

SECTION EXL

EXTERIOR LIGHTING SYSTEM

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[XENON TYPE]

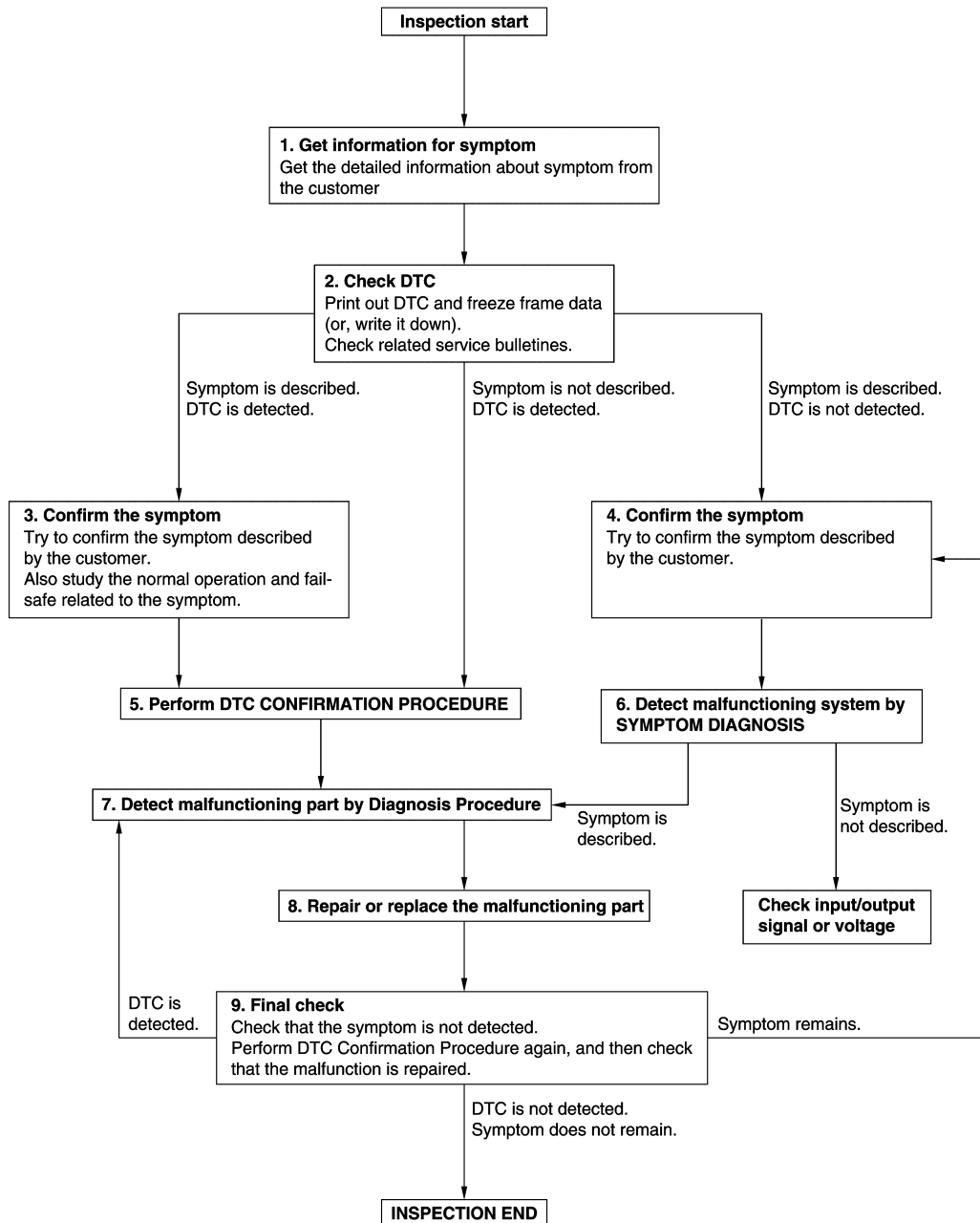
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010576238

OVERALL SEQUENCE



DETAILED FLOW

Revision: 2015 February

EXL-5

2015 QX70

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 5.

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

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

NOTE:

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

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-47. "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.

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

7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[XENON TYPE]

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-47. "Intermittent Incident"](#).

8.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 9.

9.FINAL CHECK

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

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

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

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

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

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< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000010576239

Perform levelizer adjustment when replacing the AFS control unit. (For details, refer to [EXL-8, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000010576240

1. LEVELIZER ADJUSTMENT

Perform levelizer adjustment. Refer to [EXL-8, "LEVELIZER ADJUSTMENT : Description"](#).

>> WORK END

LEVELIZER ADJUSTMENT

LEVELIZER ADJUSTMENT : Description

INFOID:0000000010576241

Perform levelizer adjustment when the following operation is performed. (For details, refer to [EXL-8, "LEVELIZER ADJUSTMENT : Special Repair Requirement"](#).)

- Replacing AFS control unit
- Removing, installing or replacing height sensor
- Adjusting, removing, installing or replacing suspension components

LEVELIZER ADJUSTMENT : Special Repair Requirement

INFOID:0000000010576242

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

Ⓐ CONSULT WORK SUPPORT

1. Select "LEVELIZER ADJUSTMENT" of ADAPTIVE LIGHT work support item.
2. 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.

