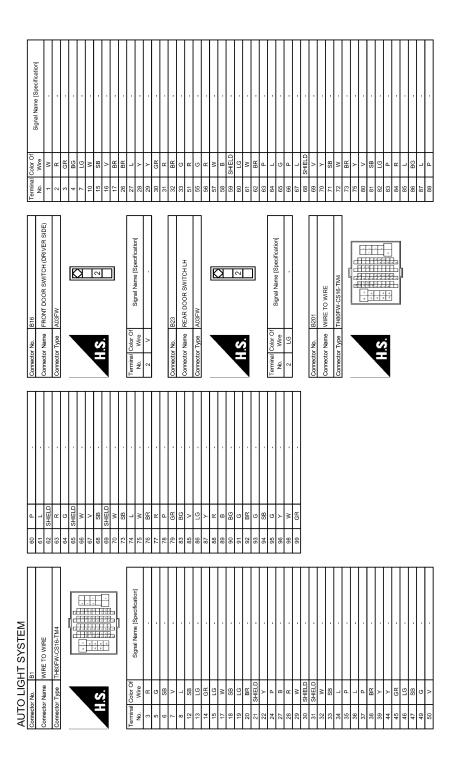
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< DTC/CIRCUIT DIAGNOSIS > **AUTO LIGHT SYSTEM** Α Wiring Diagram - AUTO LIGHT SYSTEM -INFOID:0000000009060076 IPDM E/R
(INTELLIGENT
POWER
DISTRIBUTION
MODULE
ENGINE ROOM)
(ES) To parking, license plate and tail lamps To illumination В To CAN system C TAIL LAMP BELAY IGNITION SWITCH ON or START D To headlamp (With xenon headlamp)
To headlamp (With halogen headlamp) 15A 50 Е CPU 15A 51 - III F PEAR DOOR SWITCH RH B223 는 HEADLAMP 는 LOW RELAY DATA LINE 15A 57 G 26 15A 56 FRONT DOOR SWITCH (PASSENGER SIDE) (B216) Н M117 BZ01 HEADLAMP HIGH RELAY 10A 27 10A ىك REAR DOOR SWITCH LH (B23) 137 91 90 BCM (BODY CONTROL MODULE) (M118) (M119) (M122) (M123) DATA LINK CONNECTOR (M24) J 98 FRONT DOOR SWITCH (DRIVER SIDE) K [B] [M] OPTICAL SENSOR (M94) EXL FUSE BLOCK (J/B) (M1) M COMBINATION SWITCH **AUTO LIGHT SYSTEM** 10A Ν M6 F106 M128 0 404 A BATTERY



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# **AUTO LIGHT SYSTEM**

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AUTO LIGHT SYSTEM 76   Y   [Without ICG]	8A			39	BR		6	95 GR	-
			 ]	41	*		50	W 96	
			<u> </u>	42	BG		0	97 L	
	Connector No.	o. M6		43	BG		50	98 SHIELD	-
	Connector Name	ame WIRE TO WIRE		45	^		9	Н	,
		Т	1	49	_		=	100 SB	
	Connector Type	ype TH80MW-CS16-TM4	1	3 20	۵ ۵				
			<u> </u>	25	<u></u>		5	Connector No.	M7
	1	X X X X X X X X X X X X X X X X X X X	<u> </u>	22	9	,			Т
	1	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	<u> </u>	29	*		5	Connector Name	WIRE IO WIRE
	VIIV			09	7		S	Connector Type	TH80MW-CS16-TM4
	¥	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	<u> </u>	61	ဗ				
				62	SB		_	1	
				63	9	-		•	* s
	Terminal Col	Color Of Signal Name (Specification)		64	В			Į	31
	s S	Wire Signal Name [Specification]	_	92	W		_	O II	
	-	M		99	œ		7		नन
	2			T	SHELD				
	H		l	T	>				
	T	c	I	$^{+}$	. e		Ā	Perminal Color O	L
	T		I	+	<u>_</u>		Z		Signal Name [Specification]
	+		I	2 2	2 4		Ĺ	t	- IM/ith sutomatic drive positioned
	+		T	- 6	3 >		Τ	+	Definition or demonstration define positioned
T	+	Ka a	T	+	- 8		1	╁	- [without automatic drive positioner]
	+		1 	+	3 8	1001 4884	Τ	$^{+}$	
	+		1 T	4/4	뚪 -	- [with Icc]	1	20 2	,
	+			ŧ ;	,	- [Without ICC]	<u> </u>	+	
	+		1 T	+	. J		1	я (5 20 (5	
	+	r (		+	¥ ;	- Without ICC	<u>l</u>	+	-
	+		 	وا	ا د	- [with ICC]	]	2];	
	+		 	\ \	1	- [Without ICC]		+	
	+			>	<u> </u>	- [with ICC]		15 5	
	+			82	1	- [with ICC]	1	+	
	+	BG .		82	œ	- [Without ICC]		+	
	+		_ 	62/	>	- [Without ICC]		+	
	22			62	_	- [With ICC]	~	П	-
	23			80	SB		2	21 SHIELD	
	24 E	BR -		81	SB		~	22 Y	•
_	25	· ·		82	SB		2	24 V	
	56	^		83	^		2	27 B	
	27	9		84	9		2	28 W	
<u>-</u>	28	9		85	_		~	29 R	
(Specification)	╀		I	88	  -			R	
	-			87	>			H	
	╀		 	+	S. S.		100	32 P	
	ŀ		l	Т	SHIFLD		1	ľ	
	+		 	Т	>			34	
	Г	SHELD -	I	92	>		m m	35 P	
	Г	^		┞	æ			36 L	
	+		I	+			ľ	22	
	┨	2	]		-		]		

JRLWC3752GB

# **AUTO LIGHT SYSTEM**

< DTC/CIRCUIT DIAGNOSIS > [HALOGEN TYPE]

29 Y		
12   P   OUTPUT 1     13   BR   INPUT 5     14   G   OUTPUT 2     Corrector No   M94     Corrector Type   TK03FW     TC03FW     TC	H.S.	
Corrector No. M24  Corrector Name DATA LINK CONNECTOR  Corrector Type BD16FW  LS. H.S. M24  LLS. M24  Corrector Type BD16FW	Terminal Color Of   Signal Name   Specification   3   LG	
	65 SHELD 66 SHELD 70 W 71 G 71 G 72 G 81 LG 73 G 82 B 83 B 84 V 85 B 85 C 86 G 86 W 88 B 89 B 89 C 89 C 89 C 89 W 89 B 89 B 80 C 89	

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AUTO LIGHT SYSTEM								
Connector No. M118	Connector No.	M121	80	GR	NATS ANT AMP.	139 L	TIRE PRESSURE RECEIVER COMM	
Campion Indon Indon Mod Indon	Compositor Name	CALICON CONTROL MODILE	81	W	NATS ANT AMP.	140 GR	SHIFT NP	
CONTRACTOR INSTITUTE BOWN (BOD) CONTROL MODOLE)	COLLINECTOL INGILI		82	ч	IGN RELAY (F/B) CONT	141 G	SECURITY IND LAMP CONT	
Connector Type M03FB-LC	Connector Type	TH40FGY-NH	83	>	KEYLESS ENTRY RECEIVER COMM	142 BG	COMBI SW OUTPUT 5	
			87	BR	COMBI SW INPUT 5	143 P	COMBI SW OUTPUT 1	
			88	>	COMBI SW INPUT 3	144 G	COMBI SW OUTPUT 2	
			06	۵	CAN-L	145 L	COMBI SW OUTPUT 3	
13			91	_	CAN-H	146 SB	COMBI SW OUTPUT 4	
	S E	47 39 38 38 38 34	95	9	KEY SLOT ILL CONT	150 LG	DRIVER DOOR SW	
	11.2	89 88 67 66 66 64 61 80 82 82	93	>	QNINO	H	REAR WIN	
			94	· >-	PUDDLE LAMP CONT		ł	
			92	BG	ACC RELAY CONT			
Terminal Color Of Simulation (Simulation)	Terminal Color Of	JO Jones Minness	96	H	A/T SHIFT SELECTOR POWER SUPPLY	Connector No.	M125	
No. Wire Signal Marile [Specification]	No. Wire		66	ď	SHIFT P	Connector Name	WIBE TO WIBE	
1 W BAT (F/L)	34 SB		100	9	PASSENGER DOOR REQUEST SW	COLLIBECTOL MAIL		
2 W POWER WINDOW POWER SUPPLY(BAT)	35 V	LUGGAGE ROOM ANT+	101	SB	DRIVER DOOR REQUEST SW	Connector Type	M03FW-LC	
3 Y POWER WINDOW POWER SUPPLY(RAP)	38 B	BACK DOOR ANT-	102	BG	BLOWER FAN MOTOR RELAY CONT			
	39 W	BACK DOOR ANT+	103	Y P	KEYLESS ENTRY RECEIVER POWER SUPPLY	_		
	47 Y	IGN RELAY (IPDM E/R) CONT	107	PI	COMBI SW INPUT 1			
Connector No. M119	52 SB	STARTER RELAY CONT	108	œ	COMBI SW INPUT 4		•	
	H		109	>	COMBI SW INPUT 2	Ę	- 6	
Connector Name BCM (BODY CONTROL MODULE)	╀	BACK DOOR	110	ď	HAZABD SW	ė.	3 2	
Connector Time NS16FIM-CS	ł	L-KEY WARN BITZER (FNG BOOM)	2	,			]	
٦.	Ë	+						
•	╁	L	Connector No.	No. M123	23	Terminal Color Of	L	
	ľ	BAC		Т		No. Wire	Signal Name [Specification]	
4 5 7 8 9 10	H	L	Connector Name		BCM (BODY CONTROL MODULE)	t		
11 12 14 15 17 10 10	H		Connector Type	П	TH40FG-NH	2 Y		
01 71 01 11				1		е «		
				•				
-	Connector No.	M122						
Terminal Color Of Signal Name [Specification]	Connector Name	BCM (BODY CONTROL MODULE)	<b>*</b>		25 C C C C C C C C C C C C C C C C C C C	Connector No.	M126	
D .		THE STATE OF THE S		e A	21 22 22 22 22 22 22 22 22 22 22 22 22 2	Connector Name	e WIRE TO WIRE	
5 - PASSENGER DOOR IN OCK OFFEIT		٦.				Connector Tvn	Connector Type M03MW-LC	
· >-	_					46		
8 V ALL DOOR. FUEL LID LOCK OUTPUT			Terminal	Color Of	:	_	[	
G DRIVER DOOR, FUEL			Š.	Wire	Signal Name [Specification]			
BR REAR DOOR U		1 2 2 2 3 5 5 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6	113	۵	OPLICAL SENSOR		_	
α	11.2	TO WE US NOT 100 102 100 100 99 10 10 100 100 100 100 100 10	116	SB	STOP LAMP SW 1	Ę	- 6	
B			118	۵	STOP LAMP SW 2	2	2 3	
W PUSH-BUTTO			119	gg	DR DOOR UNLOCK SENSOR			
>	Terminal Color Of		121	H	KEY SLOT SW			
W TURNSI	No. Wire	Signal Name [Specification]	123	Α.	IGN F/B	Terminal Color Of		
	74 SB	PASSENGER DOOR ANT-	124	97	PASSENGER DOOR SW	No. Wire	signal Name [specification]	
>	75 GR		132	BR	POWER WINDOW SW COMM	1 W		
	76	DRIVER DOOR ANT-	133	W	PUSH-BUTTON IGNITION SW ILL POWER	2 \		
	27 LG	DRIVER DOOR ANT+	134	GR	LOCK IND	3		
	Н		137	BG	RECEIVER/SENSOR GND			
	79 BR		138	Y	RECEIVER/SENSOR POWER SUPPLY			

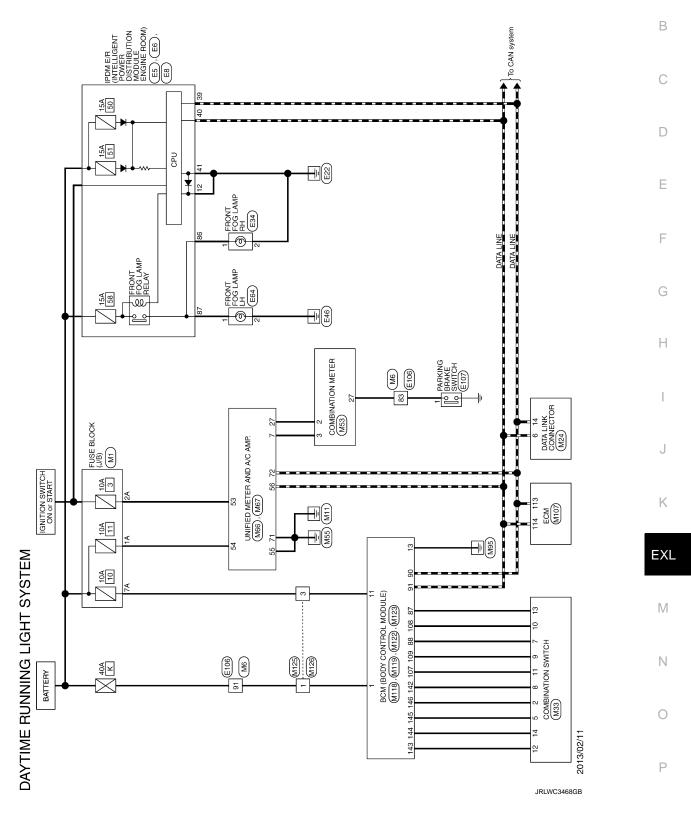
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# DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram - DAYTIME LIGHT SYSTEM -



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JRLWC3746GB

#### **DAYTIME RUNNING LIGHT SYSTEM**

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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76 W - [With ICC] 77 R - [Without ICC] 78 L - [Without ICC] 78 R - [Without ICC] 79 W - [Without ICC] 79 W - [Without ICC] 80 SB - [Without ICC] 81 SB - [Without ICC] 82 SB - [Without ICC] 84 SB - [With ICC]	884 C	100   SB   Corrector No.   M24	
15   P	227 G G	449	
Corrector No. M1  Corrector Type NSOFWAM2  AM 24 14  BA 24 44	Signal Name [Specification]	Corrector Type   TreBOMV-CS/E-TMA	
78 BR - [Without ICC] 79 L - [Without ICC] 79 Y - [Without ICC] 80 SB - [Without ICC] 81 R - [Without ICC] 81 G - [Without ICC] 84 G - [Without ICC] 85 BG - [Without ICC] 86 L - [Without ICC] 87 BG - [Without ICC] 88 G - [Without ICC] 88 G - [Without ICC] 89 G - [Without ICC] 89 G - [Without ICC] 80 G	897 CR	Corrector No. E107  Corrector Name PARKING BRAKE SWITCH Corrector Type TB01FW  Terminal Color Of Signal Name [Specification]  No. Wire  1 BG  Signal Name [Specification]	

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DAYTIME RUNNING LIGHT SYSTEM	Σ								
14 P	E C		Signal Name [Specification]	$^{+}$	+	NON-MANUAL MODE SIGNAL	Connector No.	o. M107	
- Y 9L	2			+	χ χ	COMMUNICATION SIGNAL (LCD-AMP.)	Connector Name	ame ECM	
	- 0	GR BALLERY	BALLERY POWER SUPPLY	70		ION ON'OFF SIGNAL	Constant Trees	- 1	7 11 2
Γ	+	+	COMMONICATION SIGNAL (METER-AMP.)	52	- ;	Al SNOW SWILCH SIGNAL	Connector	П.	K-LH-Z
Connector No. 1/433	+	+	SIGNAL (AMPMETER)	CZ =	+	ANOAL MODE SHIFT DOWN SIGNAL		,	
Connector Name COMBINATION SWITCH	ဂ		GROUND	77.		COMMUNICATION SIGNAL (METER-AMP.)			
	9		ALTERNATOR SIGNAL	28	~	VEHICLE SPEED SIGNAL (8-PULSE)		128 124	4 112 108 104 109
Connector Type TH16FW-NH	$\dashv$		AIR BAG SIGNAL	30	>	PARKING BRAKE SWITCH SIGNAL		127 123	5 107 103 99
	10		SECURITY SIGNAL	34	_	COMMUNICATION SIGNAL (AMPLCD)	S E	126 122	2 114 116 106 112 88
	15	Н	GROUND	38	В	BLOWER MOTOR CONTROL SIGNAL		125 121	1 117 113 109 105 101 97
	16	B METER CONTR	METER CONTROL SWITCH GROUND					]	
,	19	ll 8	ILL GND						
0 0 4 0 0	20	2	ILL	Connector No.	o. M67		Terminal Co	Color Of	3
7 8 9 10 11 12 13 14	21	BG IGNIT	IGNITION SIGNAL		-		o N	Wire Signal IN	olginal ivame [opecification]
2	╀		GROUND	Connector Name		UNIFIED METER AND ACCAMP.	97	R ACCELERATOR	ACCELERATOR PEDAL POSITION SENSOR 1
	╀	t	COMMUNICATION SIGNAL (LCD-AMP.)	Connector Type	Т	TH32FW-NH	86	t	ACCEL FRATOR PEDAL POSITION SENSOR 2 INSTRUCT
	25	╁	COMMINICATION SIGNAL (AMP -I CD)		7		ğ	Y ACCELEBATOR DEF	ACCEL EDATOR DEDAIL DOSITION SENSOR 2 (Meth. ICC)
No Mino Signal Name [Specification]	90	D VEHICLE SEE	WEHICLE SPEED SIGNAL (9 DIT SE)	_	•		8 8	TO GENEVO DO	SCHISOD DOWED STIDDLY INVITED IO
+	2 2	+	DADKING BRAKE SMITCH SIGNAL	_			8 8	Ť	SENSOR DOWER SUBBLY BARRALA ICCI
	3 00	W DDAKE CLIND	DOAKE ELLING EVEL SWITCH SIGNAL	\			3 5	W SERVICEN	SENSOR CENTRAL
	+	+	VEL SVIII ON SIGNAL	ŧ	Ŀ		3 3	1	SON GROUND
3 GR FR WASHER(+)	+	7	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	Š	4	44 45 46 47	101	┪	ASCD/ICC STEERING SWITCH
	30	G SEAT BELT BUCKLE SW	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)	1	63	55 59 60 61 62 63 66 68 70 71 72	102		EVAP CONTROL SYSTEM PRESS SENSOR
	31	L WASHER LEV	WASHER LEVEL SWITCH SIGNAL		J		103	G SENSOR POW	SENSOR POWER SUPPLY [Without ICC]
6 B GROUND	33	B ILLUMINATION	ILLUMINATION CONTROL SIGNAL				103	L SENSOR POV	SENSOR POWER SUPPLY [With ICC]
7 V INPUT3	36	LG SELECT S	SELECT SWITCH SIGNAL	Terminal Co	Color Of	Cionel Mome (Consideration)	Н		SENSOR GROUND [With ICC]
8 BG OUTPUT 5	37	SB ENTER S	ENTER SWITCH SIGNAL	o Q	Wire	orginal ivaline [obecincation]	104	GR SENSOR G	SENSOR GROUND [Without ICC]
	38	L TRIP A/B RES	TRIP A/B RESET SWITCH SIGNAL	41	^	ACC POWER SUPPLY	105	L REFRIGER	REFRIGERANT PRESS SENSOR
	-	Н	ILLUMINATION CONTROL SWITCH SIGNAL (-)	42	Y	FUEL LEVEL SENSOR SIGNAL	-	-	FUEL TANK TEMPERATURE SENSOR
11 LG INPUT 1	40	BG ILLUMINATION CON	ILLUMINATION CONTROL SWITCH SIGNAL (+)	43	œ	INTAKE SENSOR SIGNAL	L	BG SENSOF	SENSOR POWER SUPPLY
				44	9	IN-VEHICLE SENSOR SIGNAL	108	→ SEN	SENSOR GROUND
13 BR INPUT 5				45	۵	AMBIENT SENSOR SIGNAL	109	9	PNP SIGNAL
-	Connector No.	). M66		46	BG	SUNLOAD SENSOR SIGNAL	110	R ENGINE SP	ENGINE SPEED OUTPUT SIGNAL
	1	CAS CITY CLICK	040	47	S	EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL	112	\ SEN	SENSOR GROUND
	COLLECTO		AND ACCAMP.	53	9	IGNITION POWER SUPPLY	113	P CANCON	CAN COMMUNICATION LINE
Connector No. M53	Connector Type	pe TH40FW-NH		54	Y	BATTERY POWER SUPPLY	114	L CANCON	CAN COMMUNICATION LINE
CITETAL MOIT AND MOOD				22	B	GROUND	117	V DATAL	DATA LINK CONNECTOR
				99	_	CAN-H	121	LG EVAP CANISTE	EVAP CANISTER VENT CONTROL VALVE
Connector Type TH40FW-NH		Į.		25	W	BRAKE FLUID LEVEL SWITCH SIGNAL	122	P STOF	STOP LAMP SWITCH
				28	BR	FUEL LEVEL SENSOR GROUND	123	B E	ECM GROUND
	Ų	5 7 8 9	19 11 14 20	H	GR	INTAKE SENSOR GROUND	124	B EC	ECM GROUND
	4	2 2 2 3	38 38		1	IN-VEHICLE SENSOR GROUND	125	R POWER	POWER SUPPLY FOR ECM
				61	BR	AMBIENT SENSOR GROUND	126	BR ASCD/IC	ASCD/ICC BRAKE SWITCH
1 2 3 5 6 7 10 15 19 19 29				62	SB	SUNLOAD SENSOR GROUND	127	B	ECM GROUND
N 2 N 2 N 2 N 3 N 3 N 3 N 3 N 4	Terminal Color Of		:	63	œ		128	B	ECM GROUND
	o N		Signal Name [Specification]	92	88	ECV SIGNAL		-	
	2	L MANUAL MOD	MANUAL MODE SHIFT UP SIGNAL	69	_	A/C LAN SIGNAL			
	7 (	GR COMMUNICATION	COMMUNICATION SIGNAL (AMPMETER)	70	R E/	EACH DOOR MOTOR POWER SUPPLY			
	8	Н	VEHICLE SPEED SIGNAL (2-PULSE)	7.1	В	GROUND			
	Н	Н	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	72	۵	CAN-L			
	10	W MANUAL	MANUAL MODE SIGNAL						