Is the levelizer adjustment completed?

YES >> GO TO 3.

NO >> Perform the levelizer adjustment again.

3. SELF-DIAGNOSIS RESULT CHECK

Perform self-diagnosis with CONSULT. Check that any DTC is not detected.

Is any DTC detected?

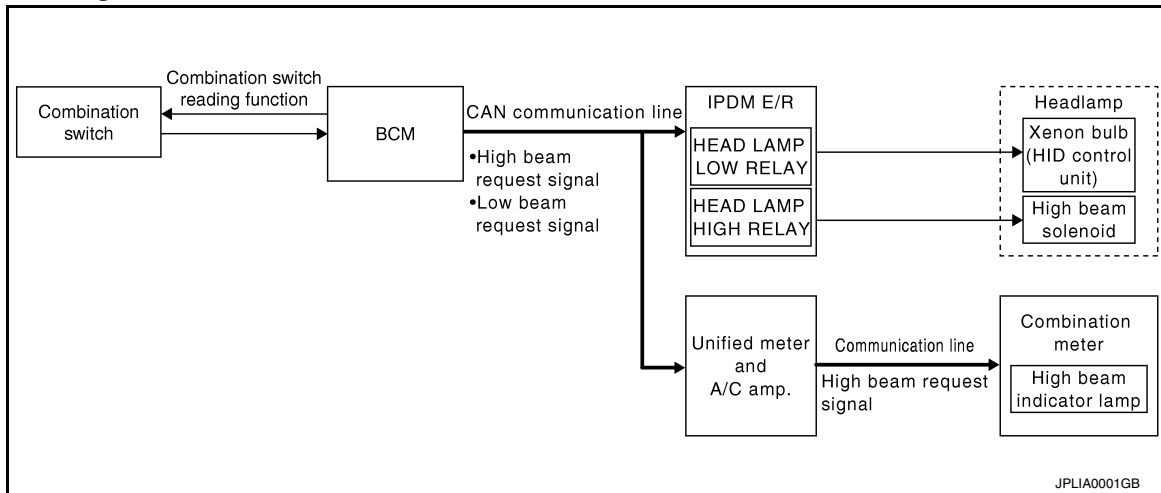
YES >> GO TO 2.

NO >> WORK END

SYSTEM DESCRIPTION

HEADLAMP SYSTEM

System Diagram



System Description

INFOID:0000000010576244

OUTLINE

- Mobile valve shade type is adopted. Xenon headlamp switches the high beam and the low beam with one xenon bulb each on right and left.
- Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and relay control function of IPDM E/R.

HEADLAMP BASIC 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 ON condition.

Headlamp ON condition

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

HEADLAMP HI/LO SWITCHING 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 high beam switching condition.

High beam switching condition

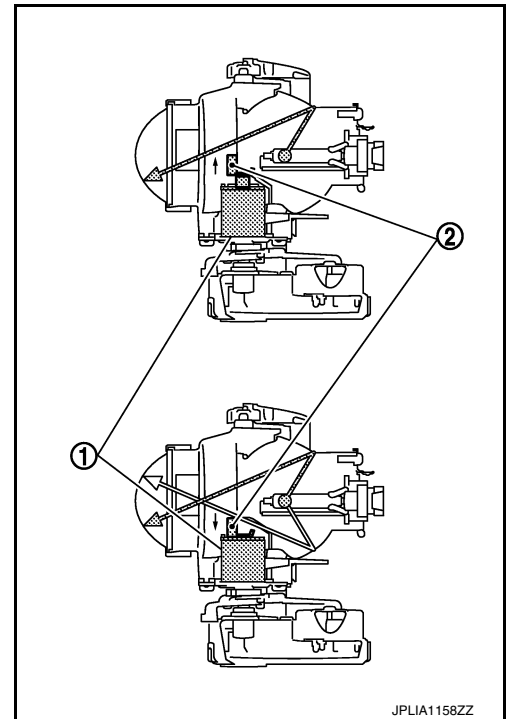
- Lighting switch HI with the headlamp ON
- Lighting switch PASS
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

HEADLAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

- When the headlamp high relay is turned ON, magnetic force is applied to the high beam solenoid (1) by a current. The mobile valve shade (2) is switched to the high beam position.
- When the headlamp high relay is turned OFF, the current stops. The mobile valve shade returns to the low beam position automatically.



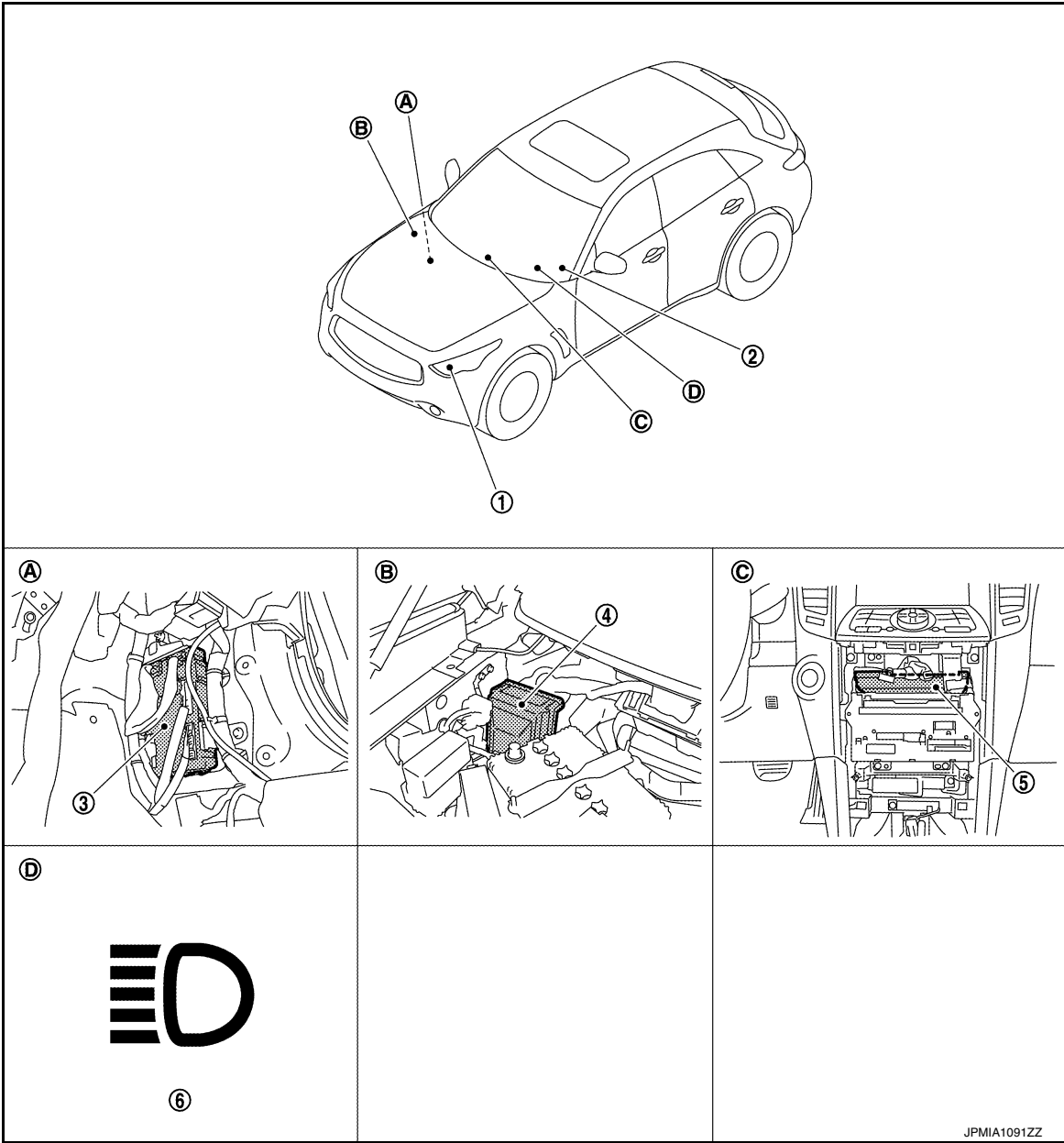
HEADLAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:0000000010576245



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

Component Description

INFOID:0000000010576246

Part	Description
BCM	• Detects each switch condition by the combination switch reading function. • Judges that the headlamp is turned ON according to the vehicle condition. - Requests the headlamp relay (HI/LO) ON to IPDM E/R (with CAN communication). - Requests the high beam indicator lamp ON to the combination meter [with CAN communication (through the unified meter and A/C amp.)].
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).

HEADLAMP SYSTEM

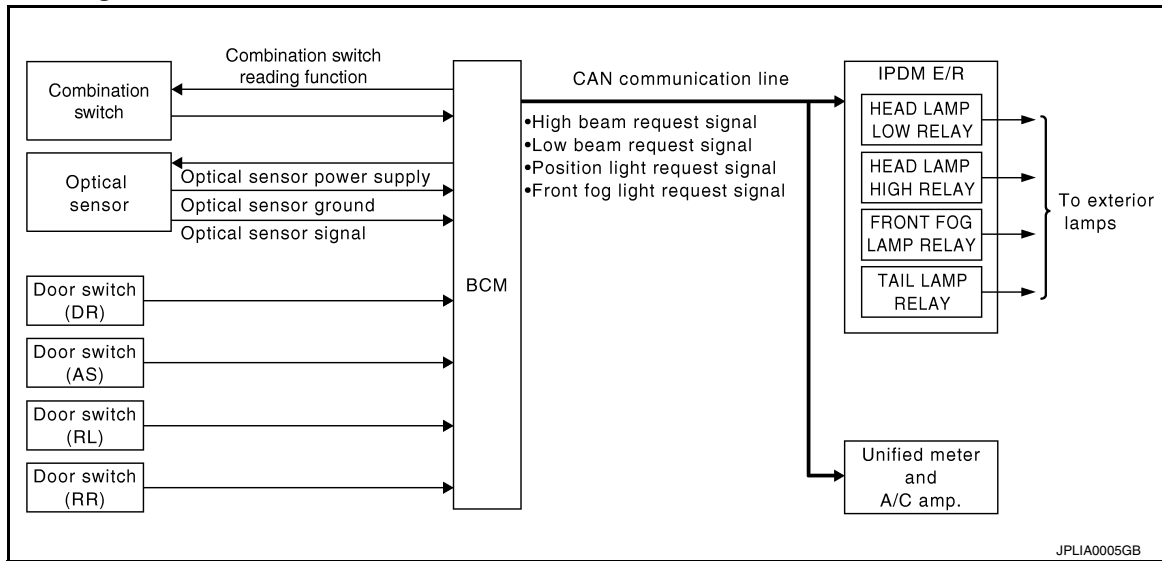
< SYSTEM DESCRIPTION >

[XENON TYPE]

Part		Description
Combination switch (Lighting & turn signal switch)		Refer to BCS-11, "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 the unified meter and A/C amp.)].
Headlamp assembly	• HID control unit • Xenon bulb	Refer to EXL-72, "Description" .
	High beam solenoid	Refer to EXL-67, "Description" .