JRLWC3748GB

#### **DAYTIME RUNNING LIGHT SYSTEM**

### [HALOGEN TYPE]

DAY	TIME R	DAYTIME RUNNING LIGHT SYSTEM									
Connector No.	or No. M118	118	Connector No.	П	M122	Connector No.	Н	M123	Connector No.	M125	
Connect	Connector Name BCI	BCM (BODY CONTROL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)	Connecto	Connector Name	BCM (BODY CONTROL MODULE)	Connector Name	WIRE TO WIRE	
Connector Type	П	M03FB-LC	Connector Type	П	TH40FB-NH	Connector Type	П	TH40FG-NH	Connector Type	M03FW-LC	
7	E.S.	<u>[1</u> ]	H.S.	vi.		4	⊞.S.		H.S.	3 1	
Terminal No.	Color Of Wire	Signal Name [Specification]	Terminal Co No.	Color Of Wire	Signal Name [Specification]	Terminal No.	Color Of Wire	Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	
-	г	BAT (F/L)	74	SB	PASSENGER DOOR ANT-	113	۵	OPLICAL SENSOR	1	,	
2	W PC	POWER WINDOW POWER SUPPLY(BAT)	22	GR	PASSENGER DOOR ANT+	116	SB	STOP LAMP SW 1	2 Y		
m	Y	POWER WINDOW POWER SUPPLY(RAP)	9/	>	DRIVER DOOR ANT-	118	۵	STOP LAMP SW 2	e E	,	
			Н	97	DRIVER DOOR ANT+	119	SB	DR DOOR UNLOCK SENSOR			
	ſ		8/	-	KOOM ANI 1-	121	Y M	KEY SLUI SW			
Connector No.	or No.		62 08	H H	ROOM ANT1+	123	≥ ⊆	IGN F/B PASSENGER DOOR SW	Connector No.	M126	
Connect	or Name BC	Connector Name BCM (BODY CONTROL MODULE)	ł	×	NATS ANT AMAD	455	9	DOWNED WINDOW SW COMMA	Connector Name	Connector Name   WIRE TO WIRE	
Connect	Connector Type NS:	NS16FW-CS	82	: œ	IGN RELAY (F/B) CONT	133	+	PUSH-BUTTON IGNITION SW ILL POWER	Connector Type M03MW-LC	M03MW-LC	
			83	>	KEYLESS ENTRY RECEIVER COMM	134	GR	LOCK IND			
_	•		28	BR	COMBI SW INPUT 5	137	BG	RECEIVER/SENSOR GND	_		
	•	[	88	^	COMBI SW INPUT 3	138	Υ	RECEIVER/SENSOR POWER SUPPLY			
4	Ī	4 5 / R 8 J	06	۵	CAN-L	139	_	TIRE PRESSURE RECEIVER COMM			
	ď	11 13 14 15 17 18 19	Н	7	CAN-H	140	GR	SHIFT N/P	٧ :	c	
-	į	A1 11 A1 41	Н	97	KEY SLOT ILL CONT	141	9	SECURITY IND LAMP CONT	į	23	
			86	^	ON IND	142	9B	COMBI SW OUTPUT 5			
			94	<b>&gt;</b>	PUDDLE LAMP CONT	143	Ь	COMBI SW OUTPUT 1			
Terminal	)	Signal Nama [Specification]	Н	Н	ACC RELAY CONT	144	9	COMBI SW OUTPUT 2	alC	If Signal Nama [Specification]	
Š		organia rearie [opcomoration]	96	GR	A/T SHIFT SELECTOR POWER SUPPLY	145	٦	COMBI SW OUTPUT 3	No. Wire	ogna rame [opcomeanor]	
4	LG LG	INTERIOR ROOM LAMP POWER SUPPLY	66	œ	SHIFT P	146	SB	COMBI SW OUTPUT 4	1	-	
2	L P.	PASSENGER DOOR UNLOCK OUTPUT	100	g	PASSENGER DOOR REQUEST SW	150	P	DRIVER DOOR SW	2 Υ	-	
7	<b>\</b>	STEP LAMP CONT	101	SB	DRIVER DOOR REQUEST SW	151	9	REAR WINDOW DEFOGGER RELAY CONT	3	-	
80		ו⊏ו	102	BG	BLOWER FAN MOTOR RELAY CONT						
6	G DR	DRIVER DOOR, FUEL LID UNLOCK OUTPUT	103	97	KEYLESS ENTRY RECEIVER POWER SUPPLY						
10	BR	REAR DOOR UNLOCK OUTPUT	101	97	COMBI SW INPUT 1						
=	ď	BAT (FUSE)	108	œ	COMBI SW INPUT 4						
13	Н	GROUND	109	<b>&gt;</b>	COMBI SW INPUT 2						
14	W	PUSH-BUTTON IGNITION SW ILL GND	110	ŋ	HAZARD SW						
15	>	ACC IND									
17	W										
18	BG	TURN SIGNAL LH (FRONT)									
19	>	INT ROOM LAMP CONT									

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**EXL-291** Revision: 2013 March 2014 QX50

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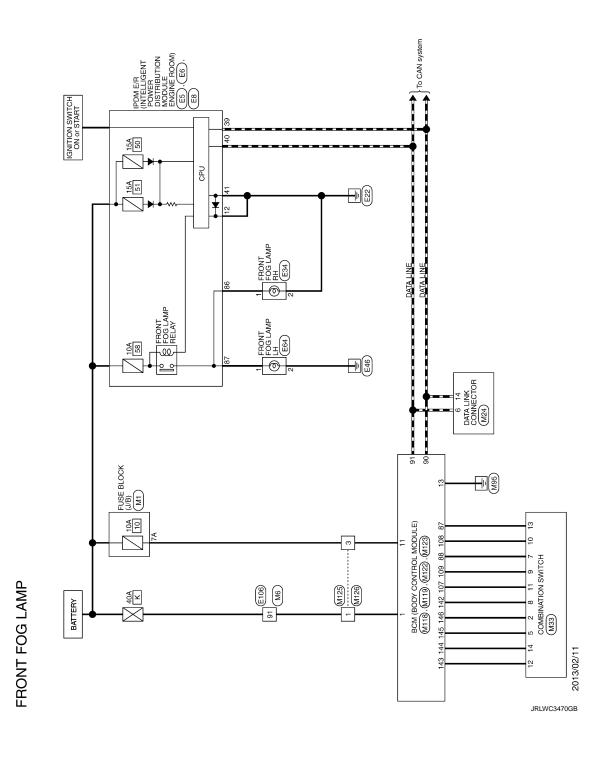
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### FRONT FOG LAMP SYSTEM

Wiring Diagram - FRONT FOG LAMP -

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#### FRONT FOG LAMP SYSTEM

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Corrector Name   Control Name   Co	Corrector Name   Corrector Name   Corrector Name   Corrector Name   No. Wire   No. Wir			FRONT FOC LAMP LH FREZIZE  Signel Name [Specification]  WIRE TO WIRE  THB0FW-CS16-TM4	25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25		
Concept Name   Front Food Na	Cornector No.			Signal Name (Specification)  Signal Name (Specification)  From  WIRE TO WIRE  THEOFW-CS16-TM4	23 24 25 27 28 28 28 28	> 0 d > > 8 0 8	
Signal Name   Scorlication    Corrector Name   Contractor Name	Cornector Name   Specification			Signal Name (Specification)  F106  WIRE TO WIRE THROFW-CS16-TM4	25 24 25 27 27 28 28 28 28	0 d > > M 0 8 8	
Convoider Vision   Convoider V	Corrector Name   Signal Name   Specification    Signal Name   Specification    No. Wire   Signal Name   Specification    No. Wire   Signal Name   Signal N			Signal Name (Specification)  E106  WIRE TO WIRE THB0FW-CS16-TM4	25 26 27 28	> > 8 0 8 ×	
H.S.	H.S.			Signel Name (Specification)  Froe WIRE TO WIRE THREETW-CS16-TM4	27 28 27 28	> % © % ×	
H.S.	Line			Signal Name (Specification)  E106  WIRE TO WIRE THEOFW.CS16-TM4	3 8 7	N S S W	1
H.S.   Carrester Name   Specification    Color Of Signal Name   Color	H.S.			Signal Name (Specification)  Froe WIRE TO WIRE THEOFW-CS16-TM4	3 5	S B ≫	
Figure   Name   Specification   Frame   Corrector Name   Corrector Nam	Fig.			Signel Name (Specification)  Froe WIRE TO WIRE THREEW-CS16-TM4	-	*	
Signal Name   Specification   Sign	Signal Name (Specification)			Signal Name (Specification)  E106 WIRE TO WIRE TH80FW.CS16-TM4	35		,
Fig. 10   Signal Name   Specification    Fig. 10   Fig.	Figure   Name   Specification			Signal Name (Specification)  E106 WIRE TO WIRE THEOFW-CS16-TM4	33	В	
Family   Color Office   Signat Name   Specification    1	Signal Name [Specification]			Signal Name (Specification)  E106 WIRE TO WIRE THEOFW-CS16-TM4	34	ш	-
The control of the	Terminal Color Of			Signer Manne Tapecuncation    E106 WIRE TO WIRE TH80FW.CS16-TM4	32	9	
Fig. 10   Fig.	Terminal Color Of No. Wire 88 W V 86 GR 89			ETOB WIRE TO WIRE THBUFW-CS16-TM4	36	SHIELD	
Figure   Corrector Name   Specification    Corrector Name   Specification    Superal Name   Superal Name   Superal Name   Specification    Superal Name   Supera	Terminal Color Of			E106 WIRE TO WIRE THBOTFW.CS16.TIM	37	>	
No.   Wire   Signal Name   Specification   S	Nb.   Wire		1	ETOS WIRE TO WIRE THEOFW.CSTG-TIM4	88	BR	
Signal Name   Specification    Specifi	83   BC     84   V     86   W     87   L     89   BR     90   P     90   P     Oornector Name	8 8 8		WIRE TO WIRE THREFW-CS16-TM4	39	BG	,
Fig. 10   Fig.	84   V     86   W     87   L     87   L     87	8 8 8		WINE TO WINE THROFFW.CS16.TMA	41	*	
Signat Name   Specification	86   W   87   L   88   GR   89   BR   90   P   90   P   90   P   90   P   90   90	8 8		WIRE TO WIRE THOURN-CSIG-TIMA	42	O	1
Signal Name   Specification	1   1   1   1   1   1   1   1   1   1	8 8		WIRE TO WIRE THEOFW.CST6-TMA	43	HH.	,
Signal kane [Specification]   Sign	88 GR 89 BR 90 P Corrector No.			THB0FW-CS16-TM4	45	· >	
Corrector No.   Est   Corrector No.   Est   Corrector No.   Est	S9 BR 90 P Cornector No.		1		49	-	,
Corrector No.   E34   Corrector No.   Correc	Corrector No.		7		C C	۵	
Corrector No.   E34	Connector No. Connector Name Connector Type		1	- 20 00 00 00 00 00 00 00 00 00 00 00 00	8 2		
Corrector No.   E34   E35	Connector No. Connector Name Connector Type			2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24	, g	
Corrector No. 15.4   Correct	Connector No. Connector Name Connector Type		ļ		5 6	2 8	'
Figure   Corrector Name   FRONT FOG LAMP RH   FLOORER	Cornector Name		Ę		9 62	í	
Corrector Name   FROMT FOCK LAMP RH	Cornector Name		Ċ	2 F	8 8	: =	1
Figure   Presentation   Figure   Figure   Presentation   Figure	Connector Type	AMP RH			8	3 (	1
Terminal Color Of Signal Name [Specification]   Color O					8	8	
This Proving	Or Now		Solor		8	>	
Theorems	CINCINC ENGINE ROOM)		ķ	Signal Name [Specification]	8 8	. 8	
Lange   Charles   Charle	or Type TH08EW-NH	[	2		92	9	,
HS   Signal Name   Specification    15   Signal Name   15   Signal Nam			ł		99	0 00	
Terminal Color Off   Signal Name (Specification)   10   Section	- P	((2 1))	L		67	SHELD	1
Light   Ligh	IT.		H		88	>	1
4   4   4   3		<u>l</u>	H		69	. <u>e</u>	
A	41 40	L	╁		02	>	,
Marco   Marco   Marco   Signal Name   Specification    10 BG   172 Y   77 BG	Terminal Color Of		H	,	7	œ	
1         W         11         SB         773         B           Signal Mane (Specification)         2         BW         12         BG         74         BR           14         R         R         -         775         G           15         P         -         775         W           17         SB         -         776         W           17         SB         -         776         Y           17         SB         -         777         P	No. Wire	Name [specification]	H		72	>	
Signal Name [Specification]         2         B.W         12         B.G         74         B.R           13         L         .         74         B.R         L         77         L           14         R         R         .         76         G         N         N           15         V         .         76         W         N         N         N         N           16         V         .         77         Y         Y         Y         N         N           10         .	W 1		H		73	В	,
13   L	2		H		74	BR	- [With ICC]
14 R R 7 77 G 77 W 77 SB 77 77 P 7	Signal Name (Specification)		H		7.4	-	- IWithout ICCI
115 P 7 77 W 77 8			+		7, 7,	ا رو	- Invited ICCI
15 V 77 P 17 SB 77 P 17 P 18 V 77 P 17 P 18 P 17 P 18 P 17 P 18 P 17 P 18 P 18		<u> </u>	ł		75	) >	[COLUMN INC.]
10 V V V V V V V V V V V V V V V V V V V		1	Ŧ		2 6	3	- [without Ico]
17 SB	B/W		+		76	\$	- [with ICC]
77 7 P	SB -		4		76	>	- [Without ICC]
	BR .		+		77	Ъ	<ul> <li>[Without ICC]</li> </ul>
20 PG 27	. 9		20 BG	-	77	ч	- [With ICC]

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FR	N	FRONT FOG LAMP									
78	BR		Connector No.		M6	43	BG	-	86	SHIELD	
78	_	- [With ICC]	Connect	Connector Name	WIRE TO WIRE	45	≯		66	>	
79	_	- [Without ICC]	50		WINE TO WINE	49	7	-	100	SB	
62	<b>\</b>	- [With ICC]	Connect	Connector Type	TH80MW-CS16-TM4	20	Ь				
80	SB					51	BR				
81	œ			•		24	≻		Connector No.	Г	M24
82	SB			•	X   X   X   X   X   X   X   X   X   X	24	9			Manne	C TO LINE OF A LANGE
83	8		•	į		29	≥		Connecto	Connector Name	DATA LINK CONNECTOR
84	9		4	υE	3 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9	٦		Connecto	Connector Type BD16FW	BD16FW
82	-			3		61	O				
98	Ь					62	SB		_	7	
87	>					63	O		_	•	
88	GR		Terminal	O	Closed Name (Consideration)	64	В		_		11
06	SHIELD	- G	Ö.	Wire	ognal name [opecincation]	92	Μ		7	۷ E	
91	Μ		-	W		99	œ	•		i	3 4 5 6 7 8
92	Υ		2	ď		29	SHIELD	-			
93	>		9	8		89	Υ	-			
94	97		4	SHELD		69	GR		Terminal	0	[position of County of Cou
92	BG		വ	9		70	PC	-	Š	Wire	ognal varie [opeoiication]
96	۵		∞	>		71	97		m	97	
26	œ		6	BR		72	>	,	4	В	
86	φ	-	9	~		73	g		2	а	
66	_		÷	æ		74	BR	- [With ICC]	9	_	
19	۵		2	g		74	-	- [Without ICC]	7	>	
	4		13	3 -		75	ı o	for warming	. 00	9	
			4	œ		92	æ	- [Without ICC]	=	SB	
Connec	Connector No.	M1	15	a.		92	>	- IWith ICCI	4	B 4	
			16	>		11	۵	- IWithout ICCI	16	>	
Connec	tor Name	Connector Name FUSE BLOCK (J/B)	17	89		17	. ~	- IWith ICCI			
Connec	Connector Type	NS06FW-M2	42	>		78	-	- [With ICC]			
			2	BB		78	~	- [Without ICC]	Connector No.	ı	M33
_	7		21	_		42	*	- [Without ICC]			
	1	llī	22	3		42	>	- [With ICC]	Connecto	Connector Name	COMBINATION SWITCH
_	Į	3A 2A 1A	23	а		80	SB		Connector Type	or Type	TH16FW-NH
	ر -	24 72 62 52 72	24	BR		8	SB				
	į	- NO S	22	Υ		82	SB	-	_	1	
		]	56	>	-	83	>		_	•	_ _ _
			27	O	-	84	O	-	_		2 2 2
Termin	Terminal Color Of	JC Sizes Name (Secretion)	28	9		85	7		٦	<b>∀</b>	C + C 7
Š	_	olgiral Name	31	7	=	98	Ь	-		į	7 8 9 10 11 12 13 14
1A	GR		32	9		87	Μ				
2A	Н		33	В	-	88	GR	-			
3A	٦		34	W	-	90	SHIELD	-	Terminal	0	[majjaca] Accord Nove (O
44	Ь		32	Я	-	91	Μ	-	Ŋ.	Wire	ognan vanne [opecincation]
5A	>	•	36	SHIELD	-	92	Υ	-	1	Р	FR WASHER(-)
6A	4		37	>		93	BR		2	SB	OUTPUT 4
7A	ď		38	BG	-	94	Ь	-	က	GR	FR WASHER(+)
8A	_		39	BR		92	R		4	O	IGN
			41	×	-	8	≶	-	2	-	OUTPUT 3
			45	BG	-	26	_		9	В	GROUND

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	Connector No. M125	Connector Name WIRE TO WIRE	Connector Type M03EW-I C		[			3 2			Terminal Color Of	No. Wire Signal Name [Specification]	- M	2 Y	3 R		- [	Connector No. M126	Connector Name   WIRE TO WIRE		Connector Type M03MW-LC	•					C 7	]		Terminal Color Of Signal Name [Specification]	1	M >	\ \ \	3 8														
- 1	tor No. M123	Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40EG-NH	1	•			St 151 16 16 16 16 16 16 16 17 15 15 15 15 15 15 15 15 15 15 15 15 15			erminal Color Of	Wire Signal Name [Specification]	P OPLICAL SENSOR	SB STOP LAMP SW 1	Ь	DR DO	KE	W	Pl	T	W PUSH-BUTTON IGNITION SW ILL POWER		BG RECEIVER/SENSOR GND	Y RECEIVER/SENSOR POWER SUPPLY	L TIRE PRESSURE RECEIVER COMM	GR SHIFT N/P	SS			G COMBI SW OUTPUT 2	COMBISW OUIPULS	9 9	2	G REAR WINDOW DEFOGGER RELAY CONT														
	Connector No.	Connecto	Connecto		_	1	7		,	_	Terminal	Ą	113	116	118	119	121	123	124	132	133	134	137	138	139	140	141	142	143	144	145	1	8	151	_													
-	GROUND	PUSH-BULLON IGNITION SWILL GND	TURN SIGNAL BH (FBONT)	TURN SIGNAL LH (FRONT)	INT ROOM LAMP CONT		14400	W122	BCM (BODY CONTROL MODULE)	Connector Type TH40FB-NH					2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	110 186 188 107 100 100 100 100 100 100 100 100 100			of Signal Name [Specification]		PASSENGER DOOR ANT-	PASSENGER DOOR ANT+	DRIVER DOOR ANT-	DRIVER DOOR ANT+	ROOM ANT1-	ROOM ANT1+	NATS ANT AMP.	NATS ANT AMP.	IGN RELAY (F/B) CONT	KEYLESS ENTRY RECEIVER COMM	COMBI SW INPULS	COMBLOW INTO 3	CANAL	CANT	KEY SLOT ILL CONT	ON IND	PUDDLE LAMP CONT	ACC RELAY CONT	A/T SHIFT SELECTOR POWER SUPPLY	SHIFT P	PASSENGER DOOR REQUEST SW	DRIVER DOOR REQUEST SW	BLOWER FAN MOTOR RELAY CONT	KEYLESS ENTRY RECEIVER POWER SUPPLY	COMBI SW INPUT 1	COMBI SW INPUT 4	COMBI SW INPUT 2	HAZARD SW
ŀ	+	4 t	17 W	F	╀	-	On response	A I RECTOR INC.	Connector Name	annector Type	odf. loose	7			S II V	į			쿋		74 SB	75 GR	76 v	77 LG	78 Y	$\dashv$	4	+	82 R	+	8/ 8/	8 8	+	+	92 LG	+	$\dashv$	+	96 GR	99 R	100 G	101 SB	102 BG	103 LG	107 LG	108 R	109 Y	110 G
FRONT FOG LAMP	+	8 BG COUPULS	10 R INPIT 4	91	P OUTPUT 1	BR INPUTS	3 10 1100	31_	Connector No. M118		Connector Name   BCM (BODY CONTROL MODULE)	Connector Type M03FB-LC				1 3					hall Color Of Signal Name (Specification)		BAT (F/L)	2 W POWER WINDOW POWER SUPPLY(BAT)	3 Y POWER WINDOW POWER SUPPLY(RAP)			Connector No. M119	Connector Name   BCM (BODY CONTROL MODULE)		Connector Type NS16FW-CS			4 5 7 7 8 9 10	] ] ,	11 13 14 15 17 18 19				f Signal Nama (Sacational	orginal realite [obecomoration]	MP POWER SUPPLY	X OUTPUT	MP CONT	LID LOCK OUTPUT	G DRIVER DOOR, FUEL LID UNLOCK OUTPUT	10 BR REAR DOOR UNLOCK OUTPUT	R BAT (FUSE)