AUTO LIGHT SYSTEM

System Diagram



System Description

INFOID:0000000010576248

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, side marker lamp, tail lamp, license plate 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 \(BCM - HEAD LAMP\)".](#)

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).

AUTO LIGHT SYSTEM

[XENON TYPE]

< SYSTEM DESCRIPTION >

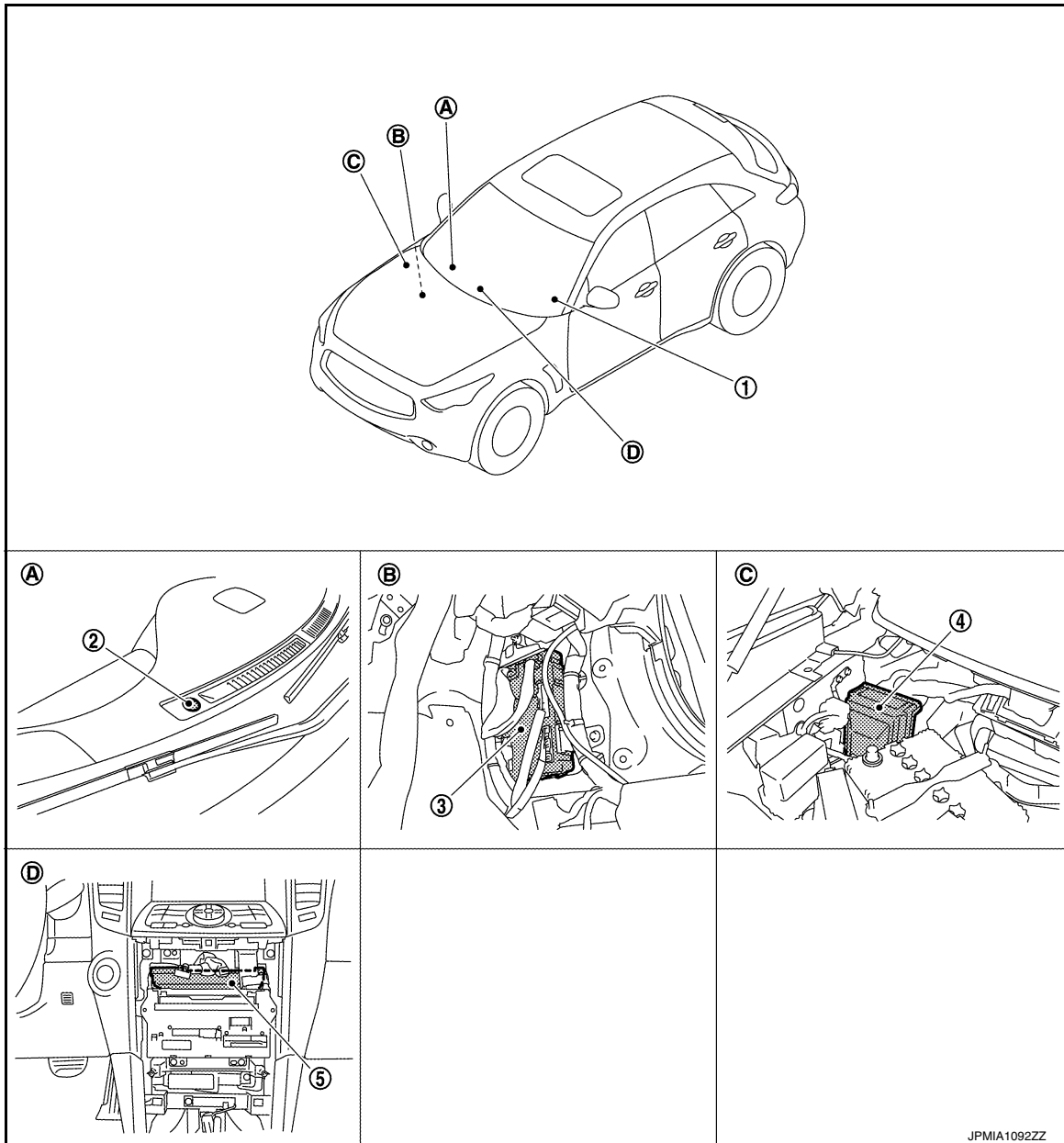
- Turns the exterior lamp OFF with the ignition switch ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to [EXL-34, "HEAD-LAMP : CONSULT Function \(BCM - HEAD LAMP\)"](#).