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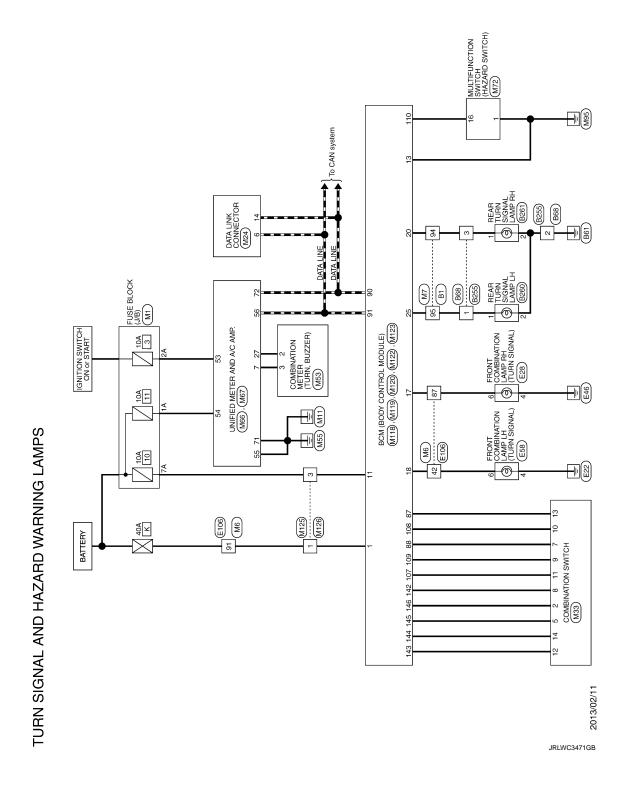
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#### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram - TURN AND HAZARD WARNING LAMPS -



[HALOGEN TYPE] < DTC/CIRCUIT DIAGNOSIS >

			/ 1
	ммР LH	WP RH certication	В
	B260 REAR TURN SIGNAL LAMP LH HS02FG-W	Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	С
	Connector No. B260 Connector Name REAR TUR Connector Type HS02FG-W	Herminal Color Of No. Wire R Corrector No. Wire Corrector Type H Vive Vive R Corrector Type H Vive R Corrector Type H Vive R Viv	D
			Е
	IRE	Signal Name [Specification]	F
	Connector No. B68 Connector Name WIRE TO WIRE Connector Type RH08MB	WIRE T	G
	Connector No. Connector Name	H.S.  Terminal Coor Of No. Ornector No. Orne	Н
			ı
			1
MPS	L SHIELD R	S   S   S   S   S   S   S   S   S   S	J
IING LA	60 61 62 SH 63	<del></del>	К
ARD WARNING LAMPS			EXL
HAZARI	M4	Signal Name (Specification)	
NAL AND	B1 WIRE TO WIRE TH80FW-CS16-TM4		M
TURN SIGNAL AND HAZ	Connector No. B Connector Name V Connector Type		N
구	<u> </u>	F S 1	0
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97 R	C DIE	1	100 P			Connector No. M1	Connector Name FUSE BLOCK (J/B)	$\neg$	٦.			34 📗	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8A 77 04 34	]		J(	No. Wire Signal Name [Specification]	1A GR -	2A G .	7	4A P	- v Y9	- Y V9	7A R -	8A L			Connector No. M6	Connector Name WIRE TO WIRE	_	Connector Type   TH80MW-CS16-TM4		2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 2 3 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4					Terminal Color Of		1 W	2 R	: 0	4 SHELD -	9	>
43 BR .	707	+	50 P	H	Н	BR	× .	57 09	5 8	20 28 W	ł	2 0		67 SHIELD -			- M 02	71 R	72 Y -	73 B -	74 BR - [With ICC]	74 L - [Without ICC]	9	75 W - [Without ICC]	M	76 Y - [Without ICC]	-		BR		79 L - [Without ICC]	- wil	8 0	+	BG	H	T	4	- v 28	89 GR	90 SHIELD	91 W	92 Y	93 V		╀	c
NING LAMPS Connector No. 1E106	T	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS16-TM4			- n	8 8		_	]	Toemisos Color Of		ω.	2 W -	3 B	4 GR -	5 GR -	- × 8	9 BR	10 BG .	11 SB .	12 BG -	13 L	14 R	15 P	16 V -	17 SB -	18 V -	20 BG .	7	> 0	23 63	L >	- 25 V 96	27 W	H	31 BG	M	33 B	╀	35 G	36 SHIELD	37 V	BR	H	*	,
TURN SIGNAL AND HAZARD WARNING LAMPS Corrector No. 1E28		Connector Name FRONT COMBINATION LAMP RH	Connector Type RS08FB-PR				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1 (				No. Wire Signal Name [Specification]	2 B -	3 B/Y -	4 B/W	5 BG -	· ^ 9	7 BR -	- A			Connector No. E58	CONTRACT NAME OF TAXABLE PARTY OF TAXABL	Connector Name FRONI COMBINATION LAMP LH	Connector Type RS08FB-PR				ţ	) I	8 1 9 9	)	F	Signal Name [Specification]	8	3 B/Y	4 B/W		9	7 P	8 BG						

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< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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																								9					F	Г	14 16	8 7 8	J			pecification																														В
			•					•		1							•		-				M24	DECEMBED VIOLENTS	DATA LINK CONNECTOR	BD16FW					1	3 4 5				Signal Name [Specification]					•																									С
ŀ	75 W	Н	+	78 P	$\dashv$	83 BG		Н	_	88 W	_	Н	91 G	Н	93 BR	> ^6	+	Н	M 86	Н			Connector No.		Connector Name	Connector Type B		_		•	Ę	Ċ			Toursing	lerminal Color Of	NO. WIFE	3 FG	4 20	2 8	9	۸ /	Ø	11 SB	14 P	, <del>/</del>	-																			D
	ification]	positioner]	ve positioner]																																Ī																															Ε
	Signal Name [Specification]	- [With automatic drive positioner	- [Without automatic drive positioner																																		.										.				•															F
Ī	Wire	SB	>	U	BG	*	В	SB	ΓC	>	g	Μ	SB	ΓG	BR	SHIELD	>	^	В	W	В	SHIELD	_	Ь	SB	7	а	_	а	æ	<b>&gt;</b>	ŀ	ag	5 9	2 8	9 ;	>	2	-	_	SHIELD	Я	9	SHIELD	SB	>	> 4	PC	SHIELD	Μ	9															G
	No.	3	3	2	9	7	8	12	13	14	15	17	18	19	50		22	24	27	28	59		31	32	33	34	32	36	37	38	39	44	45	2 4	7 4	4	64	20	Т						Т	Т	- 1				73															Н
Sc		- [With ICC]	- [Without ICC]		- [Without ICC]	- [With ICC]	- [Without ICC]	- [With ICC]	- [With ICC]	- [Without ICC]	- [Without ICC]			-	-		-		-		-	- O													MZ	_	WIRE TO WIRE	┪	LHBUMW-CS16-1M4				0 2 0 0			000																				J
TAM	- 88	BR	+	$\dashv$	$\dashv$			œ		ď	_		SB		Н		$\dashv$	Н	Н		GR		≥	Y	⊦	۵	H	Ͱ	П	SHELD	Т	87	┨		Compositor No	CIOI IND.	Connector Name		Connector Type		`			ψ	į																					IZ.
	73	74	74	75	9/	9/	77	77	78	78	79	79	80	81	82	83	8	82	98	87	88	96	9	92	83	98	95	8	6	86	66	100			Care	5	Conne		Conne							l																				K
TURN SIGNAL AND HAZARD WARNING LAMPS								-			-	-		-	-	-	-	-	-		-																				-				1				-		-															X
N SIG	씸	BR	BG .	_	ď	۵	>	SB	>	BG	٦	W	Д	BR	Υ	^	9	9	٦	9	В	Μ	ď	SHIELD	>	BG	BR	×	BG	88	Α	-	۵	. 8	á >	- (	و	Α.	-	9	SB	9	В	Α	œ	SHIFLD	OLUETO,	>	GR	PT.	Pl															Ν
TUR	10	11	12	13	14	15	16	17	18	20	21	22	23	24	25	26	27	28	31	32	33	34	35	36	37	38	33	41	42	43	45	49	250	8 2	2	ŧ [	à	28	۵۵	61	62	63	64	92	99	67	5	68	69	70	71															
																																																																		0
																																																							JF	RLV	VC:	376	650	GB	3					

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ĮŢ.	RN SIC	TURN SIGNAL AND HAZARD WARNING LAMPS	DNIN	LAM	Sc				
Connec	Connector No.	M33	10	9	SECURITY SIGNAL	Н	H	Connector No.	M72
Connec	Connector Name	COMBINATION SWITCH	15	20 00	GROUND METER CONTROL SWITCH GROUND	38	BLOWER MOTOR CONTROL SIGNAL	Connector Name	me MULTIFUNCTION SWITCH
Connec	Connector Type	TH16FW-NH	19	ω	ILL GND			Connector Type	DE TH16FW-NH
			20	œ	ILL	Connector No.	M67		
_	٦		21	BG	IGNITION SIGNAL	Connector Name	PARTER AND ACC AMP	_	
	1		2 2	a 2	GROUND	F			
1	É	1 2 3 4 5 6	25	հ ≻	COMMUNICATION SIGNAL (ECD-AMIF.) COMMUNICATION SIGNAL (AMPLCD)	collector 1 ype	e inscriving	Į.	4 6 8 14 16
4	į	7 8 9 10 11 12 13 14	56	ď	VEHICLE SPEED SIGNAL (8-PULSE)	_		Ş	
			27	> 3	PARKING BRAKE SWITCH SIGNAL	,			200
Terminal	al Color Of		59 62	≥ %	SEATBELT BLOCK ESWITCH SIGNAL SPATEN	Ę	41 42 43 44 45 46 47	Terminal Color O	L
S.	Wire	Signal Name [Specification]	30	ŋ	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)	Ċ	57 58 59 60 61 62 63 66	No.	Wire Signal Name [Specification]
-	۵	FR WASHER(-)	34	Ŀ	WASHER LEVEL SWITCH SIGNAL			-	B GROUND
2	SB		33	В	ILLUMINATION CONTROL SIGNAL			3	/ ACC
e	GR	FR WASHER(+)	36	97	SELECT SWITCH SIGNAL	Terminal Color Of	to it is to	4 F	R III
4	9	IGN	37	SB	ENTER SWITCH SIGNAL	No. Wire		2	ILL CONT
2	_	OUTPUT 3	38	_	TRIP A/B RESET SWITCH SIGNAL	41 \	ACC POWER SUPPLY	9	SB AV COMM (H)
9	В	GROUND	38	Ь	ILLUMINATION CONTROL SWITCH SIGNAL (-)	Н	FL	8	W
7	^		40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)	43 R		6	B SW GND
∞	BG					_		14	/ DISK EJECT SIGNAL
6	≻	INPUT 2				$\dashv$		16	G HAZARD ON
10	ď		Connector No.	tor No.	M66	_	$\dashv$		
7	P.		Jonno	Connector Name	INIFIED METER AND A/C AMP	$\dashv$	EXHAUS		
12	4		3		. 1	53 C		Connector No.	M118
13	_		Connect	Connector Type	TH40FW-NH	4	BATTER	Connector Name	me BCM (BODY CONTROL MODILLE)
4	<u>ن</u>	OUTPUT 2		•		22 B			(
				1		26 L	CAN-H	Connector Typ	Connector Type M03FB-LC
		, and a second		₹		+	+	_	•
Connec	Connector No.	M53	•	J	W 20 C 2	+	-	_	
Connec	Connector Name	COMBINATION METER	1	į.	23 22 33 34 33	96 09	IN VEHICLE SENSOR GROUND		7
Connec	Connector Type	TH40FW-NH				61 BR		Ě	
						H	3 SUNLOAD SENSOR GROUND	?	7
	1		Terming	erminal Color Of	Of Signal Name [Specification]	_			]
	1		انج	Wire	4	65 BG			
_	Į	20 20 21 21 22 22 22 23 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	ا م	-	MANUAL MODE SHIFT UP SIGNAL	+	+	<u> </u>	r Of Signal Name [Specification]
1	Ŷ	77 28 29 39 33	\ 0	¥ -	VELICI E SPEED SIGNAL (2 PI SE)	) t	EACH DOOK MOTOR POWER SUPPLY	NO. WIR	$\downarrow$
			٥	1 5	VEHICLE SPEED SIGNAL (2-FOLSE)	+		$^{+}$	Ť
			D 5	3	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SDE)	/2 F	CAN-L	7 0	W POWER WINDOW POWER SUPPLY(BAT)
Tormin	orminal Color Of		2 =	} ୯	NON-MANIAI MODE SIGNAL			2	POWER WINDOW POWER SOPPLI(KAP)
Š	Wire	Signal Name [Specification]	14	HH H	00				
-	GR	BATTERY PO	20	-	ION ON/OFF SIGNAL				
2	PI	COMMUNICATIONS	23	≻	AT SNOW SWITCH SIGNAL				
က	GR	COMMUNICATIONS	25	>	MANUAL MODE SHIFT DOWN SIGNAL				
2	ш	GROUND	27	9	COMMUNICATION SIGNAL (METER-AMP.)				
9 1	۵ ا	ALTERNA	58	œ :	VEHICLE SPEED SIGNAL (8-PULSE)				
`	8	AIR BAG SIGNAL	8	>	PARKING BRAKE SWITCH SIGNAL				

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< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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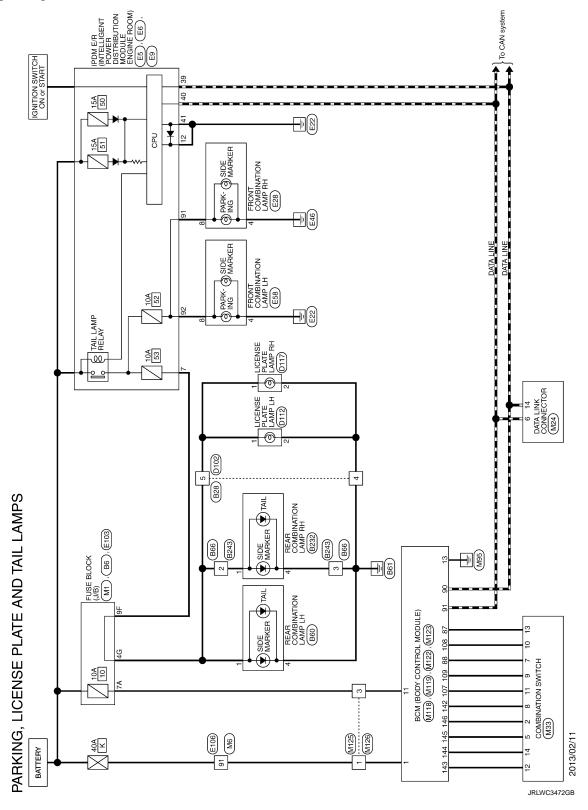
Corrector No. M/25  Corrector Npe M/03FW-LC  The M/	Terminal Color Of Signal Name [Specification]  1 W No. Wire  2 R	B C D
Connector No. M123  Connector Type TH40FG-N+1  Connector Type TH40FG-N+1  H.S. Eight Hall Hall Hall Hall Hall Hall Hall Hal	Terminal Color Of Signal Name [Specification]   No.   Wine   Delical, ERRORP   118   State   STOP LAMP SW 2   STOP SW 3   STOP LAMP SW 2   STOP SW 3   STOP SW 3	E F G
Corrector Type TH40FB-N41    Corrector Type TH40FB-N41   Corrector	Farminal Color Of   Signal Name [Specification]   Nume   Vitre   PASSENGERE DOOR ANT-   75   CV   DRIVER DOOR ANT-   77   LG   DRIVER DOOR ANT-   77   LG   DRIVER DOOR ANT-   77   LG   DRIVER DOOR ANT-   78   V   ROOM ANT-   78   V   ROOM ANT-   79   BR   ROOM ANT-   79   BR   ROOM ANT-   79   ROOM ANT-   79   ROOM ANT-   79   ROOM ANT-   79   ROOM ANT-   70   ROOM ANT-   70	J K
TURN SIGNAL AND HAZARD WARNING LAMPS   Corrector No.   M/19   Corrector No.   M/19   Corrector No.   Corrector No.   M/19   Corrector No.   NS16FW-CS	Name	M N
	JRLWC3767GB	0

**EXL-301** Revision: 2013 March 2014 QX50

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### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram - PARKING, LICENSE PLATE AND TAIL LAMPS -



### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

[HALOGEN TYPE] < DTC/CIRCUIT DIAGNOSIS >

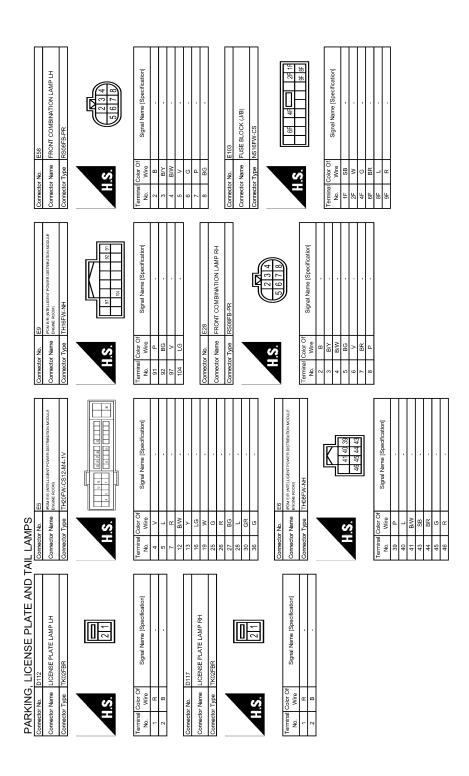
Corrector Nume   WIRE TO WIRE	B C
	Е
THOMMWAH   THOMMWAH	F
18   P	G
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Signal Name [Specification]	I
10   10   10   10   10   10   10   10	J
19   LG   LG   LG   LG   LG   LG   LG   L	K
Sification]	EXL
(3(L)   (3(L	M
Cornector No.   Big   Cornector No.   Big   Cornector No.   Big   Cornector No.   Cornector Type   NS12FBR-CS   Cornector Type   NS12FBR-CS   Cornector Type   NS12FBR-CS   Cornector No.   No	Ν
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**EXL-303** Revision: 2013 March 2014 QX50



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### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS > [HALOGEN TYPE]

	43	a		Г		σ	aa	
Connector Name WIRE TO WIRE	45	W		98 SHIELD		10	œ	
$\neg$	49			100 400		± 5	BR 0	
Connector type   TH80FW-CS16-TM4	200			J 001		7 5	- BG	
	0					2 5		
	5 [	2 6	0	Γ		<u> </u>	د د	ii ii
	i G	K :		т		2 5	1 2	
0 8 0 8 0 8	20 1	M .			JSE BLOCK (J/B)	9	>	
	00	2		Т		-	<del>2</del> 2	
	61	9		╗	S06FW-M2	18	>	
	62	SB				20	BG	-
	63	>				21	_	,
	64	8			<u> </u>	22	W	•
	65	9			3A 1A	23	d	
	99	۵		Ę		22	a	
	22	2 10 10		į.	8A /A 5A 5A 4A	4	ź >	
	10	STILLE			]	0.7	- 3	
	8	-				8	> 4	
	69	5	i			77	9	
	70	>		Terminal Color Of	Signal Name [Specification]	78	o	
	71	œ		┪		31	7	
	72	>		-		32	g	-
	73	В	ì	_		33	В	-
	74	8	- [with ICC]			8	W	
	74	_	- [Without ICC]			32	ď	1
	75	ŋ	- [With ICC]	L		98	SHIELD	,
,	75	Α.	- [Without ICC]	L		37	>	
	9/	M	- [With ICC]	H		8	B.G.	1
	76	>	- [Without ICC]	Ł		8	æ	
	1		IM/#bout ICCI	1		3 5	, w	
	1		DAGE ICCI			Ş	: 6	
	: 1	٤	- [will loc	Γ		¥ .	20 1	
	78	BK	- [Without ICC]	T	9	43	BG	
	78	_	- [With ICC]		IBE TO WIBE	42	Α	
,	79		- [Without ICC]			49		
,	79	>	- [With ICC]	Г	480MW-CS16-TM4	20	<u>a</u>	
	80	SB		1	ĺ	5	BR.	
	9	3 0		-		, u	<u> </u>	
	0	١				5	-	
	82	SB				24	9	
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	84	ď		Ę		en G	-	
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	Т	0 1110		No	Signal Name [Specification]		///	
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	95	>		2 8		49	SHIELD	
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	t i	2 2		Т		000	5 .	
-	32	BG	-	5 G		70	PC	-
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1		Signal Name (Specification)  Signal Name (Spe	Signal Name (Specification) 65 67 61 66 61 66 61 61 61 61 61 61 61 61 61	Signal Name (Speechcatton)  Si	Signal Name   Specification    Specification    Signal Name   Signal Name   Specification    Signal Name   Signal Name   Specification    Signal Name   Specification    Signal Name   Signal Name   Specification    Signal Name   Signal N	Signal Name   Specification   Signal Name   Signal Name	Signal Name (Specification)   Sign	Signal Name (Specification)  Signal Name (Spe

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Revision: 2013 March **EXL-305** 2014 QX50