NOTE:

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

Component Parts Location

INFOID:0000000010576249



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

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AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Description

INFOID:0000000010576250

Part	Description
BCM	• Detects each switch condition by the combination switch reading function. • Judges the outside brightness from the optical sensor signal. • Judges the OFF timing according to the vehicle condition. • Judges the ON/OFF status of the exterior lamp and each illumination according to the outside brightness and the vehicle condition. Requests ON/OFF of each relay to IPDM E/R (with CAN communication).
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-11, "System Diagram" .
Optical sensor	Refer to EXL-84, "Description" .

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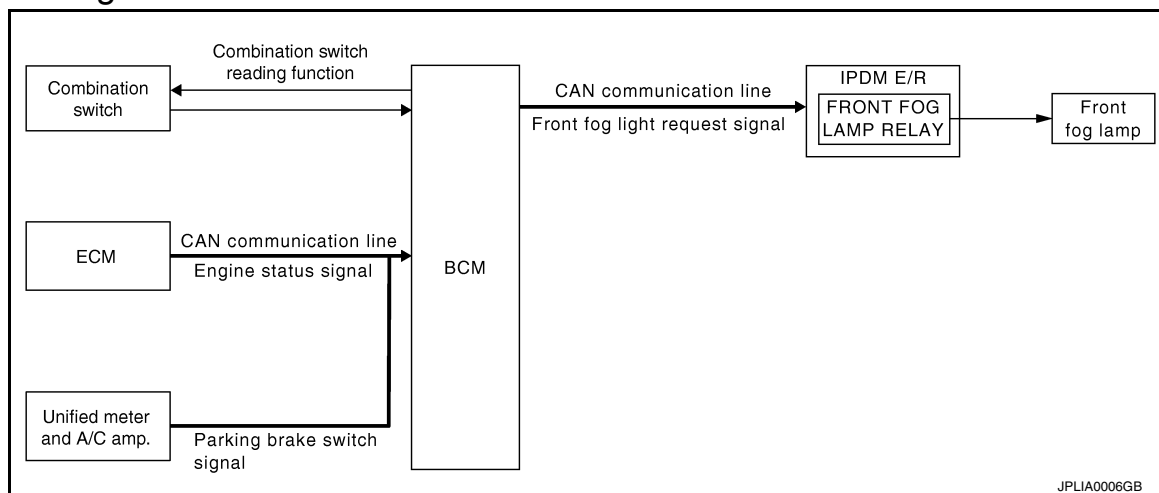
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DAYTIME RUNNING LIGHT SYSTEM

System Diagram



System Description

INFOID:0000000010576252

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.

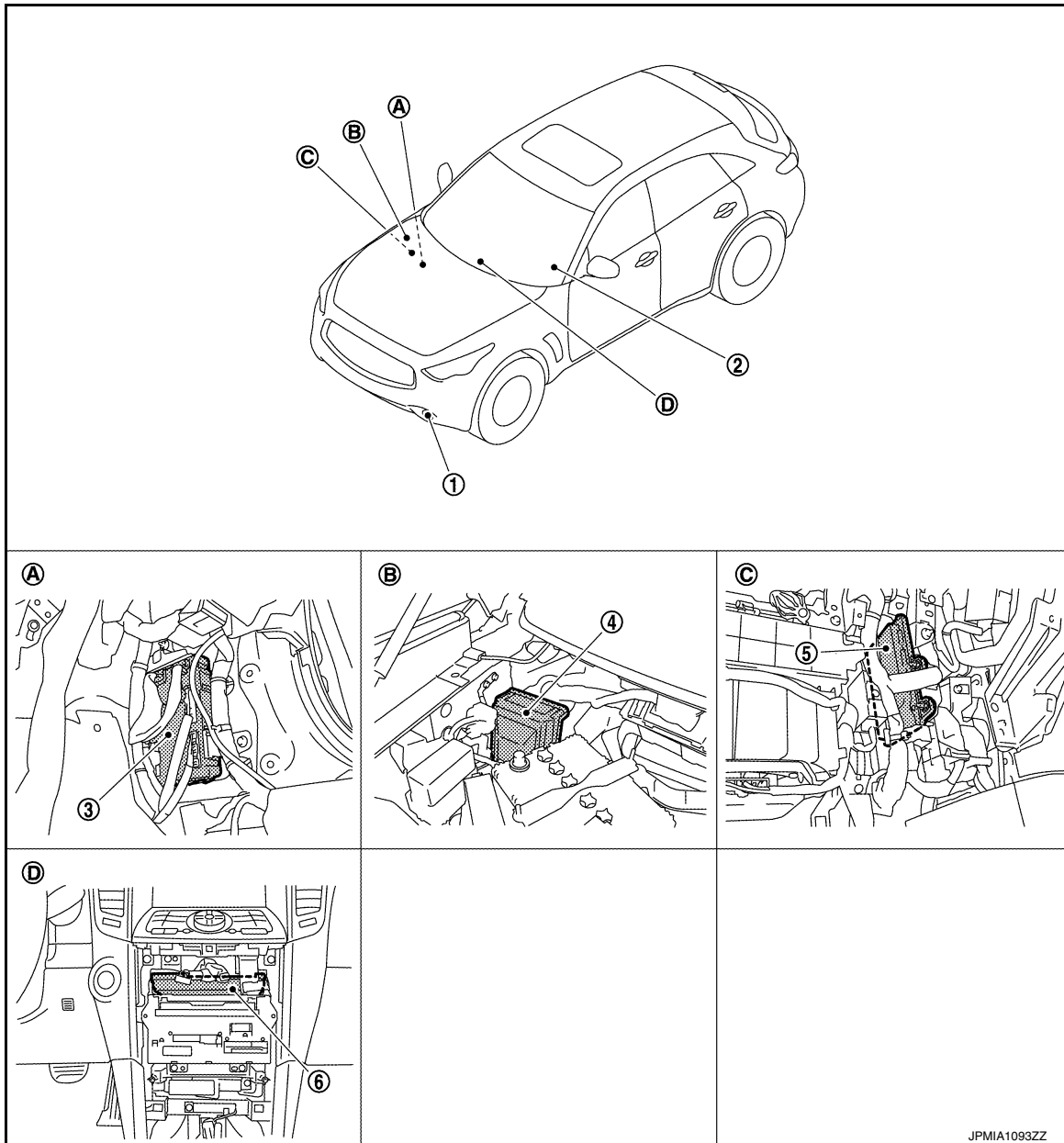
DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:000000010576253