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72 Y	-	Termina	Terminal Color Of	Picture (Specification)	Connector No.	M118	Connector No.	lo. M122	
73 SB		N	Wire	oighal name [openingation]	Connector Mamo	CALIDON CONTROL MODILE	Corporator Momo		GILIGOM IOGENOS AGOS MOS
_	- [With ICC]	3	PI		COLLINECTOL NAIL		COLLECTO		CONTROL MODOLE)
74 L	- [Without ICC]	4	В		Connector Type	M03FB-LC	Connector Type	ype TH40FB-NH	_
75 G		വ	В						
76 GR	- [Without ICC]	9	_		_		_	•	
76 W	- [With ICC]	7	>			1			
77 P	- [Without ICC]	80	g			13			<u> </u>
77 R	- [With ICC]	=	SB		SE/		Ę	8 8	の 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日
78 L	- [With ICC]	14	۵		2	7		10 88 88 00	200 100 100 100 100 100 100 100 100 100
78 R	- [Without ICC]	16	>						
W 62	- [Without ICC]								
Y 67	- [With ICC]				Terminal Color Of	JO Jones Since Street	Terminal Color Of		[mailton Since Of a mail of land of
80 SB		Connector No.	or No.	M33	No. Wire		No.	Wire	iliai ivalire [Specification]
81 SB				TOTHER OF MOUNTAINED	1	BAT (F/L)	74	SB	PASSENGER DOOR ANT-
82 SB			o Marine		2 W	POWER WINDOW POWER SUPPLY(BAT)	75	GR PAS	PASSENGER DOOR ANT+
83 ^		Connect	Connector Type	TH16FW-NH	3	POWER WINDOW POWER SUPPLY(RAP)	92	^	DRIVER DOOR ANT-
8 0							2.2	97	DRIVER DOOR ANT+
82 r			1				78	Α.	ROOM ANT1-
86 P			•	<u>_</u>	Connector No.	M119	62	BR	ROOM ANT1+
W 28		_	Į		-	THE CONTROL OF THE CONTROL	80	GR	NATS ANT AMP.
89 GR		7	ď	0 4 0 0	Corriector Name	BOM (BOD) CONTROL MODULE)	81	M	NATS ANT AMP.
OS SHIELD	-	1	į	7 8 9 10 11 12 13 14	Connector Type	Connector Type NS16FW-CS	82	R 16	IGN RELAY (F/B) CONT
91 W							83	Y KEYLES	KEYLESS ENTRY RECEIVER COMM
92 Y					_		87	BR	COMBI SW INPUT 5
93 BR		Terminal	I Color Of	Signal Name (Specification)			88	^	COMBI SW INPUT 3
94 P		è	Wire	orginal varie [opeomoanori]		4 5 7	06	Ь	CAN-L
95 GR		-	۵	FR WASHER(-)	Ø <u>F</u>	11 13 14 15 17 18 10	91	7	CAN-H
M 96	-	2	SB	OUTPUT 4		01 11 01 11	92	LG P	KEY SLOT ILL CONT
97 L		က	GR	FR WASHER(+)			93	^	ON IND
98 SHIELD		4	g	IGN			94	٨	PUDDLE LAMP CONT
		2	٦	OUTPUT 3	lal	Of Street Name (Specification)			ACC RELAY CONT
100 SB		9	В	GROUND	No. Wire		96	GR A/T SHIFT	A/T SHIFT SELECTOR POWER SUPPLY
		7	^	INPUT 3	4 LG	INTERIOR ROOM LAMP POWER SUPPLY	66	В	SHIFT P
		8	BG	OUTPUT 5	2 F	PASSENGER DOOR UNLOCK OUTPUT	100		PASSENGER DOOR REQUEST SW
Connector No.	M24	6	<b>&gt;</b>	INPUT 2	7 Y	STEP LAMP CONT	101	SB DRIV	DRIVER DOOR REQUEST SW
Constant Mana	DATA LINK CONNECTOR	10	œ	INPUT 4	8	ALL DOOR, FUEL LID LOCK OUTPUT	102	BG BLOWER	BLOWER FAN MOTOR RELAY CONT
COILIBECTO MAINE	DAIN COINT	1	PP	INPUT 1	9	DRIVER DOOR, FUEL LID UNLOCK OUTPUT	103	LG KEYLESS E	KEYLESS ENTRY RECEIVER POWER SUPPLY
Connector Type BD16FW	BD16FW	12	۵	OUTPUT 1	10 BR	REAR DOOR UNLOCK OUTPUT	107	97	COMBI SW INPUT 1
		13	æ	INPUT 5	± R	BAT (FUSE)	108	œ	COMBI SW INPUT 4
_		14	Ø	OUTPUT 2	13 B	GROUND	109	<b>*</b>	COMBI SW INPUT 2
					14 W	PUSH-BUTTON IGNITION SW ILL GND	110	9	HAZARD SW
•	/81 11 11				15 Y	ACC IND			
<b>∀</b> ∃	╫				17 W				
	3 4 5 6 7 8				H	T			
					/ 61	INT ROOM LAMP CONT			

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### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS > [HALOGEN TYPE]

S M125	me WIRE TO WIRE	pe M03FW-LC	3 2 1	]	olor Of Signal Name [Specification]		Α				. M126	-	WIRE TO WIRE	pe M03MW-LC					C	6 7			yr Of	Wire Ognal rame [Specification]			
IL LAMPS	Connector Name	Connector Type	HS		Terminal Color Of No. Wire	1	2 ,	3			Connector No.	Commontor No.	Connector Name	Connector Type			`	\	S II				nalC	No.	1	2	3
PARKING, LICENSE PLATE AND TAIL LAMPS Connector No. M123 Connector No.	BCM (BODY CONTROL MODULE)	TH40FG-NH			Signal Name [Specification]	OPLICAL SENSOR	STOP LAMP SW 1	STOP LAMP SW 2	DR DOOR UNLOCK SENSOR	KEY SLOT SW	IGN F/B	PASSENGER DOOR SW	POWER WINDOW SW COMM	PUSH-BUTTON IGNITION SW ILL POWER	LOCK IND	RECEIVER/SENSOR GND	RECEIVER/SENSOR POWER SUPPLY	TIRE PRESSURE RECEIVER COMM	SHIFT N/P	SECURITY IND LAMP CONT	COMBI SW OUTPUT 5	COMBI SW OUTPUT 1	COMBI SW OUTPUT 2	COMBI SW OUTPUT 3	COMBI SW OUTPUT 4	DRIVER DOOR SW	REAR WINDOW DEFOGGER RELAY CONT
XING So	Connector Name	r Type	H.S.		Terminal Color Of No. Wire	Ь	SB	Д	8S	ଧଃ	M	91	BR	M	N9	98	Å	٦	a9	9	98	Ь	9	٦	SB	97	9
PARKIN Connector No.	Connecto	Connector Type	7		Ferminal No.	113	116	118	119	121	123	124	132	133	134	137	138	139	140	141	142	143	144	145	146	150	151

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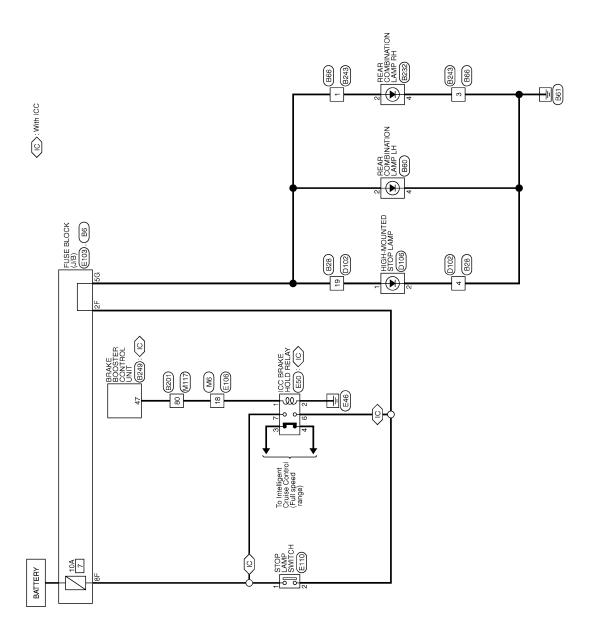
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Revision: 2013 March **EXL-307** 2014 QX50

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# STOP LAMP

Wiring Diagram - STOP LAMP -



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ŀ	18 P		Commeter No.		Connector Name WIRE TO WIRE	_	Connector Type TH80FW-CS16-TM4										Terminal Color Of	No. Wire Signal Name [Specification]	t	: m	ľ	t	+	+	+	<u>"</u>	+	BK	BR .			· .	_	31 R	32 BR -	Н	51 R					SHIELD	9T 09	╁	+	+	P			- d 99	1 <u>/9</u>	68 SHIELD	1
ŀ	+	+	-	+	+				Connector No. B60	Т	Connector Name REAR COMBINATION LAMP LH	Ť	Connector Type TH04MW-NH					1	1.0			Torminal Color Of	Signal Name [Specification]	a Mile	+	_	4 B		ı	Connector No. B66	Competer Name IMIDE TO WIDE	_	Connector Type TH24MW-NH						12 14 15 16 17 18	20		Terminal Color Of	No. Wire Signal Name [Specification]	t	S a	+	m .	4	14 W	H	16 BR -	┞	1
বা	Connector No. B6	Connector Name FUSE BLOCK (J/B)	Connector Tune NS43EDD CS	NO IZFBR-CO					\$	129 116 106				Terminal Color Of Signal Nama (Sacation)	Wire Oglial Ivalie Opecification			GR		: 5			000	D20	Connector Name WIRE TO WIRE		Connector Type TH24MW-NH					3 4 5 6	13 14 15 16 17 18 19 20 21 22 23 24			Terminal Color Of Signal Nama (Sacciffication)	allow loads	GR -		,	,	BG	BR	- [With around view monitor]			- [vvitriout around wew monitor]	<ul> <li>[With around view monitor]</li> </ul>		- [With around view monitor]	- [Without around view monitor]	SHELD	

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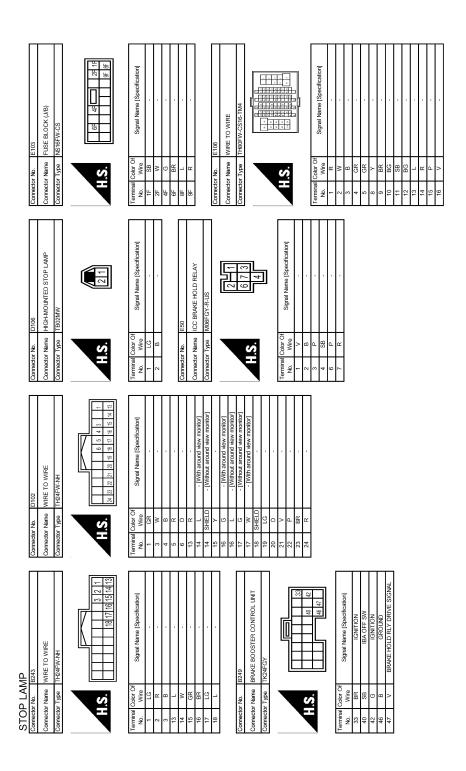
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43	45	49	20 20	52	22	29	09	19	63	199	99	99	/9	8 8	02	7.1	72	73	7	75	76	9/		78	78	162	80	8 84	88	84	82	98	87	88	06	91	92	86	
M6	WIRE TO WIRE		I HBUMW-CST6-1 M4		X 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Signal Name [Specification]																-						-						
r No.	r Nama	- recursor	Connector Type	٦	1		νį Τ	1		Color Of	Wire	W	× (	SHIFLID	G	Υ	BR	R G	ž d	BG.	R	۵ :	SB	>	- BG	Μ	Ь	쑮 >	۰ /	G	9	Ĺ	G	В	×	ч	SHIELD	> 2	(
Connector No.	Connector Name	No.	Connecto		,	7	7	1		Torminal	<u>S</u>	-	7 0	0 4	. 2	8	6	10	=	13	14	15	17	18	20	22	23	24	26	27	28	31	32	33	34	32	36	37	
# ICC]	- [With ICC]	- [Without ICC]	- [without ICC]	- [With ICC]					1 1							-								Ŧ			ſſ	T-	-T.	_	1		ification						
- [Withou									1				a										E110	STOP I AMP SWITCH	т	٦.			7	1 2		•	Of Signal Name [Specification]	_					
	ĸ	BR		>	Ĥ	+	+	7	9 _	+	╁	П	7	A >	+	Н	_	d 0	Y iii	SHIELD	-		1		т	٦.	Į.		ဂ  -			-		Wire	-	W	Н	- SB	
- [Withou	ĸ	BR		>	Н	+	+	+	+	38 98	╁	П	7	+	> >	Н	Н		Y iii	98 SHIELD	100 P		Connector No. E110	Connector Name STOP I AMP SWIT	$\neg$	٦.			ŧ				nal Color Of	_	+	+	Н	4 SB -	
_ d	ĸ	BR		>	Н	+	+	+	+	+	╁	П	✝	+	+	Н	Н	d 0	Y iii	T	Н		1		т	٦.			ဂ  -					Wire	+	2	Н	4	
۵.	- 77 R	- 78 BR		Y 67	Н	- 81	- 82		+	33 88		П	-	+	88	- 94	- 98	- 86 P	Y /6	T	Н		1	- Connector Name	Connector Two				ဂ  -				Terminal Color Of	Wire		- 2	[With ICC] 3	4	

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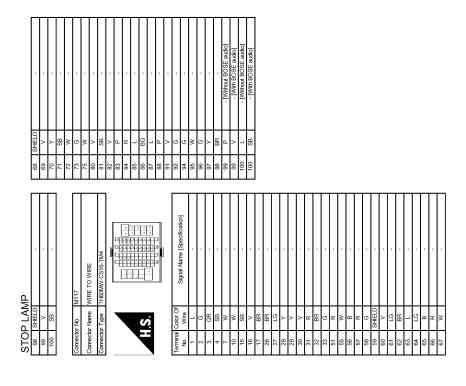
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# **BACK-UP LAMP**

Wiring Diagram - BACK-UP LAMP -

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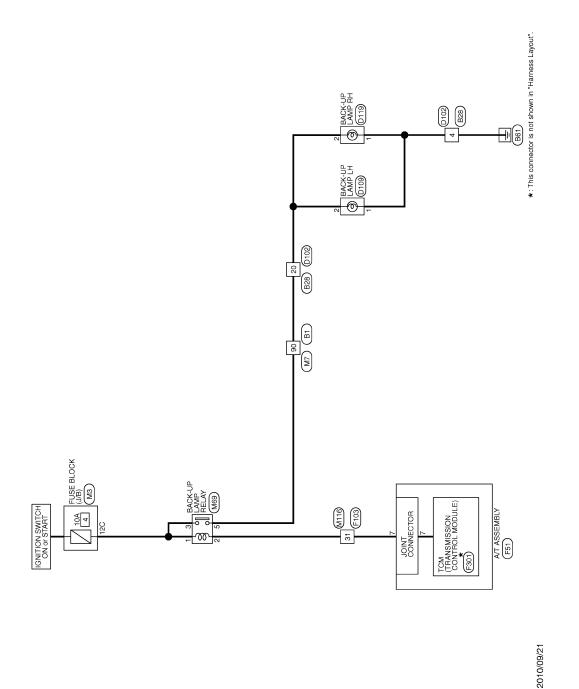
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**BACK-UP LAMP** 

Fig. 10   Fig.	BACK	BACK-UP LAMP	ļ										
Commodor Name   MRE TO WIRE   Commodor Name   Commodor	Connector No	o. B1	09	۵		1	Connector No.	). B28		Connector	T	0102	
Connector Type   Connector Type   Trickinkvish   Trickin	onnector N		62	- HS			Connector Na		E TO WIRE	Connector	Name N	VIRE TO WIRE	
1   1   1   1   1   1   1   1   1   1	onnector T	ype TH80FW-CS16-TM4	88	2			Connector Ty	rpe TH24	MW-NH	Connector	Type	H24FW-NH	
1			64	g									
Column   C			65	뽒			,	•			7		
Signate Name (Specification)   17   28   18   19   18   18   19   18   19   19	1		99	^						_	•	<u> </u>	
Control   Cont	•		29	^									
Control   Cont	Ę	* *	89	S			Š	_	2	Ę	V	5 4	
27    28    24			69	SHE				5	16 17 18 19 20 21 22 23		3	23 22 21 20 19 18 17 16 15 14	
Signat Name (Specification)   775   State   Control of Maria (Specification)   775			70	>				]]			-1		
Syprak Name (Specification)         72         L         C         Terminal Color Of Parametric Color Of Pa			73	SE									
RYMON         WINTON         WINTON </td <td>rminal Cc</td> <td></td> <td>74</td> <td>_</td> <td></td> <td></td> <td>Terminal Col</td> <td>or Of</td> <td>Simple Specification</td> <td>Terminal</td> <td>Color Of</td> <td>Signal Name [Specification]</td> <td></td>	rminal Cc		74	_			Terminal Col	or Of	Simple Specification	Terminal	Color Of	Signal Name [Specification]	
C C C C C C C C C C C C C C C C C C C	No.		75	\$				Vire	olgrial ivanie [opecification]	N	Wire	olgikal ivanie [opecindation]	
SSB         77         R         77         R         8         W         9         W         9         R <td>8</td> <td></td> <td>9/</td> <td>ä</td> <td></td> <td></td> <td>-</td> <td><u>بر</u></td> <td></td> <td>-</td> <td>GR</td> <td></td> <td></td>	8		9/	ä			-	<u>بر</u>		-	GR		
V C         N C         P C         N C         P C         N C         P C         N C         P C         N C <td>2</td> <td></td> <td>77</td> <td>œ</td> <td></td> <td></td> <td>_</td> <td>W</td> <td></td> <td>က</td> <td>^</td> <td></td> <td></td>	2		77	œ			_	W		က	^		
V         V         CR         CR <td>_</td> <td></td> <td>78</td> <td>۵</td> <td></td> <td></td> <td>L</td> <td>8</td> <td></td> <td>4</td> <td>8</td> <td></td> <td></td>	_		78	۵			L	8		4	8		
L C         R S BC         R C<	7		6/	ğ				œ		ഹ	œ		
15B         15B         17         BR         17         BR         17         BR         17         BR         PV         P	8		83	BG			H	36		9	0		
LG         LG<	12		82	>			$\vdash$	Ж Ж		13	œ		
GR         CR         CR<	13	. 91	98	PLG			H	۲.	- [With around view monitor]	14	7	- [With around view monitor]	
LG         RB         R	┝		87		1		Г	IELD	- [Without around view monitor]	Г	SHIELD	- [Without around view monitor]	
W         W         B	H		88	ď			H	В	- [Without around view monitor]	15	Υ		
SSB         SSB         SSB         TO	L		88	В			L		- [With around view monitor]	16	g	- [With around view monitor]	
L(G)         10         C         17         L         With a cound view montol         17         C         C           SHELD         3         G         R         -	H		06	Ä			H	×		16	_	- [Without around view monitor]	
BR         C	H	. ·	91	Ø			17		- [With around view monitor]	17	Ø	- [Without around view monitor]	
SMELD         3.9         G         C         T         SMELD         T         T         SMELD         T         SMELD         T         T         T         T         SMELD         T <td>Г</td> <td>BR .</td> <td>95</td> <td>ä</td> <td></td> <td></td> <td>H</td> <td>~</td> <td>- [Without around view monitor]</td> <td>17</td> <td>Α</td> <td>- [With around view monitor]</td> <td></td>	Г	BR .	95	ä			H	~	- [Without around view monitor]	17	Α	- [With around view monitor]	
Y         Y			93	9			П	IELD		П	SHIELD		
P         P	52	· ·	94	SE			H	9-		19	PI	1	
Mathematical Part   Math	54		95	9			H	36		20	0		
No.   No.	27		96	^			L	В		21	>		
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	Connector Na. M3 Connector Name FUSE BLOCK (J/B)	$\neg$	H.S.	Terminal Color Of Name (Specification) 10C H 11C R 11C
ŀ	+	33 GR	36 P · · · · · · · · · · · · · · · · · ·	46   V   Cornector No.   F301
Γ	Connector Name A/T ASSEMBLY	$\neg$	H.S.	Terminal Color Of   Signal Name   Specification   No.   Wire   Signal Name   Specification   No.   Wire   Signal Name   Specification   No.   CANH   CANH   Signal Name   Specification
Δ.	Connector No. D109 Connector Name BACK-UP LAMP LH	Connector Type NS02MW-CS	H.S.	Terminal Color Of   Signal Name (Specification)   1

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31	_		Connecto	Connector No. M69	M69	38	ŋ	
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33	SB		Connecto	or Name	BACK-UP LAWIP KELAT	44	_	
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# **ECU DIAGNOSIS INFORMATION**

# BCM (BODY CONTROL MODULE)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
FR WIFER HI	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
FR WIPER IN I	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
RR WIPER ON	Rear wiper switch ON	On
DD WIDED INT	Other than rear wiper switch INT	Off
RR WIPER INT	Rear wiper switch INT	On
DD WACHED CW	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD WIDED CTOD	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
TUDNI CIONAL D	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAIVIP SVV	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
UI DEAIN ON	Lighting switch HI	On
HEAD LAMD CW/4	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
DASSING SW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ALITO LICUT CM	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

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### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

Monitor Item	Condition	Value/Status
TD FOC CW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
SOOK OW BIC	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
SOOK OW NO	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
DOOK OW-KE	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
JOOK GW-BK	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
ODE LOCK OW	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
ODE UNLOCK SW	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
NET CIL LK-SW	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
NET CTL UN-SW	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
TIVID OF LIN SW	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the key is not pressed	Off
RNE-LOCK	LOCK button of the key is pressed	On
DKE TINI OCK	UNLOCK button of the key is not pressed	Off
RKE-UNLOCK	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
DKE DVIIC	PANIC button of the key is not pressed	Off
RKE-PANIC	PANIC button of the key is pressed	On
	UNLOCK button of the key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	On

< ECU DIAGNOSIS INFORMATION >

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Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
OF FIGAL DENOOR	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
(EQ 5W -DIX	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
TEQ OV NO	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
PEO SW -RD/TP	Back door request switch is not pressed	Off
REQ SW -BD/TR	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
GN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
SNANL SW 2	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
DETE/CANCE SW	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
71 1 1 14/14 OVV	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
JNLK SEN -DR	Driver door is unlocked	Off
THE CENT DIX	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
5511 511 II DIN	Push-button ignition switch (push-switch) is pressed	On
GN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
DETE GAA -ILDIAI	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
JI I FIN -IFUIVI	Selector lever in P or N position	On

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### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

Monitor Item	Condition	Value/Status	
CET D. MET	Selector lever in any position other than P	Off	
SFT P -MET	Selector lever in P position	On	
CET N. MET	Selector lever in any position other than N	Off	
SFT N -MET	Selector lever in N position	On	
	Engine stopped	Stop	
ENIONE OTATE	While the engine stalls	Stall	
ENGINE STATE	At engine cranking	Crank	
	Engine running	Run	
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off	
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off	
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off	
VEH SPEED 1	While driving	Equivalent to speed- ometer reading	
VEH SPEED 2	While driving	Equivalent to speed- ometer reading	
	Driver door is locked	LOCK	
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY	
	Driver door is unlocked	UNLOCK	
	Passenger door is locked	LOCK	
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY	
	Passenger door is unlocked	UNLOCK	
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset	
	Ignition switch ON	Set	
DDMT ENO CEDE	The engine start is prohibited	Reset	
PRMT ENG STRT	The engine start is permitted	Set	
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset	
VEV SW. SLOT	The key is not inserted into key slot	Off	
KEY SW -SLOT	The key is inserted into key slot	On	
RKE OPE COUN1	During the operation of the key	Operation frequency of the key	
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_	
CONFOMIDALI	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet	
CONFRM ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done	
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet	
JONFINIVI ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done	
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet	
CONFINIVI IDS	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done	

#### < ECU DIAGNOSIS INFORMATION >

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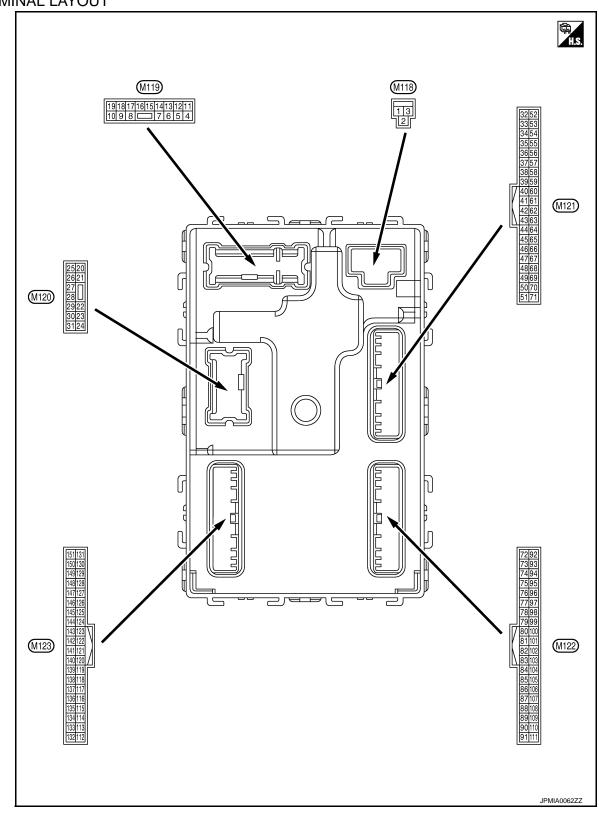
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Monitor Item	Monitor Item Condition			
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet		
CONFIRMIDZ	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done		
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet		
CONTINUED	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done		
TP 4	The ID of fourth key is not registered to BCM	Yet		
17 4	The ID of fourth key is registered to BCM	Done		
TP 3	The ID of third key is not registered to BCM	Yet		
IF 3	The ID of third key is registered to BCM	Done		
TP 2	The ID of second key is not registered to BCM	Yet		
IF Z	The ID of second key is registered to BCM	Done		
TP 1	The ID of first key is not registered to BCM	Yet		
IF I	The ID of first 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 tire		
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire		
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire		
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire		
ID DECST EL 1	ID of front LH tire transmitter is registered	Done		
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet		
ID REGST FR1	ID of front RH tire transmitter is registered	Done		
ID REGST FRT	ID of front RH tire transmitter is not registered	Yet		
ID REGST RR1	ID of rear RH tire transmitter is registered	Done		
ID VEROLI VVI	ID of rear RH tire transmitter is not registered	Yet		
ID DECCT DI 1	ID of rear LH tire transmitter is registered	Done		
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet		
WARNING LAMP	Tire pressure indicator OFF	Off		
WARNING LAMP	Tire pressure indicator ON	On		
DUZZED	Tire pressure warning alarm is not sounding	Off		
BUZZER	Tire pressure warning alarm is sounding	On		

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TERMINAL LAYOUT



PHYSICAL VALUES

### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

Terminal No. Description				Value		
+ (VVire	e color) –	Signal name	Input/ Output	Condition		(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4	Intorior vocam la man		Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V	
(-round)		Interior room lamp power supply	Output	Interior room lamp battery saver is not activated.  (Outputs the interior room lamp power supply)		Battery voltage
5 (L) Ground	Cround	Passenger door UN- LOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
	Ground		Output		Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Otan lane	Output	Step lamp	ON	0 V
(Y)	Ground	Step lamp	Output		OFF	Battery voltage
8 (V) Ground	All doors, fuel lid LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage	
				Other than LOCK (Actuator is not activated)	0 V	
9 (G) Ground	Driver door, fuel lid UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage	
				Other than UNLOCK (Actuator is not activated)	0 V	
10 (BR) Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage	
	Oround	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		0 V
					OFF	0 V
14 (W) Ground	Push-button ignition				NOTE: When the illumination brightening/dimming level is in the neutral position	
	Ground	Ground switch illumination Out	Output	Output Tail lamp	ON	10 0 2 ms JSNIA0010GB
15		und ACC indicator lamp		Lamatein and the Control	OFF or ON	Battery voltage
(Y) Ground	Output		Ignition switch	ACC	0 V	

### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

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Terminal No. (Wire color)		Description				Value
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0 V
17 (W) G		Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
					Turn signal switch OFF	0 V
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(V)		control		lamp	ON Turn signal switch OFF	0 V 0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
23 (G)	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage
					Other than OPEN (Back door opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s
					OFF (Character)	6.5 V
26 (G)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
(5)					ON (Operated)	Battery voltage

# < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	Λ
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
34	Ground	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	В
(SB)	Giouna	na (–)		OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	E
35	Canada	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	G H
(V)	Ground				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0  JMKIA0063GB	J K
38	Canada	Back door antenna (–	Output	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	M
(B)	Ground	)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	O

### < ECU DIAGNOSIS INFORMATION >

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	inal No.	Description				Value
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
39	Ground	Back door antenna		When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(W)	Glound	(+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
47	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage
(Y)		E/R) control	•	-	ON	0 V
52	52 GR) Ground Starter relay control	Output	Ignition switch	When selector lever is in P or N position	Battery voltage	
(SB)	0.00	Claire Foldy Collins	Carpar	ON	When selector lever is not in P or N position	0 V
60	Ground	Push-button ignition	Input	Push-button igni- tion switch (push	Pressed	0 V
(BR)	Ground	switch (Push switch)	iliput	switch)	Not pressed	Battery voltage
61 (W)	Ground	Back door opener request switch	Input	Back door opener request switch	ON (Pressed)  OFF (Not pressed)	0 V  (V) 15 10 5 10 ms  JPMIA0016GB 1.0 V
64	Crawad	Intelligent Key warn-	Outnut	Intelligent Key	Sounding	0 V
(V)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	Battery voltage
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
					Not in stop position	0 V
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	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
					Pressed	0 V
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close) ON (Door open)	(V) 15 10 5 0 JPMIA0011GB 11.8 V 0 V

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#### < ECU DIAGNOSIS INFORMATION >

	ninal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
74	Ground	Passenger door antenna (-)	Output	When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	(SB) Ground te			quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
75	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(GR)	Glound				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
76		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s
(V)	Ground	(-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

# < ECU DIAGNOSIS INFORMATION >

	ninal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
77		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(LG)	Ground	(+) Output Switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB		
78	0	Room antenna 1 (–)	0	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s  JMKIA0062GB
78 (Y)	Ground	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
79	Ground	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)	Sisting	(Instrument panel)	-	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s  JMKIA0063GB

#### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			0 100	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82	Ground	Ignition relay [Fuse	Output	Ignition switch	OFF or ACC	0 V
(R)	Ground	block (J/B)] control	Output	ignition switch	ON	Battery voltage
83	Ground	Remote keyless entry receiver communica-		During waiting		(V) 15 10 5 0  JMKIA0064GB
(Y)		tion		When operating e	ither button on the key	(V) 15 10 5 1 ms  JMKIA0065GB

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

	inal No.	Description				Value	А
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	A
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	С
					Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms	E
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	Rear wiper switch ON (Wiper intermittent dial 4)	1.3 V  (V) 15 10 2 ms  JPMIA0039GB 1.3 V	G H
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB	J K

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# < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 2 ms JPMIA0037GB
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 2 ms 1.3 V
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
90 (P)	Ground	CAN-L	Input/ Output	_		_
91 (L)	Ground	CAN-H	Input/ Output	_		_

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
					OFF	Battery voltage
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB
					ON	0 V
					OFF or ACC	Battery voltage
93 (V)	Ground	ON indicator lamp	Output	Ignition switch ON ON		0 V
					OFF	Battery voltage
94 (Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V
					OFF	0 V
95 (BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	_	1.00 0. 0.1	Battery voltage
99	0	Selector lever P posi-	la a cat	Colonton loves	P position	0 V
(R)	Ground	tion switch	Input	Selector lever	Any position other than P	Battery voltage
					ON (Pressed)	0 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
102		Blower fan motor re-	•		OFF or ACC	1.0 V 0 V
(BG)	Ground	lay control	Output	Ignition switch	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB	
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	

# < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

	inal No. e color)	Description				Value	А
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	$\wedge$
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C D
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	E
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	G H I
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB	J K
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms	M
						1.3 V	0

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#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB
					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms 1.1 V

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description	10117			
	inai No. e color)	Description	Input/		Condition	Value
+	_	Signal name	Output			(Approx.)
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)	0.00.10	<b>Opinoa</b> . <b>Conico</b> .		ON	When dark outside of the vehicle	Close to 0 V
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage
		Stop lamp switch 2		Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
118	Ground	(Without ICC)	Input	Otop lamp switch	ON (Brake pedal is de- pressed)	Battery voltage
(P)	Giodila	Stop lamp switch 2	iliput		OFF (Brake pedal is not de- brake hold relay OFF	0 V
		(With ICC)			ON (Brake pedal is de- rake hold relay ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121	Ground	Key slot switch	Input	When the key is in	serted into key slot	Battery voltage
(BR)	Cround	rtoy diot dwitori	mpat	When the key is n	ot inserted into key slot	0 V
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V  Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0
						JPMIA0013GB 10.2 V
				Ignition switch OF	F or ACC	Battery voltage

# < ECU DIAGNOSIS INFORMATION >

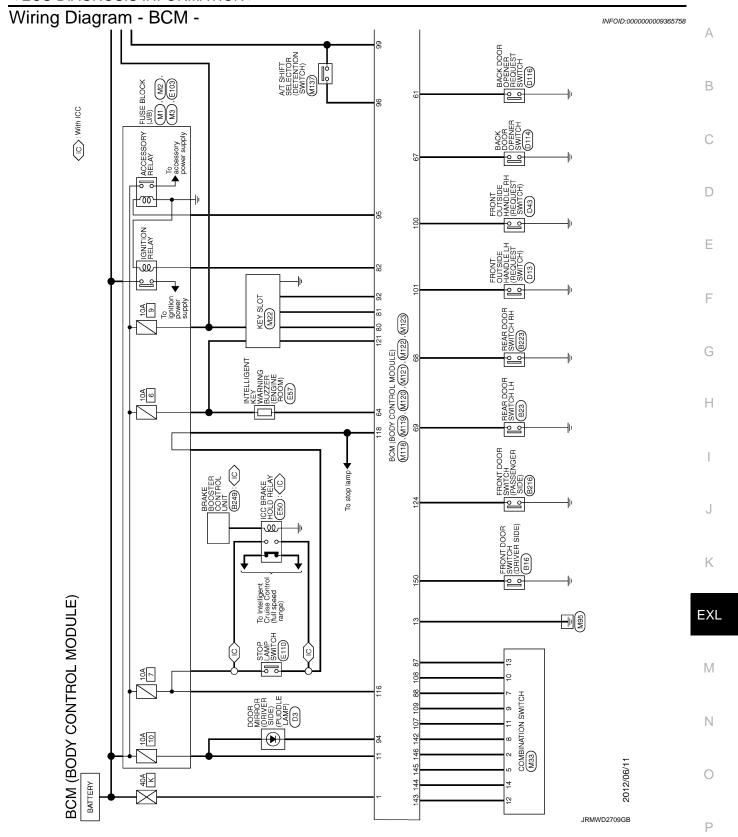
	nal No. color)	Description			0 199	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					ON (Tail lamps OFF)	9.5 V <b>NOTE</b> :
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps ON)	The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5 U JPMIA0159GB
					OFF	0 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF ON	Battery voltage 0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch ON	<u> </u>	0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(Y)	Oround	power supply	Output	igilition switch	ACC or ON	5.0 V
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 + 0.2s OCC3881D
(L)	Ground	er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
140 (GR)	Ground	Selector lever P/N position	Input	Selector lever	P or N position  Except P and N positions	Battery voltage 0 V
+					ON CONTRACTOR OF THE PROPERTY	0 V
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s
						11.3 V

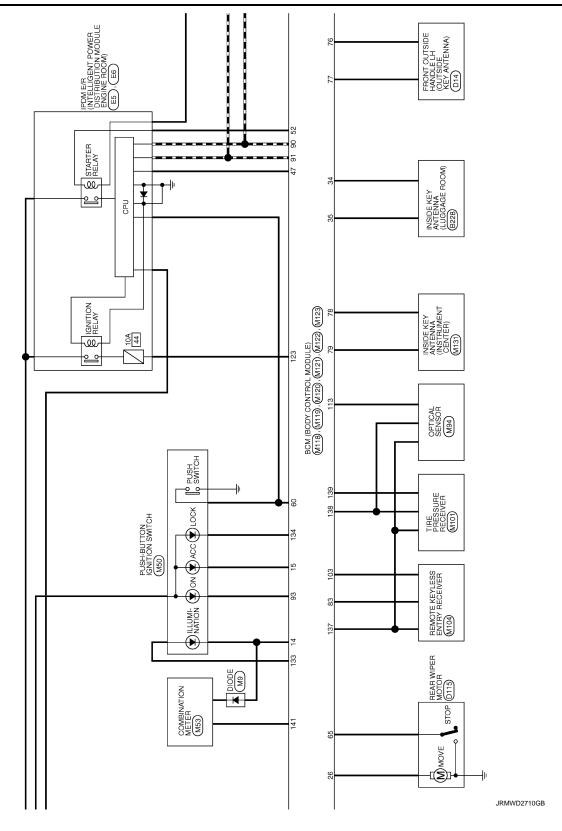
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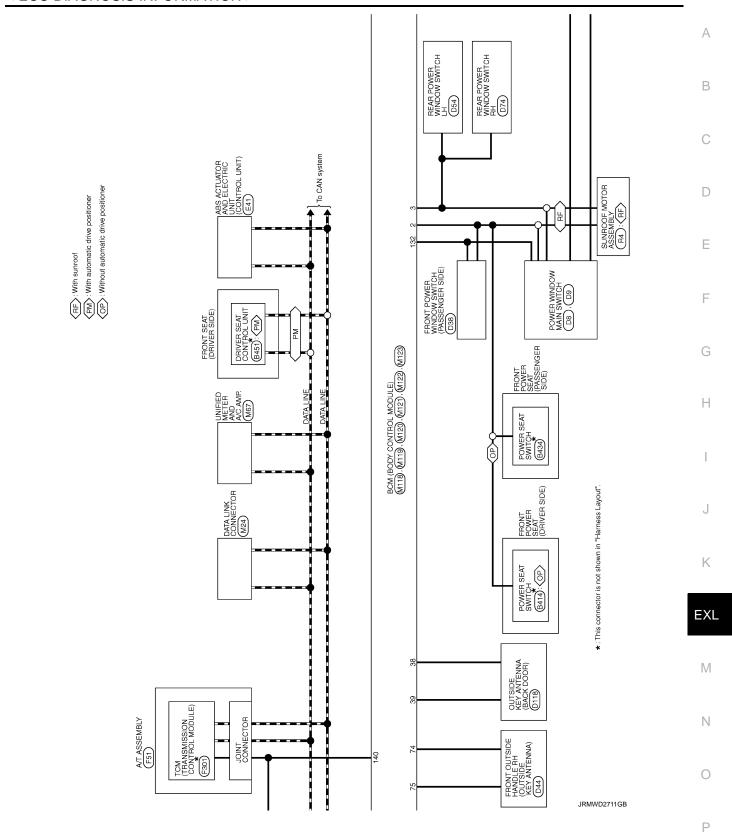
	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	0 V
					Lighting switch 1ST	(V)
1.10		Cambination avitab		Combination	Lighting switch HI Lighting switch 2ND	(V) 15 10
142 (BG)	Ground	Combination switch OUTPUT 5	Output	switch (Wiper intermit- tent dial 4)	Turn signal switch RH	5 0 2 ms JPMIA0031GB
					All switches OFF (Wiper intermittent dial 4)	10.7 V 0 V
					Front wiper switch HI (Wiper intermittent dial 4)	
143		Combination switch		Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10
(P)	Ground	OUTPUT 1	Output	switch	Any of the conditions below with all switches OFF  Wiper intermittent dial 1  Wiper intermittent dial 2	2 ms
					Wiper intermittent dial 2     Wiper intermittent dial 3     Wiper intermittent dial 6     Wiper intermittent dial 7	JPMIA0032GB 10.7 V
					All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	
144		Combination switch		Combination	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15
(G)	Ground	OUTPUT 2	Output	switch	Rear washer switch ON (Wiper intermittent dial 4)	10 5 0
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	2 ms JPMIA0033GB 10.7 V
					All switches OFF	0 V
					Front wiper switch INT	(10)
				Combination	Front wiper switch LO	(V) 15
145 (L)	Ground	Combination switch OUTPUT 3	Output	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms
						10.7 V

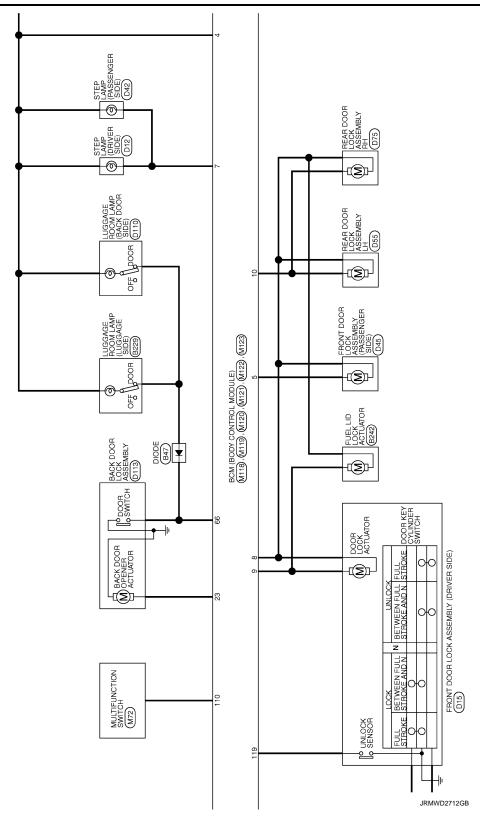
#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	0 V
					Front fog lamp switch ON	
				Combination	Lighting switch 2ND	(V)
146	Ground	Combination switch	Output	switch	Lighting switch PASS	10
(SB)	0.00.110	OUTPUT 4	o a .par	(Wiper intermit- tent dial 4)	Turn signal switch LH	0 JPMIA0035GB 10.7 V
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
151	Cround	Rear window defog-	Output	Rear window de-	Active	0 V
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage

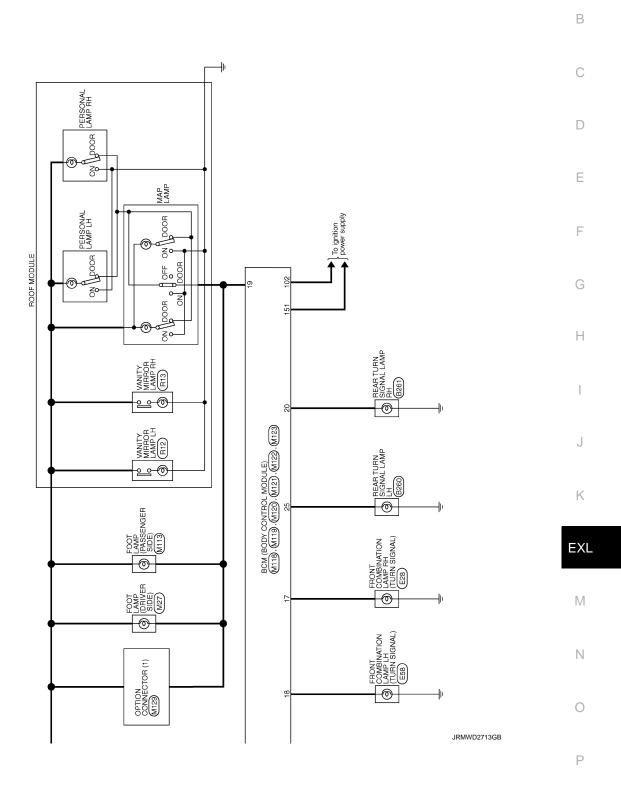








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BCM (BODY CONTROL MODULE) Cornector No. Bit6 Comedor Name FRONT DOOR SWITCH (DRIVER SIDE) Comedor Type A03FW	Terminal Color Of Sgnal Name (Specification) No. Wire 2 L	Corrector No. B228 Corrector Name NSDE KEY ANTENNA (LUGGAGE ROOM) Corrector Type RK02FGY	Corrector No. 8242 Connector Name FUEL LID LOCK ACTUATOR Connector Type MO4FW-LC
H.S.	Corrector No. B216 Corrector Name FRONT DOOR SWITCH (PASSENGER SIDE) Corrector Type A03FW	H.S.	H.S.
Terminal Color Of Signal Name (Specification) No Wire 2 V	H.S.	Terminal Color Of   Signal Name (Specification)   No.   Wire	Terminal Color Of   Signal Name [Specification]   No.   Wire
Cornector No. B23 Cornector Name REAR DOOR SWITCH LH Cornector Type A03FW	Terminal Color Of Signal Name (Specification) No. Wire 2 L	Corrector No. B229 Corrector Name Lucsade Room Lavir (Lucsade SDE) Corrector Type TK03FW	Corrector No. B249  Corrector Name BRAME BOOSTER CONTROL UNIT Corrector Type TY24FGY
H.S.	Connector No. B223 Connector Name REAR DOOR SWITCH RH Connector Type A03FW	H.S.	H.S.
Terminal Color Of   Signal Name [Specification]   No.   Wire	H.S.	Terminal Color Of No. Wire Signal Name [Specification]	Terminal Coor Of Signal Name (Specification) No. Wire Signal Name (Specification) No. Signal Name (Specification) No. Signal Name (Specification)
Connector No. B47  Connector Name DIODE  Connector Type 24335_C3900	Terminal Color Of Signal Name (Specification) No. Wire Signal Name (Specification)	, ,	BRAKE HO
H.S.			