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

Component Description

INFOID:000000010576254

Part	Description
BCM	• Detects each switch condition with the combination switch reading function. • 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).
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 >

[XENON TYPE]

Part	Description
Combination switch (Lighting & turn signal switch)	Refer to BCS-11, "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.

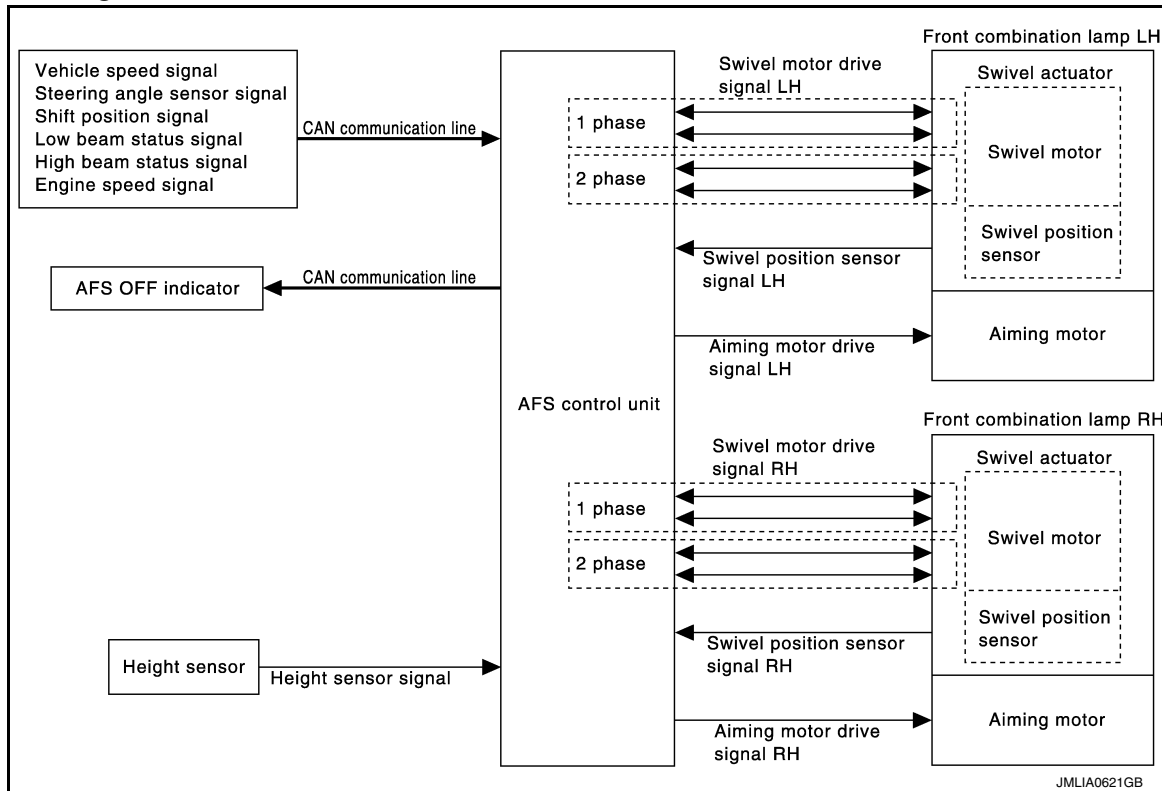
ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM

System Diagram



System Description

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.

ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM

[XENON TYPE]

< SYSTEM DESCRIPTION >

- 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

- 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.