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< ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

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Corrector No. D3  Corrector Name DOOR MIRROR (DRIVER SIDE)  Corrector Type TF24MW-N4H  (2 11 10   7 6 5 3 2   1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal Color Of   Signal Name (Specification)   No.   Wive   Wive   Wive   Signal Name (Specification)   Signal Name   Signa	Terminal Color Of Signal Name [Specification]  Terminal Color Of Signal Name [Specification]
Corrector No. B451  Corrector Type THG2PW    1   3   4   4   4   4   4   4   4   4   4	Terrninal Color Of   Signal Name (Specification)   No. Wire   Wire   Wire   PLUSE (ECELINACE)   Wire   W	
Corrector No. B414  Corrector Type NST0FWLCS  2 1	Terminal Color Of No. Signal Name (Specification)  1	Terminal Color Of   Signal Name (Specification)   No.   Wire   Signal Name (Specification)
BCM (BODY CONTROL MODULE) Connector No. B260 Connector Name REAR TURN SIGNAL LAMP LH Connector Type H502FG-W	Terminal   Color Of   Signal Name   Specification    Wire	
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**EXL-347** Revision: 2013 March 2014 QX50

Connector No.   D42	Connector Name STEP LAMP (PASSENGER SIDE)	Connector Type TR02EW	7				0 E		<u>_</u>	No. Wire ognerine controlling	2 SB	┨		Connector No. D43	Connector Name FRONT OUTSIDE HANDLE RH (REQUEST SWITCH)	Hooving the second	Commedial lype RAUZFL				(12)		<u></u>		2 B									
Connector No. D15	Connector Name FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)	Connector Type F06FGY-RS				ΙĿ	((1 2 3 4 5 6))		Terminal Color Of	No. Wire olgital realite [Specification]	) d		4 B	5 Y	- · · · · · 9		Connector No. 1D38	ı	Connector Name FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	Connector Type NS16FW-CS	•		_	8 9 10 11 17		lar	No. Wire	 	9 6	10 W	11 B	Н	 16 V -	
Connector No. D13	Connector Name FRONT OUTSIDE HANDLE LH (REQUEST SWITCH)	Connector Type RK02FI		<					Terminal Color Of Simple Color Of	No. Wire Signal Name [Specimoauou]		┨		Connector No. D14	Connector Name FRONT CUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA)	Comment of the Control of the Contro	Connector Type KNUZMGY		✓		(1 2) (1 2)		le l	1	2 SB									
BCM (BODY CONTROL MODULE)	- Y 9	, BX	0 6	10 Y	11 G	13 P -	14 V -	15 B -	Connector No. D9	Connector Name POWER WINDOW MAIN SWITCH	Connector Type NS03FW-CS				₹ -	17 19			Terminal Color Of	No. Wire Signal Name [Specification]	17 B -	+	Connector No. D12	Connector Name STEP LAMP (DRIVER SIDE)	Connector Type TB02FW	•		1 F				ā	1 R	2 SB -

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< ECU DIAGNOSIS INFORMATION >

#### [HALOGEN TYPE]

Connector No. D110 Connector Name (LUCGAGE ROOM LANP (BACK DOOR SDE) Connector Type TKIGFW	H.S.	Corrector Name   BACK DOOR LOCK ASSEMBLY	
Corrector No. D74  Corrector Name REAR POWER WINDOW SWITCH RH  Corrector Type NS08FW-C5	Ferminal Color Of Nurse   Signal Name   Specification   Nurse   Nurs	Corrector No. 1076 Corrector Name REAR DOOR LOCK ASSEMBLY RH Corrector Type EIGEGY-RS  H.S. Terminal Color Of Signal Name [Specification] 1	
Corrector No. D54  Corrector Name REAR POWER WINDOW SWITCH LH  Corrector Type NSD8FW-CS	H.S.	Corrector No. DSS Corrector Name REAR DOOR LOCK ASSEMBLY LH Corrector Type EDSFGY-RS  H.S. (1211) Terminal Color Of Name (Specification) 1 V V 2 G	
BCM (BODY CONTROL MODULE) Connector Name proof consect evicas en curses extranses Connector Type RKG2MGY	H.S.	Connector Name Insort book Lock Asserting Publishers side.    Connector Type   ED6FOY-RS	

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Corrector No. E28  Corrector Name FRONT COMBINATION LAMP RH  Corrector Type RS08FB-PR	H.S.	al Color Of Signal Name [Specification] Wire BY BW BW		Corrector No. E41  Corrector Name Ass ACTUATOR AND ELECTRIC UNIT CONTROL UNIT  Corrector Type BAAAZFB-AHZ4LH	H.S.	Color Of Signal N Wire B B G G R R R B B	1 - 1   E
Connec		No. 2 A 4	9 ~ 8	Connec	7	Terminal No.	0 7 6 1 7 1 1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1
E5 FORMS TO SOUR TO STANDARD MODULE FORMS FOOD THEODY-CS12-M4-1V		Signal Name [Specification]			Еб рам ей-ист. поем по тем по	44 4 4 3 3 8	Signal Name [Specification]
	E S:	Color Of Wire	; - □ ≥ □	6 GR L 86	1 1 . 1 1	H.S.	No. Wire No. Wire 39 P L 41 B/W 43 SB 44 BR BR 45 G G R A16 R R R R R R R R R R R R R R R R R R R
Connector No. Connector Name Connector Type		Terminal No. 4 4 5 7	1 19 19 25 25	38 30 24 32 34	Connector No. Connector Name	7	Terminal No. 39 40 41 44 45 46
Connector No. D116  Connector Name BACK DOOR OPENER REQUEST  Connector Type TKC2MBR-P	H.S.	Terminal Color Of   Signal Name [Specification]   No.   Wire   Y   W	Connector No. D118 Connector Name OUTSIDE KEY ANTENNA (BACK DOOR) Connector Type RKI02FGY	H.S.	Terminal Color Of   Signal Name   Specification		
BCM (BODY CONTROL MODULE) Cornector Nan. BACK DOOR OFENER SWITCH Connector Type TK02MBR-P	H.S.	Terminal Color Of   Signal Name (Specification)   No.   Wire   1 GR	Connector No. D115 Connector Name REAR WIPER MOTOR Connector Type C.IO4FW-1V	H.S.	Terminal Color Of Signal Name (Specification) No. Wire 2 G 3 O	-	

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< ECU DIAGNOSIS INFORMATION >

#### [HALOGEN TYPE]

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Connector No E301	Τ	Connector Name TCM (TRANSMISSION CONTROL MODULE)	Connector Type SP10FG		•			(112 3 4 5)		?) •		Terminal Color Of	No. Wire Signal Name [Specification]	1 - IGNITION POWER SUPPLY	2 - BATTERY POWER SUPPLY	3 - CAN-H	4 - K-LINE	5 GROUND	6 - IGNITION POWER SUPPLY		8 - CAN-L	9 - STARTER RELAY				Connector No. M1	Connector Name FUSE BLOCK (J/B)	CM WITCOOL	Comector type NSUBHW-MZ			3A 13	ON 74 64 54 44				No. Wire Signal Name [Specification]	t	t	+	+	+	+	+	. X	8A L			
Connector No F110		Connector Name STOP LAMP SWITCH	Connector Type M04FW-LC	-	[			9 4	1 2	<u> </u>		Terminal Color Of	No. Wire Signal Name [Specification]	1 L	2 W	3 ×	4 SB			Connector No. F51	Γ	Connector Name A/T ASSEMBLY	Connector Type RK10FG-DGY		<		(5 4 3 2 1		9 2 8 5 7 8	)	Terminal Color Of	Wire		BR BATTERY	3 O CANH	> 0	Y	~		GR	j a								
Connector No F58		Connector Name FRONT COMBINATION LAMP LH	Connector Type RS08FB-PR	-	_			_	2	<i>"</i>		Terminal Color Of	No. Wire	2 B	3 B/Y -			9	7 P	8 BG -			Connector No. E103	Agril Ago id agril actionment	$\neg$	Connector Type NS16FW-CS	•			6F 4F 2F 1F	20 E			E E	No. Wire	$^{+}$	: 0	+	ПХ	+	+								
BCM (BODY CONTROL MODULE)	26 LG DP.FL	27 GR DS.RL	28 G UZ	29 LG DS.RR	30 SB BLS	34 B VNC OFF SW	- NWO	200	45 BUS-H		Connector No.   F50		Connector Name ICC BRAKE HOLD RELAY	Connector Type M06FGY-R-US		[ ]	2017		/ Q					No. Wire Signal Name [Specification]	- ·	4	+	+	ъ h	4		Connector No. E57	Connector Name Intelligent KEV WARNING RIZZER (ENGNE BOOM)	CONTROL MAINE	Connector Type RK03FBR		~	<b>«</b>	}	H.S. ((1 3))				Terminal Color Of Signal Name [Specification]		1 Y	3 <		

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BCM (BODY CONTROL MODULE)	Connector No. M9	Cornector No. M24	Connector No. M33	
Connector Name FUSE BLOCK (J/B)	e e	an e	le l	MITCH
Connector Type NS10FW-CS	Connector Type 24335_C9900	Connector Type BD16FW	Connector Type TH16FW-NH	
_				<b>[</b>
48.38			1 2 3	4 5 6
		3 4 5 6 7 8	7 8 9	10  11  12  13  14
Terminal Color Of Signal Name (Specification)	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name (Specification)	Terminal Color Of Signal Nam	Signal Name [Specification]
+	$^{+}$	+	۵	FR WASHER(-)
Н	2 W	Н	SB	OUTPUT 4
5B BG .		<b>в</b> -		FR WASHER(+)
- 1 do 20	Connector No. M22	7 \	9 _	OUTPUT 3
╀	Г	9 8	B 9	GROUND
- BS 86		Ľ		INPUT 3
	Connector Type TH12FW-NH	14 P	BG	OUTPUT 5
		16 Y -	Υ	INPUT 2
Connector No. M3			ď	INPUT 4
Connector Name FUSE BLOCK (J/B)			9] -	INPUT 1
CO WILLOWS	ī	Connector No. M2/	a 8	SUIPUI 1
Connector Type NSTZFW-CS	12356	Connector Name FOOT LAMP (DRIVER SIDE)	E C	INPUL 5
-	[ ] II	Connector Type A02FW	,	2 1015
	lal (		Connector No. M50	
126 116 106 9C 7C 8C	No. Wife		Connector Name PUSH-BUTTON IGNITION SWITCH	NITION SWITCH
		<u> </u>	Connector Type TK08FBR	
	W		,	
Terminal Color Of Signal Name [Specification]	5 Y ILL BAT			
10C L -	8	<u></u>		2 3
+	11 BR KEY SWITCH SIGNAL		4 5 6	6 7 8
95 S		2 BR		
Н				
9C BG -			Terminal Color Of Signal Nam	Signal Name [Specification]
			$^{+}$	
			2 W	
			H	
			5 GR	
			+	

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< ECU DIAGNOSIS INFORMATION >

#### [HALOGEN TYPE]

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THOPWAND METER   THOP	7H22FW-NH1    14 22 43 44 43 48 47		Connector Name TIRE PRESSURE RECEIVER
Terminal Color Of   Wise   W		Connector Type TH16FW-NH	
Terminal Color Of Wase 1 41 V V V V V V V V V V V V V V V V V	99		
		H.S. 1 4 6 8 14 16 14 16	H.S.
V 14	Signal Name [Specification]	Terminal Color Of Signal Name [Specification] No. Wire	Terminal Color Of Signal Name [Specification] No. Wire
42 ×	ACC POWER SUPPLY FUEL LEVEL SENSOR SIGNAL	1 B GROUND 3 V ACC	1 BG GROUND
17.7	INTAKE SENSOR SIGNAL	4 R ILL	4 Y BATTERY
pecilicationij 44	IN-VEHICLE SENSOR SIGNAL	<b>*</b>	
BATTERY POWER SUPPLY 45 P	AMBIENT SENSOR SIGNAL	6 SB AV COMM (H)	Connector No M404
0	NHALST GAS / OUTSIDE COOR DETECTING SENSOR SIGNAL	8	_
53 G	IGNITION POWER SUPPLY	14 Y DISK EJECT SIGNAL	Connector Name   REMOTE KEYLESS ENTRY RECEIVER
SIGNAL 54	BATTERY POWER SUPPLY	16 G HAZARD ON	Connector Type JAB04FB
AIR BAG SIGNAL 55 B	GROUND		•
36 L	DEAKE ELLID LEVEL SMITCH SICHAL	Commoder No.	
WITCH GROUND 58 BR	FUEL LEVEL SENSOR GROUND	COLUMN TO THE PROPERTY OF THE	
ILL GND 59 GR	INTAKE SENSOR GROUND	Connector Name OPTICAL SENSOR	1 1 1 T
	IN-VEHICLE SENSOR GROUND	Connector Type TK03FW	11.3.
GNAL 61	AMBIENT SENSOR GROUND		
62	SUNLOAD SENSOR GROUND		
SNAL (LCD-AMP.) 63	•		nal
GNAL (AMPLCD)	ECV SIGNAL	£	
VEHICLE SPEED SIGNAL (8-PULSE) 69 L PARKING RRAKE SWITCH SIGNAL 70 R FAC	FACH DOOR MOTOR POWER SLIPPLY	1.5.	1 BG GROUND
- A	GROUND		. PC
SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) 72 P	CAN-L		
SEAT BELT BUCKLE SWITCH SKINAL (PASSENGER SIDE)		la	
WASHER LEVEL SWITCH SIGNAL		No. Wire	
ILLUMINATION CONTROL SIGNAL			
SWITCH SIGNAL			
ENTER SWITCH SIGNAL		3 B GROUND	
TRIP A/B RESET SWITCH SIGNAL			
ILLUMINATION CONTROL SWITCH SIGNAL (+)			

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Cornector No. M119 Cornector Name BCM (BODY CONTROL MODULE)
Connector Type NS16FW-CS
H.S.
Terminal Color Of Signal Name [Specification]
4 LG INTERIOR ROOM LAMP POWER SUPPL 5 L PASSENGER DOOR UNLOCK OUTPUT
> >
9 G DRIVER BOOK, FUEL LID UNLOCK OUTPUT 10 BR REAR BOOR UNLOCK OUTPUT
11 R
14   W   PUSH-BUTTON IGNITION SW ILL GND
18         BG         TURN SIGNAL LH (FRONT)           19         V         INT ROOM LAMP CONT
Corrector No. M120 Corrector Name BCM (BODY CONTROL MODULE) Corrector Type NS12FW-CS
H.S. 25 26
Terminal Color Of Signal Name (Specification) No. Wire Signal Name (Specification)
9 0
25 G TURN SIGNAL LH (REAR) 26 G REAR WIPER OUTPUT
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Commonder No. D43	ı	Connector Name VANITY MIRROR LAMP LH	Connector Type MCA02FW					<u>د</u> ک	7	Terminal Color Of Signal Name (Specification)	No. Wire Ognarivarie Especification		2 - 2		Connector No. 1813		Connector Name VANITY MIRROR LAMP RH	Connector Type MCA02FW				- <u>I</u> -	7		Terminal Color Of	No. Wire Signal Name [Specification]	- 1	2									
NA M4327	ı	Name A/T SHIFT SELECTOR	Type TH12FW-NH			[	<u></u>	12345	7 8 9 10 11	Color Of Signal Many Consideration	0	M 2	· ·				SB		GR .			No. R4	Name SUNBOOF MOTOR ASSEMBLY	T.m. VEA40EOV	Collector type TEATOR'S			1	7 8 9 10		Solor Of Signal Name [Specification]	GR SW-BIT1	SN	BR +B	L SPEED SENSOR(2P)	F	G GROUND
old responses		Connector Name	Connector Type				`	Ę		Terminal Color Of	ġ	- (	2	ю 4	. 5	> _	œ	6	10	11		Connector No.	Connector Name					7	₹		Terminal Color Of No. Wire	-	2	7	8	6	10
BCM (BODY CONTROL MODULE)	LINE TRESSONE RECEIVEN COMIN	SECURITY IND LAMP CONT	COMBI SW OUTPUT 5	COMBI SW OUTPUT 1	COMBI SW OUTPUT 2	COMBI SW OUTPUT 3	COMBI SW OUTPUT 4	DRIVER DOOR SW	REAR WINDOW DEFOGGER RELAY CONT	M129	OPTION CONNECTOR (1)		THOSMW-NH				8	· ·			Signal Name [Specification]	1			M131	Connected Money Alone MEV ANTERNA (NICTOLINEAT CENTED)	INSIDE RET ANTENNA (INSTRUMENT CENTER)	RK02FGY	<		(12			Constant Name Of Association Co.	ognal Name [opecification]		
]   	٦ و	် ပ	BG	۵	9	٦	SB	Pl	9	П	Connector Name		Connector Type	•	•	Į	e	į			erminal Color Of	o	œ			Nome 1	or Name	Connector Type	7	Ţ	ķ			erminal Color Of	Wire	BR	>
	340	141	142	143	144	145	146	150	151	Connector No.	Connecto		Connect	_		_	7	1			Terminal	က	9		Connector No.	0	Connect	Connecti		_	7			Termina	No.	-	2

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#### Fail-safe

#### FAIL-SAFE CONTROL BY DTC

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

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

Display contents of CONSULT	Fail-safe	Cancellation
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 $ON \rightarrow OFF$
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent  • Starter control relay signal  • Starter relay status signal
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent  Starter motor relay control signal  Starter relay status signal (CAN)
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 (Battery voltage)</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 position attained at the time of DTC detection	When any of the following conditions are fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	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 becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

#### REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

#### Condition of cancellation

- 1. More than 1 minute is passed after the rear wiper stops.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

#### DTC Inspection Priority Chart

INFOID:0000000009365760

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 CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

Priority	DTC	Λ
	B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION	В
	<ul> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SW</li> <li>B2605: PNP SW</li> </ul>	С
4	<ul> <li>B2608: STARTER RELAY</li> <li>B260A: IGNITION RELAY</li> <li>B260F: ENG STATE SIG LOST</li> <li>B2614: ACC RELAY CIRC</li> </ul>	D
	<ul> <li>B2615: BLOWER RELAY CIRC</li> <li>B2616: IGN RELAY CIRC</li> <li>B2617: STARTER RELAY CIRC</li> <li>B2618: BCM</li> </ul>	Е
	<ul> <li>B261A: PUSH-BTN IGN SW</li> <li>B261E: VEHICLE TYPE</li> <li>B26EA: KEY REGISTRATION</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>	F
	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR	Н
5	<ul> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> <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>	J
6	B2621: INSIDE ANTENNA     B2623: INSIDE ANTENNA	K

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 <a href="EXL-246">EXL-246</a>, "COM-MON ITEM: CONSULT Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	_	BCS-41
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-42
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-43
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-40

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CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-43
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-44
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-45
B2195: ANTI SCANNING	×	_	_	_	SEC-46
B2553: IGNITION RELAY	_	×	_	_	PCS-48
B2555: STOP LAMP	_	×	_	_	SEC-47
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-49
B2557: VEHICLE SPEED	×	×	×	_	SEC-51
B2560: STARTER CONT RELAY	×	×	×	_	SEC-52
B2562: LOW VOLTAGE	_	×	_	_	BCS-44
B2601: SHIFT POSITION	×	×	×	_	<u>SEC-53</u>
B2602: SHIFT POSITION	×	×	×	_	SEC-56
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-59
B2604: PNP SW	×	×	×	_	SEC-62
B2605: PNP SW	×	×	×	_	SEC-64
B2608: STARTER RELAY	×	×	×	_	SEC-66
B260A: IGNITION RELAY	×	×	×	_	PCS-50
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-68
B2614: ACC RELAY CIRC	_	×	×	_	PCS-52
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-55
B2616: IGN RELAY CIRC	_	×	×	_	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-71
B2618: BCM	×	×	×	_	PCS-61
B261A: PUSH-BTN IGN SW	_	×	×	_	SEC-73
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-76</u>
B2621: INSIDE ANTENNA	_	×	_	_	DLK-58
B2623: INSIDE ANTENNA	_	×	_	_	DLK-60
B26E1: ENG STATE NO RES	×	×	×	_	SEC-69
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-70</u>
C1704: LOW PRESSURE FL	_	_	_	×	
C1705: LOW PRESSURE FR	_	_	_	×	M/T 00
C1706: LOW PRESSURE RR	_	_	_	×	WT-23
C1707: LOW PRESSURE RL	_	_	_	×	
C1708: [NO DATA] FL	_	_	_	×	
C1709: [NO DATA] FR	_	_	_	×	\\(\frac{1}{2} = 0 = 0
C1710: [NO DATA] RR	<del>_</del>	_	_	×	<u>WT-25</u>
C1711: [NO DATA] RL	_	_	_	×	-

# < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-28
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u> </u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	_	×	<u>WT-32</u>

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#### IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [HALOGEN TYPE]

< ECU DIAGNOSIS INFORMATION >

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

Reference Value INFOID:0000000009365762

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

Monitor Item	(	Condition	Value/Status
RAD FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 – 100 %
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL & CL D. DEC	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
111 1 0 DEO	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND HI or AUTC	(Light is illuminated)	On
	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
		Front fog lamp switch OFF	Off
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	<ul> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Canada)</li> </ul>	On
		Front wiper switch OFF	Stop
ED WID DEO	Innition quitab ON	Front wiper switch INT	1LOW
FR WIP REQ	Ignition switch ON	Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
ION DIVA DEO	Ignition switch OFF or ACC		Off
IGN RLY1 -REQ	Ignition switch ON		On
ION DLV	Ignition switch OFF or ACC		Off
IGN RLY	Ignition switch ON		On
PUSH SW	Release the push-button ignition	n switch	Off
F 03F1 3VV	Press the push-button ignition s	witch	On
INTER/NP SW	Ignition switch ON	Selector lever in any position other than P or N	Off
		Selector lever in P or N position	On
ST RLY CONT	Ignition switch ON		Off
OT IVEL OOM	At engine cranking		On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Cor	ndition	Value/Status
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking	At engine cranking	
	Ignition switch ON		Off
0=200 U B137	At engine cranking		INHI ON $\rightarrow$ ST ON
ST/INHI RLY		control relay cannot be recognized by when the starter relay is ON and the	UNKWN
DETENT SW	Ignition switch ON	<ul> <li>Press the selector button with selector lever in P position</li> <li>Selector lever in any position other than P</li> </ul>	Off
	Release the selector button with sel	lector lever in P position	On
S/L RLY -REQ	NOTE: The item is indicated, but not monitor	ored.	Off
S/L STATE	NOTE: The item is indicated, but not monitor	ored.	UNLOCK
DTRL REQ	NOTE: The item is indicated, but not monitor	ored.	Off
OIL P SW	Ignition switch OFF, ACC or engine	running	Open
OIL P SVV	Ignition switch ON		Close
HOOD SW	Close the hood		Off
	Open the hood		On
HL WASHER REQ	NOTE: The item is indicated, but not monitor	ored.	Off
	Not operation		Off
THFT HRN REQ	Panic alarm is activated     Horn is activated with VEHICLE S TEM	On	
LICENI CLIIDE	Not operating		Off
HORN CHIRP	Door locking with Intelligent Key (ho	On	
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitor	ored.	Off

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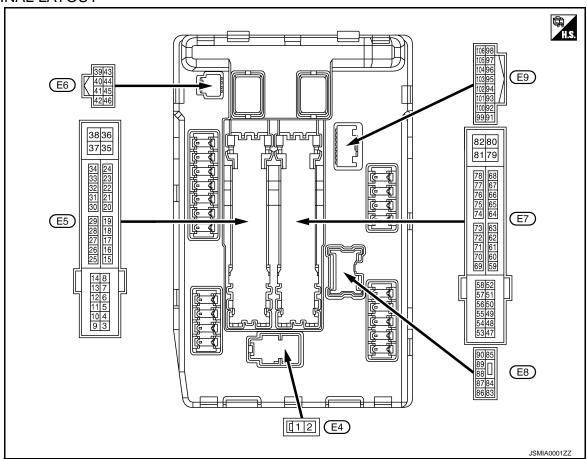
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< ECU DIAGNOSIS INFORMATION >

## TERMINAL LAYOUT



### PHYSICAL VALUES

	inal No.	Description				Value	
+ (Wire	e color)	Signal name	Input/ Output	Condition		(Approx.)	
1 (W)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage	
2 (L)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage	
4	Craund	Frant winer I O	Outrout	Ignition	Front wiper switch OFF	0 V	
(V)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage	
5	Cround	Front winer III	Output	Ignition	Front wiper switch OFF	0 V	
(L)	Ground	Front wiper HI	Output switch O		Front wiper switch HI	Battery voltage	
7	0	Tail, license plate lamps &	0	Ignition	Lighting switch OFF	0 V	
(R)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage	
12 (B/W)	Ground	Ground	_	Ignition swi	itch ON	0 V	
13					tely 1 second or more after ignition switch ON	0 V	
(Y)	Ground	Fuel pump power supply	Output	<ul> <li>Approximately 1 second after turning the ignition switch ON</li> <li>Engine running</li> </ul>		Battery voltage	
16				Ignition	Front wiper stop position	0 V	
(LG)	Ground Front wiper auto stop Input Ignition switch C		switch ON	Any position other than front wiper stop position	Battery voltage		

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			0 177	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
19	Cravad	lanition relevance comple	Outnut	Ignition swi	tch OFF	0 V
(W)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
25	0	126	0 1 1	Ignition swi	tch OFF	0 V
(G)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
26*	0	lanisian adama anna	0	Ignition swi	tch OFF	0 V
(R)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
27	Cravad	louition relevementes	lan.ut	Ignition swi	tch OFF or ACC	Battery voltage
(BG)	Ground	Ignition relay monitor	Input	Ignition swi	tch ON	0 V
28	Cround	Push-button ignition	Innut	Press the p	oush-button ignition switch	0 V
(L)	Ground	switch	Input	Release the	e push-button ignition switch	Battery voltage
30 (GR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
36 (G)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
39 (P)	_	CAN-L	Input/ Output		_	
40 (L)	_	CAN-H	Input/ Output		_	_
41 (B/W)	Ground	Ground	_	Ignition swi	tch ON	0 V
42	Ground	Cooling fan relay control	Input	Ignition swi	tch OFF or ACC	0 V
(Y)	Ground	Gooming fair relay control	прис	Ignition swi	tch ON	0.7 V
43 (SB)	Ground	A/T shift selector (Detention switch)	Input	Ignition switch ON	<ul> <li>Press the selector button (Selector lever P)</li> <li>Selector lever in any position other than P</li> </ul>	Battery voltage
					Release the selector but- ton (selector lever P)	0 V
44	Ground	Horn relay control	Input	The horn is	deactivated	Battery voltage
(BR)	Giouria	Hom relay control	Input	The horn is	activated	0 V
45	Ground	Anti thoft harn roley central	Innut	The horn is	deactivated	Battery voltage
(G)	Ground	Anti theft horn relay control	Input	The horn is	activated	0 V
46 (R)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
(11)				SWITCH OIN	Selector lever P or N	Battery voltage
					A/C switch OFF	0 V
48 (L)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage
40				Ignition swi (More than ignition swi	a few seconds after turning	0 V
49 (BG)	Ground	ECM relay power supply	Output	Ignition s     Ignition s     (For a fertion switch	witch OFF w seconds after turning igni-	Battery voltage

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
51	Cround	Ignition relay newer aupply	Output	Ignition sw	itch OFF	0 V
(Y)	Ground	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage
53				Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
(W)	Ground	ECM relay power supply	Output	Ignition s	w seconds after turning igni-	Battery voltage
54		Throttle control motor re-		Ignition sw (More than ignition sw	a few seconds after turning	0 V
(P)	Ground	lay power supply	Output	Ignition s	w seconds after turning igni-	Battery voltage
55 (SB)	Ground	ECM power supply	Output	Ignition sw	itch OFF	Battery voltage
56	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
(LG)	Giodila	ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage
57	Ground	Ignition relay power supply	Output	Ignition sw	itch OFF	0 V
(G)	Ground	ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage
58	Ground	Ignition relay power supply	Output	Ignition sw	itch OFF	0 V
(V)	Oroana	igiliadii idiay powol dappiy	Catpat	Ignition sw	itch ON	Battery voltage
69				Ignition sw (More than ignition sw	a few seconds after turning	Battery voltage
(BR)	Ground	ECM relay control	Output	<ul> <li>Ignition switch ON</li> <li>Ignition switch OFF         (For a few seconds after turning ignition switch OFF)</li> </ul>		0 – 1.5 V
70 (BG)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON $ ightarrow$ OFF		0 − 1.0 V ↓ Battery voltage ↓ 0 V
				Ignition sw	itch ON	0 – 1.0 V
74	Cround	Ignition relevances are also	Out	Ignition sw	itch OFF	0 V
(P)	Ground	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage
75	Ground	Oil pressure switch	Input	Ignition	Engine stopped	0 V
(SB)	Giodila	On pressure switch	mput	switch ON	Engine running	Battery voltage

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	,
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	/-
				Ignition switch ON		(V) 4 2 0 PMIA0001GB 6.3 V	
76 (Y)	Ground	Power generation command signal	Output	40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0 ■ 2ms JPMIA0002GB 3.8 V	E
					on "ACTIVE TEST", "AL- R DUTY" of "ENGINE"	(V) 6 4 2 0 	G ⊢
77 (R)	Ground	Fuel pump relay control	Output	<ul><li>the ignition</li><li>Engine real</li><li>Approximate</li></ul>	tely 1 second or more after	0 – 1.0 V  Battery voltage	J
80	0	Ctartan mada	Outrot	_	ignition switch ON		K
(W)	Ground	Starter motor	Output	At engine of		Battery voltage	
83 (BG)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V	EX
					Lighting switch 2ND Lighting switch OFF	Battery voltage 0 V	
84 (V)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch 2ND	Battery voltage	V
					Front fog lamp switch OFF	0 V	
86 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	Front fog lamp switch     ON     Daytime running light     activated (Only for Canada)	Battery voltage	N
					Front fog lamp switch OFF	0 V	
87 (L)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	Front fog lamp switch     ON     Daytime running light     activated (Only for Canada)	Battery voltage	Р
88 (GR)	Ground	Washer pump power supply	Output	Ignition swi	itch ON	Battery voltage	

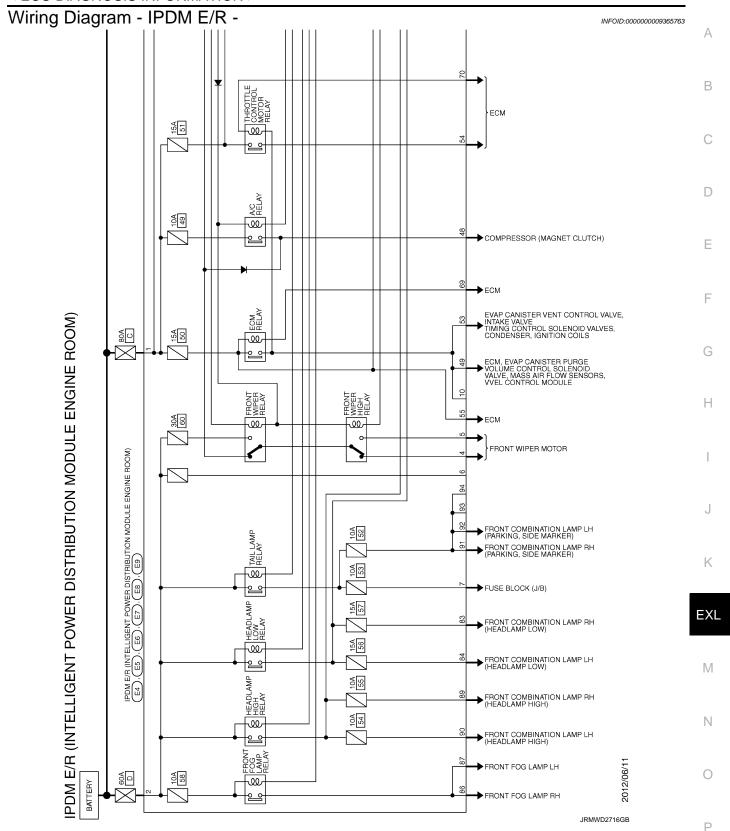
**EXL-365** Revision: 2013 March 2014 QX50

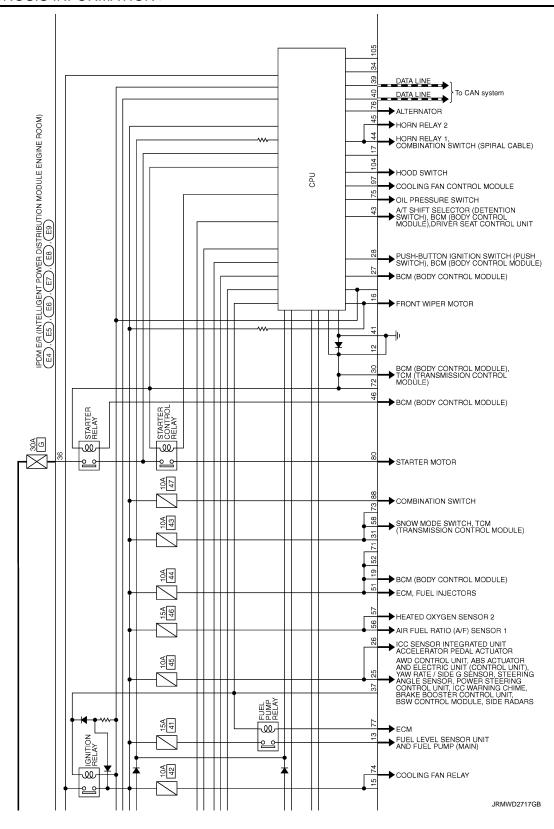
< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
89				Ignition	Lighting switch OFF	0 V	
(BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	<ul><li>Lighting switch HI</li><li>Lighting switch PASS</li></ul>	Battery voltage	
90				Ignition	Lighting switch OFF	0 V	
(P)	Ground	Headlamp HI (LH)	Output	switch ON	<ul><li>Lighting switch HI</li><li>Lighting switch PASS</li></ul>	Battery voltage	
91	Ground	Parking lamp (RH)	Output	Ignition	Lighting switch OFF	0 V	
(P)	Giodila	Faiking lamp (KH)	Output	switch ON	Lighting switch 1ST	Battery voltage	
92	Ground	Parking lamp (LH)	Output	Ignition	Lighting switch OFF	0 V	
(BG)	Giodila	Faiking lamp (LH)	Output	switch ON	Lighting switch 1ST	Battery voltage	
97 (V)	Ground	Cooling fan control	Output	Engine idlir	ng	0 – 5 V	
104	104 Ground Hood switch		Input	Close the h	nood	Battery voltage	
(LG)	Giodila	11000 SWILOIT	input	Open the h	ood	0 V	

<sup>\*:</sup> Only for the models with ICC system

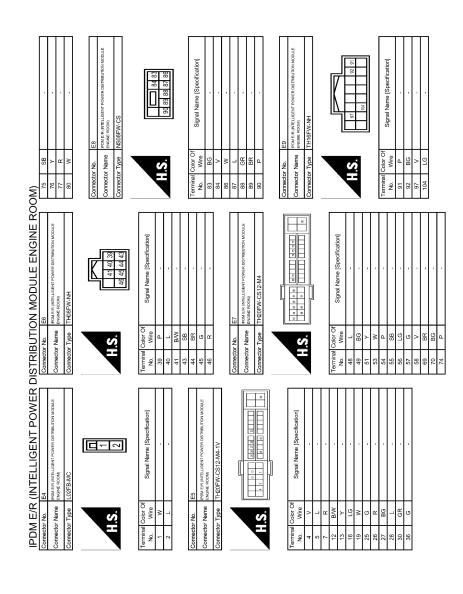
< ECU DIAGNOSIS INFORMATION >





# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS INFORMATION > [HALOGEN TYPE]

Α В С D Е F G Н Κ EXL M Ν 0 JRMWD2718GB Р



JRMWD8171GB

Fail-safe INFOID:0000000009365764

#### CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

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< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe operation
Cooling fan	<ul> <li>Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON</li> <li>Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF</li> </ul>
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

#### If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
Headlamp	<ul> <li>Turns ON the headlamp low relay when the ignition switch is turned ON</li> <li>Turns OFF the headlamp low relay when the ignition switch is turned OFF</li> <li>Headlamp high relay OFF</li> </ul>
<ul><li>Parking lamps</li><li>License plate lamps</li><li>Side maker lamps</li><li>Illuminations</li><li>Tail lamps</li></ul>	<ul> <li>Turns ON the tail lamp relay when the ignition switch is turned ON</li> <li>Turns OFF the tail lamp relay when the ignition switch is turned OFF</li> </ul>
Front wiper	<ul> <li>The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed.</li> <li>The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.</li> </ul>
Front fog lamps	Front fog lamp relay OFF
Horn	Horn relay OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF

#### IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Voltage	judgment		
Ignition relay contact side	Ignition relay excitation coil side	IPDM E/R judgment	Operation
ON	ON	Ignition relay ON normal	_
OFF	OFF	Ignition relay OFF normal	_
ON	OFF	Ignition relay ON stuck	Detects DTC "B2098: IGN RELAY ON"     Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"

#### FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper stop position signal.

When a front wiper stop position signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 seconds activation and 20 seconds stop five times.

Ignition switch	Front wiper switch	Front wiper stop position signal
ON	OFF	The front wiper stop position signal (stop position) cannot be input for 10 seconds.
ON	ON	The front wiper stop position signal does not change for 10 seconds.

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< ECU DIAGNOSIS INFORMATION >

#### NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

#### STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index INFOID:0000000009365765

#### 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 FFD (Freeze Frame data).
- The number is 0 when is detected now.
- The number increases like 1 ightarrow 2  $\cdots$  38 ightarrow 39 after returning to the normal condition whenever IGN OFF ightarrow
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

×: Applicable

CONSULT display	Fail-safe	Reference
No DTC is detected. further testing may be required.	_	_
U1000: CAN COMM CIRCUIT	×	PCS-14
B2098: IGN RELAY ON	×	PCS-15
B2099: IGN RELAY OFF	_	PCS-16
B210B: START CONT RLY ON	_	<u>SEC-77</u>
B210C: START CONT RLY OFF	_	<u>SEC-78</u>
B210D: STARTER RELAY ON	_	SEC-79
B210E: STARTER RELAY OFF	_	SEC-80
B210F: INTRLCK/PNP SW ON	_	<u>SEC-82</u>
B2110: INTRLCK/PNP SW OFF	<del></del>	SEC-84

### **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

INFOID:0000000009060092

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## SYMPTOM DIAGNOSIS

## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

Symptom Table

#### **CAUTION:**

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

Syr	mptom	Possible cause	Inspection item	
Headlamp (HI) is not turned ON.  One side		Fuse     Halogen bulb (HI)     Harness between IPDM E/R and the headlamp high     Daytime running light relay (with daytime running light system)     IPDM E/R	Headlamp (HI) circuit Refer to <u>EXL-258</u> .	
	Both sides	Symptom diagnosis		
Headlamp (HI) is not	When ignition switch is turned ON.	"BOTH SIDE HEADLAMPS (HI) A Refer to <u>EXL-376</u> .	RE NOT TURNED ON"	
turned OFF.	When ignition switch is turned OFF.	IPDM E/R	_	
High beam indicator lam [The headlamp (HI) is tu		Combination meter	Combination meter     Data monitor "HI-BEAM IND"     BCM (HEAD LAMP)     Active test "HEADLAMP"	
Headlamp (LO) is not turned ON.	One side	Fuse     Halogen bulb (LO)     Harness between IPDM E/R and the headlamp low     IPDM E/R	Headlamp (LO) circuit Refer to EXL-260.	
	Both sides	Symptom diagnosis		
Headlamp (LO) is not	When ignition switch is turned ON.	"BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-377.		
turned OFF.	When ignition switch is turned OFF.	IPDM E/R	_	
Headlamp is not turned	ON/OFF with the lighting	Combination switch     Harness between the combination switch and BCM     BCM	Combination switch Refer to BCS-93.	
switch AUTO.		Optical sensor     Harness between the optical sensor and BCM     BCM	Optical sensor Refer to <u>EXL-268</u> .	
Front fog lamp is not turned ON.	One side	Front fog lamp bulb     Harness between IPDM E/R and the front combination lamp     Front combination lamp     IPDM E/R	Front fog lamp circuit Refer to EXL-262.	
	Both side	Symptom diagnosis	ADE NOT TURNER COM	
Front fog lamp is not turned ON.		"BOTH SIDE FRONT FOG LAMPS Refer to <u>EXL-379</u> .	S ARE NOT TURNED ON"	
Parking lamp is not turned ON.		Fuse     Parking lamp bulb     Harness between IPDM E/R     and the front combination lamp     Front combination lamp     IPDM E/R	Parking lamp circuit Refer to EXL-264.	

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## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

Symp	tom	Possible cause	Inspection item
Tail lamp is not turned ON.		Harness between IPDM E/R and the rear combination lamp     Rear combination lamp	Tail lamp circuit Refer to EXL-273.
License plate lamp is not to	urned ON.	Harness between IPDM E/R and the license plate lamp     License plate lamp	License plate lamp circuit Refer to EXL-275.
Tail lamp and the license p ON.	late lamp are not turned	Fuse     Harness between IPDM E/R and the rear combination lamp     IPDM E/R	Tail lamp circuit Refer to EXL-273.
<ul><li>lamp are not turned ON.</li><li>Parking lamp, the tail lar lamp are not turned OFF</li></ul>	<ul> <li>Parking lamp, the tail lamp and the license plate lamp are not turned ON.</li> <li>Parking lamp, the tail lamp and the license plate lamp are not turned OFF.</li> <li>(Each illumination is turned ON/OFF.)</li> </ul>		TAIL LAMPS ARE NOT TURNED
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation.)	Harness between BCM and each turn signal lamp     Turn signal lamp bulb	Turn signal lamp circuit Refer to EXL-266.
DIITIK.	Indicator lamp is included	Combination switch     Harness between the combination switch and BCM     BCM	Combination switch Refer to BCS-93.
	One side	Combination meter	_
Turn signal indicator lamp does not blink. (The turn signal indicator	Both sides (Always)	<ul> <li>Turn signal indicator lamp signal</li> <li>Unified meter and A/C amp.</li> <li>BCM</li> <li>Combination meter</li> </ul>	Unified meter and A/C amp. Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
lamp is normal.)	Both sides (Only when activating the hazard warning lamp with the ignition switch OFF)	The combination meter power supply and the ground circuit Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-55.
<ul> <li>Hazard warning lamp does not activate.</li> <li>Hazard warning lamp continues activating.</li> <li>(Turn signal is normal.)</li> </ul>		Hazard switch     Harness between the hazard switch and BCM     BCM	Hazard switch Refer to EXL-271.

### NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS > [HALOGEN TYPE]

## NORMAL OPERATING CONDITION

Description A

### **AUTO LIGHT SYSTEM**

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

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

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

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

Description

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

## Diagnosis Procedure

INFOID:0000000009060095

## 1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-93, "Symptom Table".

#### Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

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

### (E) CONSULT DATA MONITOR

- 1. Select "HL HI REQ" of IPDM E/R data monitor item.
- 2. With operating the lighting switch, check the monitor status.

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

### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-96, "Exploded View".

## 3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-258, "Component Function Check".

#### Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

**BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON** [HALOGEN TYPE] < SYMPTOM DIAGNOSIS > BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON Description INFOID:0000000009060096 Both side headlamps (LO) are not turned ON in any condition. Diagnosis Procedure INFOID:0000000009060097 CHECK COMBINATION SWITCH Check the combination switch. Refer to BCS-93, "Symptom Table". Is the combination switch normal? YES >> GO TO 2.

(P)CONSULT	$D\Lambda T\Lambda$	MONIT	ΩP
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NO

- Select "HL LO REQ" of IPDM E/R data monitor item.
- With operating the lighting switch, check the monitor status.

>> Repair or replace the malfunctioning part. 2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

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

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-96, "Exploded View".

## 3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-260, "Component Function Check".

#### Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

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## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

## PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

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

## Diagnosis Procedure

INFOID:0000000009060099

## 1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-93, "Symptom Table".

#### Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

## 2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

### PCONSULT DATA MONITOR

- 1. Select "TAIL & CLR REQ" of IPDM E/R data monitor item.
- 2. With operating the lighting switch, check the monitor status.

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

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM.

## 3. TAIL LAMP CIRCUIT INSPECTION

Check the tail lamp circuit. Refer to EXL-273, "Component Function Check".

#### Is the tail lamp circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

### BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS > [HALOGEN TYPE]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

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

Diagnosis Procedure

## 1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-93, "Symptom Table".

#### Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

## 2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

#### (P)CONSULT DATA MONITOR

- 1. Select "FR FOG REQ" of IPDM E/R data monitor item.
- 2. With operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch	ON	On
TRIOGREQ	(Lighting switch 2ND)	OFF	Off

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM.

## 3. FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-262, "Component Function Check".

#### Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

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### **PRECAUTIONS**

< PRECAUTION > [HALOGEN TYPE]

## **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.

[HALOGEN TYPE]

## PERIODIC MAINTENANCE

## HEADLAMP AIMING ADJUSTMENT

Description INFOID:0000000009060103 В

#### PREPARATION BEFORE ADJUSTING

#### NOTE:

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

Before performing aiming adjustment, check the following.

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

#### NOTE:

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

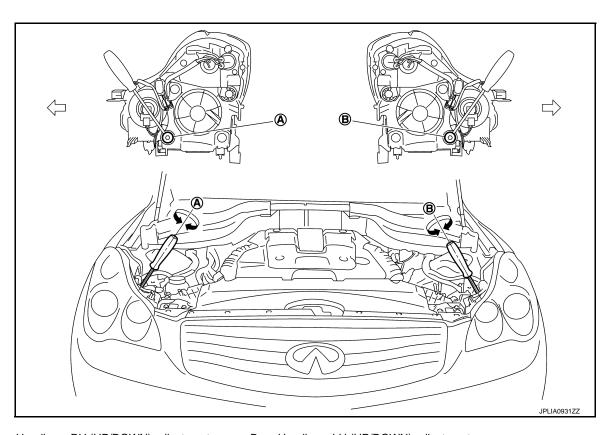
Wipe out dirt on the headlamp.

#### **CAUTION:**

**Never use organic solvent (thinner, gasoline etc.)** 

Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW



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

∀
 : Vehicle center

#### NOTE:

The figure is the vehicle without AFS. Each adjustment screw is applied to the vehicle with AFS.

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Adjustment screw		Screw driver rotation	Facing direction
Α	Headlamp RH (UP/DOWN)	Clockwise	UP
A	neadiamp Kn (0F/DOWN)	Counterclockwise	DOWN
В	Headlems I H (LID/DOM/M)	Clockwise	UP
Ь	Headlamp LH (UP/DOWN)	Counterclockwise	DOWN

## Aiming Adjustment Procedure

INFOID:0000000009060104

1. Place the screen.

#### NOTE:

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

#### NOTE:

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

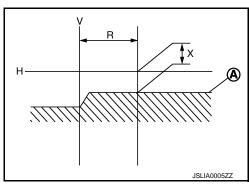
#### **CAUTION:**

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

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

#### Light axis measurement range (R) : 350 $\pm$ 175 mm (13.78 $\pm$ 6.89 in)

Low beam distribution on the screen

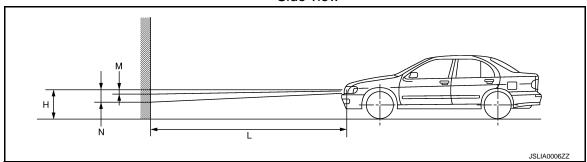


 Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

unit: mm (in)

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

#### Side view



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

#### FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

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### FRONT FOG LAMP AIMING ADJUSTMENT

Description INFOID:0000000009060105

#### PREPARATION BEFORE ADJUSTING

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

Before performing aiming adjustment, check the following.

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

#### NOTE:

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

Wipe out dirt on the headlamp.

#### **CAUTION:**

Never use organic solvent (thinner, gasoline etc.)

Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW

Turn the aiming adjusting screw for adjustment.

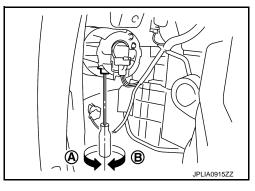
A: UP

**B: DOWN** 

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

#### NOTE:

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



INFOID:00000000009060106

## Aiming Adjustment Procedure

1. Place the screen.

#### NOTE:

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

### NOTE:

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

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

4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 200 mm (7.87 in).

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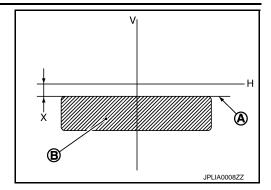
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### FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

Front fog lamp light distribution on the screen



A : Cutoff line

B : High illuminance area

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

X : Cutoff line height

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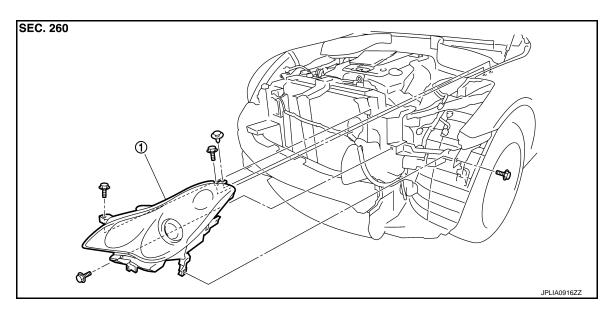
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## REMOVAL AND INSTALLATION

## FRONT COMBINATION LAMP

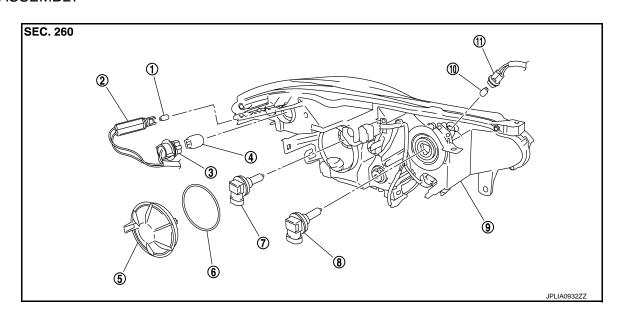
Exploded View

**REMOVAL** 



1. Front combination lamp

#### **DISASSEMBLY**



- 1. Front side marker lamp bulb
- 4. Front turn signal lamp bulb
- 7. Halogen bulb (LO)
- 10. Parking lamp bulb

- 2. Front side marker lamp bulb socket
- 5. Resin cap
- 8. Halogen bulb (HI)
- 11. Parking lamp bulb socket
- 3. Front turn signal lamp bulb socket
- 6. Seal packing
- 9. Headlamp housing assembly

Removal and Installation

REMOVAL CAUTION:

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#### FRONT COMBINATION LAMP

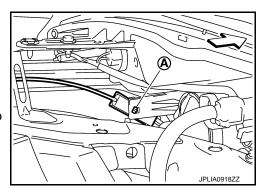
#### < REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

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

- Remove the front bumper fascia. Refer to EXT-12, "Exploded View".
- 2. Remove the headlamp mounting bolts and clips.
- 3. Remove the harness clip and the holding clip (A)\*.
  \*: Left side only.

- 4. Pull out the headlamp assembly forward the vehicle.
- 5. Disconnect the connector before removing the headlamp assembly.



#### INSTALLATION

Install in the reverse order of removal.

#### NOTE:

After installation, perform aiming adjustment. Refer to EXL-381, "Description".

Replacement

#### **CAUTION:**

- Disconnect the battery negative terminal or remove the fuse.
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
   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.

#### **HEADLAMP BULB (LO)**

- 1. Remove the fender rubber protector in the engine room. Keep a service area.
- 2. Rotate the resin cap counterclockwise and unlock it.
- Disconnect the headlamp (LO) bulb connector.
- 4. Rotate the bulb counterclockwise and unlock it.
- Remove the bulb from the headlamp housing assembly.

#### HEADLAMP BULB (HI)

- Remove the washer tank inlet<sup>\*</sup>. Refer to <u>WW-112, "Exploded View"</u>.
   \*:When replace a right.
- 2. Disconnect the headlamp (HI) bulb connector.
- 3. Rotate the bulb socket counterclockwise and unlock it.
- Remove the bulb socket from the headlamp housing assembly.

#### PARKING LAMP BULB

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

#### FRONT TURN SIGNAL LAMP BULB

- 1. Remove the fender rubber protector in the engine room. Keep a service area.
- 2. Rotate the bulb socket counterclockwise and unlock it.
- Remove the bulb from the bulb socket.

#### FRONT SIDE MARKER LAMP BULB

- Remove the fender rubber protector in the engine room. Keep a service area.
- 2. Rotate the bulb socket counterclockwise and unlock it.
- Remove the bulb from the bulb socket.

## **FRONT COMBINATION LAMP**

#### REMOVAL AND INSTALLATION >

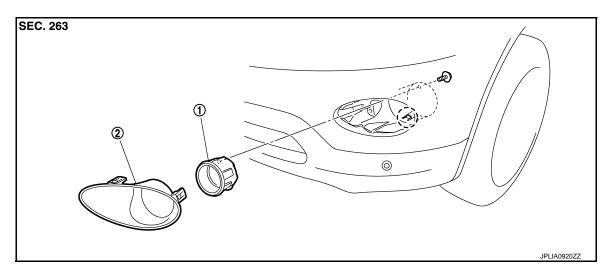
[HALOGEN TYPE]

DISASSEMBLY  1. Rotate the resin cap counterclockwise and unlock it. 2. Disconnect the headlamp bulb (LO) connector. 3. Rotate the headlamp bulb (LO) counterclockwise and unlock it 4. Remove the bulb from the headlamp housing assembly. 5. Rotate the headlamp bulb (HI) counterclockwise and unlock it 6. Remove the bulb from the headlamp housing assembly. 7. Rotate the parking lamp bulb socket counterclockwise and unlock it. 8. Remove the bulb from the parking lamp bulb socket.	< REMOVAL AND INSTALLATION >	[HALOGEN TYPE]
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<ul><li>10. Remove the bulb from the front turn signal lamp bulb socket.</li><li>11. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.</li><li>12. Remove the bulb from the front side marker lamp bulb socket.</li><li>ASSEMBLY</li></ul>		
11. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.  12. Remove the bulb from the front side marker lamp bulb socket.  ASSEMBLY		
2. Remove the bulb from the front side marker lamp bulb socket. ASSEMBLY	·	
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ASSERTING IT THE TEVELSE OLDER OF DISASSERTING.		
	Assemble in the reverse order of disassembly.	

Revision: 2013 March **EXL-387** 2014 QX50

### FRONT FOG LAMP

Exploded View



- Front fog lamp
- (^) : Pawl

2. Front fog lamp finisher

#### Removal and Installation

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#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### **REMOVAL**

- 1. Remove the front fender protector. Keep a service area. Refer to <a href="EXT-25">EXT-25</a>, "FENDER PROTECTOR: Exploded View".
- 2. Remove the front fog lamp finisher.
- 3. Remove the front fog lamp connector.
- 4. Remove the screw.
- 5. Disengage the pawl. And then remove the front fog lamp.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### NOTE:

After installation, perform aiming adjustment. Refer to EXL-383, "Description"

#### **CAUTION:**

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

#### FRONT FOG LAMP BULB

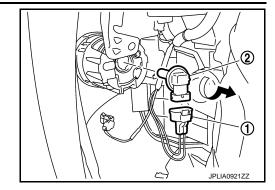
1. Remove the front fender protector. Keep the service area. Refer to <a href="EXT-25">EXT-25</a>, "FENDER PROTECTOR: Exploded View".

### **FRONT FOG LAMP**

## < REMOVAL AND INSTALLATION >

## [HALOGEN TYPE]

- 2. Remove the front fog lamp bulb connector (1).
- 3. Rotate the bulb (2) counterclockwise and unlock it.



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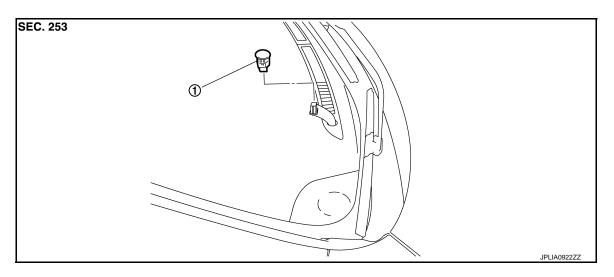
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## **OPTICAL SENSOR**

Exploded View



1. Optical sensor

#### Removal and Installation

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#### **REMOVAL**

- 1. Insert an appropriate tool between the optical sensor and the instrument upper panel. Pull out the optical sensor upward.
- 2. Disconnect the optical sensor connector. And then remove the optical sensor.

#### **INSTALLATION**

Install in the reverse order of removal.

### LIGHTING AND TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## **LIGHTING AND TURN SIGNAL SWITCH**

Exploded View

Lighting and turn signal switch is integrated in the combination switch.  $\underline{\mathsf{BCS-97,\ "Exploded\ View"}}.$ 

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### **HAZARD SWITCH**

< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

## HAZARD SWITCH

Exploded View

The hazard warning switch is integrated in the multifunction switch. Refer to AV-135, "Exploded View".

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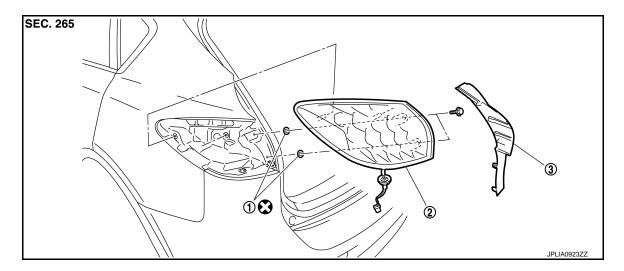
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## **REAR COMBINATION LAMP**

Exploded View



Seal packing

- 2. Rear combination lamp
- Rear combination lamp finisher

Removal and Installation

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### **REMOVAL**

- Remove the luggage side finisher lower. Refer to INT-36, "Exploded View".
- 2. Remove the rear combination lamp finisher.

Refer to GI-4, "Components" for symbols in the figure.

- 3. Remove the rear combination lamp mounting bolts.
- 4. Disconnect the rear combination lamp connector.
- 5. Pull the rear combination lamp toward outside of the vehicle. Remove the rear combination lamp.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Seal packing cannot be reused.

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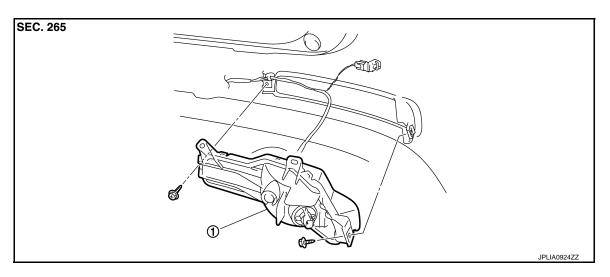
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### REAR TURN SIGNAL LAMP

Exploded View



Rear turn signal lamp

#### Removal and Installation

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#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### **REMOVAL**

- 1. Remove the rear bumper fascia. Refer to EXT-16, "Exploded View".
- Remove the rear turn signal lamp.

#### **INSTALLATION**

Install in the reverse order of removal.

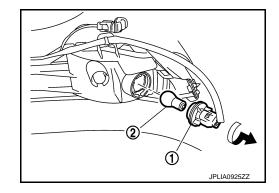
Replacement

#### **CAUTION:**

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

#### REAR TURN SIGNAL LAMP BULB

- 1. Turn the bulb socket (1) counterclockwise and unlock it.
- 2. Remove the bulb (2) from the socket.



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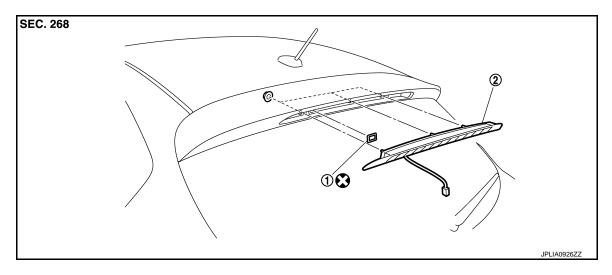
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## HIGH-MOUNTED STOP LAMP

Exploded View



1. Seal packing

2. High-mounted stop lamp

Refer to GI-4, "Components" for symbols in the figure.

#### Removal and Installation

#### **REMOVAL**

- Remove the back door finisher inner. Refer to <u>INT-40, "Exploded View"</u>.
- 2. Remove the high-mounted stop lamp mounting nuts.
- 3. Disconnect the high-mounted stop lamp connector. And then remove the rear washer tube.
- 4. Pull the high-mounted stop lamp toward rear of the vehicle.
- 5. Remove the high-mounted stop lamp.

#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Seal packing cannot be reused.

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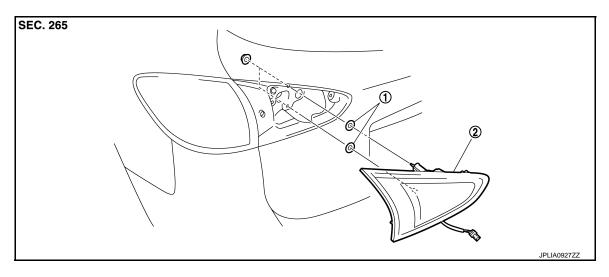
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## **BACK-UP LAMP**

Exploded View



1. Seal packing

Back-up lamp

#### Removal and Installation

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#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### REMOVAL

- Remove the back door finisher inner. Refer to <u>INT-40</u>, "Exploded View".
- Remove the back-up lamp mounting nuts.
- 3. Disconnect the back-up lamp connector. And then remove the back-up lamp.

#### INSTALLATION

Install in the reverse order of removal.

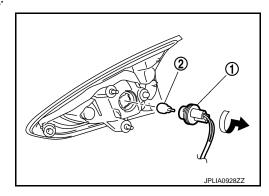
Replacement

#### **CAUTION:**

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

#### **BACK-UP LAMP BULB**

- 1. Remove the back-up lamp. Refer to EXL-396, "Exploded View".
- 2. Turn the bulb socket (1) counterclockwise and unlock it.
- Remove the bulb (2) from the socket.



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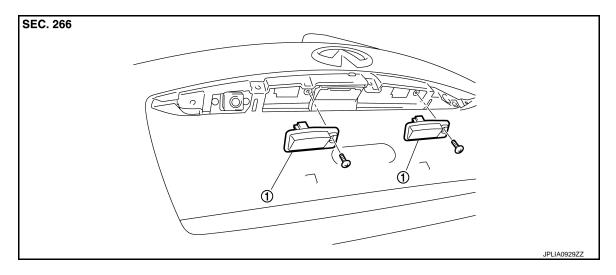
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### LICENSE PLATE LAMP

Exploded View



License plate lamp

#### Removal and Installation

**CAUTION:** 

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

- 1. Remove the door handle cover. Refer to EXT-48, "Exploded View".
- 2. Remove the screw. And then remove the license plate lamp.
- 3. Disconnect the license plate lamp connector.

#### INSTALLATION

Install in the reverse order of removal.

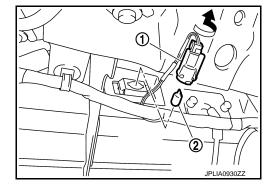
Replacement

#### **CAUTION:**

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

#### LICENSE PLATE LAMP BULB

- 1. Remove the back door finisher inner. Refer to <a href="INT-40">INT-40</a>, "Exploded View".
- 2. Turn the bulb socket (1) counterclockwise and unlock it.
- 3. Remove the bulb (2) from the socket.



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## SERVICE DATA AND SPECIFICATIONS (SDS)

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[HALOGEN TYPE]

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## SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

**Bulb Specifications** 

Item		Туре	Wattage (W)
	Headlamp (HI)	H9 (Halogen)	65
	Headlamp (LO)	H11 (Halogen)	55
Front combination lamp	Front turn signal lamp	W21W	21
	Parking lamp	W5W	5
	Front side marker lamp	W5W	5
Front fog lamp		H8	35
Rear combination lamp	Stop lamp/Tail lamp	LED	_
Real Combination lamp	Rear side marker lamp	LED	_
Rear turn signal lamp		PY21W (Amber)	21
Back-up lamp		W16W	16
License plate lamp		W5W	5
High-mounted stop lamp		LED	_