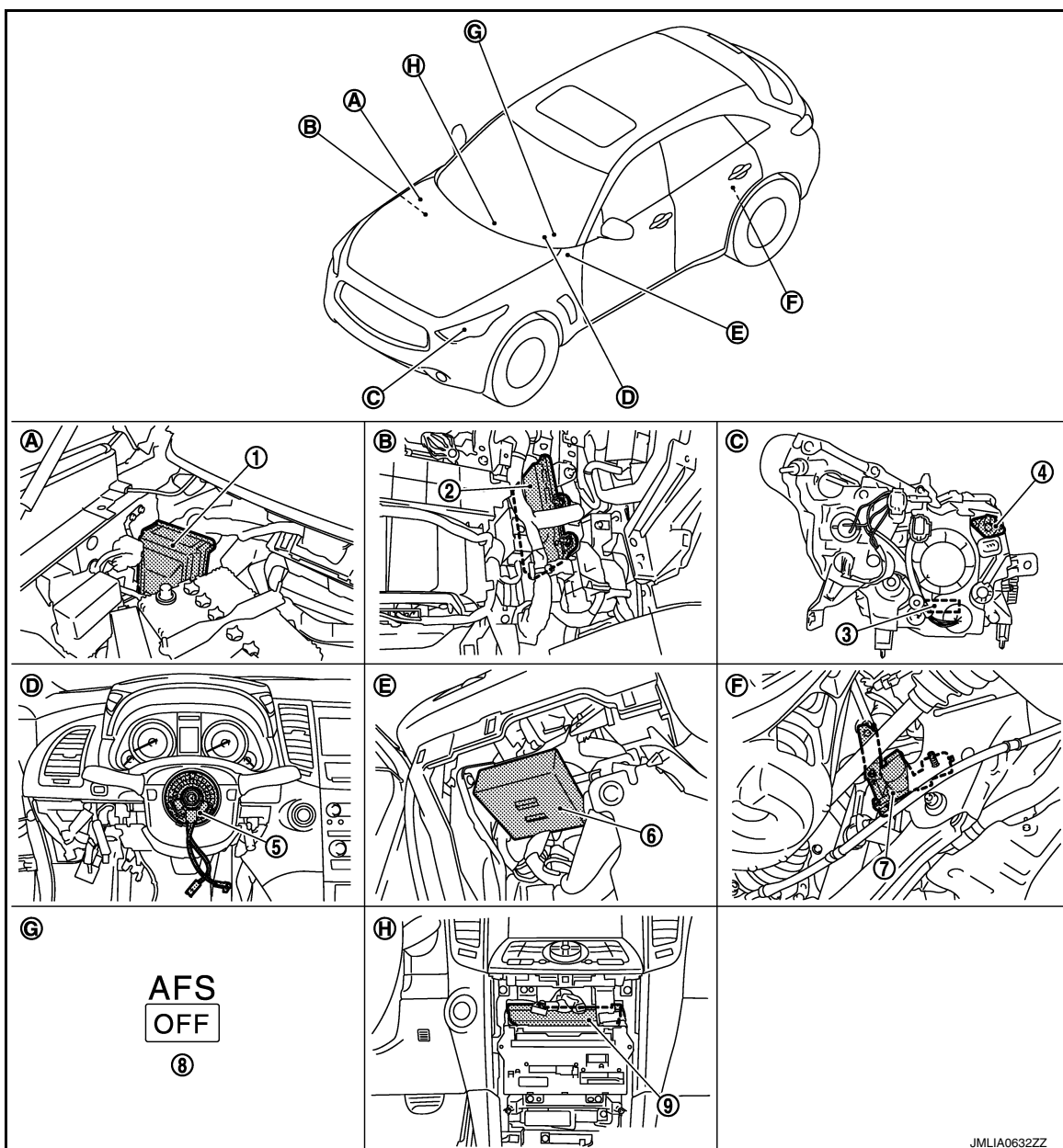
ACTIVE ADAPTIVE FRONT-LIGHTING SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:000000010576257



- | | | |
|-----------------------------------|---|----------------------------------|
| 1. IPDM E/R | 2. ECM | 3. Swivel actuator |
| 4. Aiming motor | 5. Steering angle sensor | 6. AFS control unit |
| 7. Height sensor | 8. AFS OFF indicator lamp | 9. Unified meter and A/C amp. |
| A. Engine room dash panel (RH) | B. Behind the glove box | C. Front combination lamp (back) |
| D. Steering column cover (inside) | E. Behind the instrument driver lower panel | F. Rear suspension member (LH) |
| G. On the combination meter | H. Behind the cluster lid C | |

Component Description

INFOID:000000010576258

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-74, "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 the unified meter and A/C amp.)].

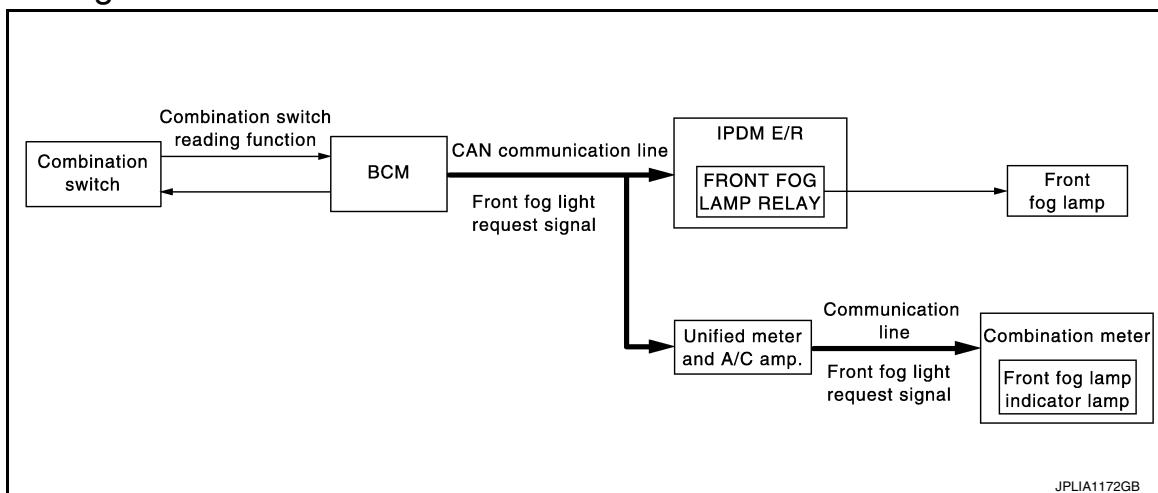
FRONT FOG LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

FRONT FOG LAMP SYSTEM

System Diagram



System Description

INFOID:0000000010576260

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-16, "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 and the combination meter (through the unified meter and A/C amp.) 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.
- Combination meter turns the front fog lamp indicator lamp ON according to the front fog light request signal.

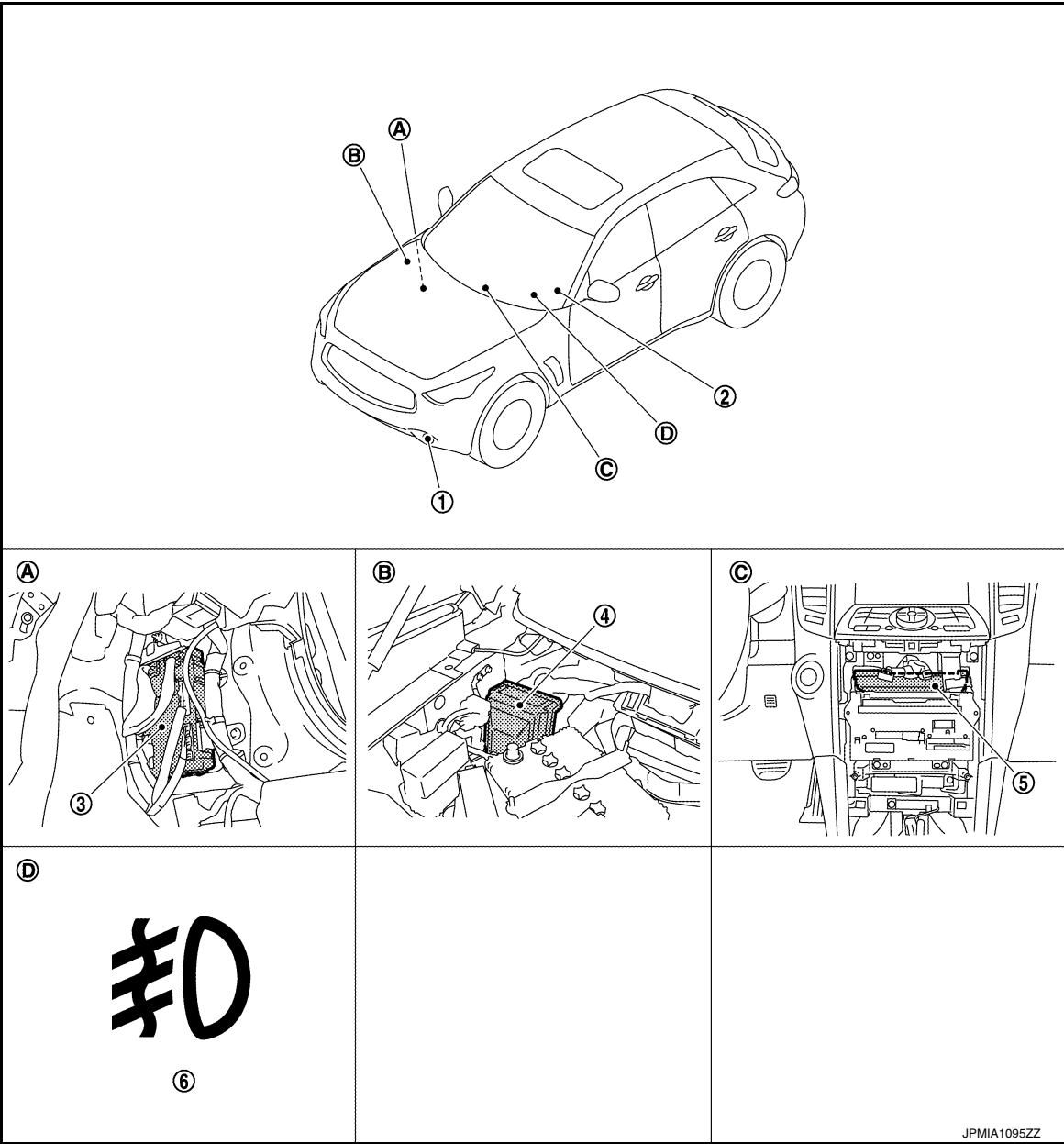
FRONT FOG LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:0000000010576261



- | | | |
|-------------------------------------|--------------------------------|----------------------------------|
| 1. Front fog lamp | 2. Combination switch | 3. BCM |
| 4. IPDM E/R | 5. Unified meter and A/C amp. | 6. Front fog lamp indicator lamp |
| A. Dash side lower (passenger side) | B. Engine room dash panel (RH) | C. Behind the cluster lid C |
| D. On the combination meter | | |

Component Description

INFOID:0000000010576262

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

FRONT FOG LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Part	Description
Combination switch (Lighting & turn signal switch)	Refer to BCS-11, "System Diagram" .
Combination meter (Front fog lamp indicator lamp)	Turns the front fog 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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EXL

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

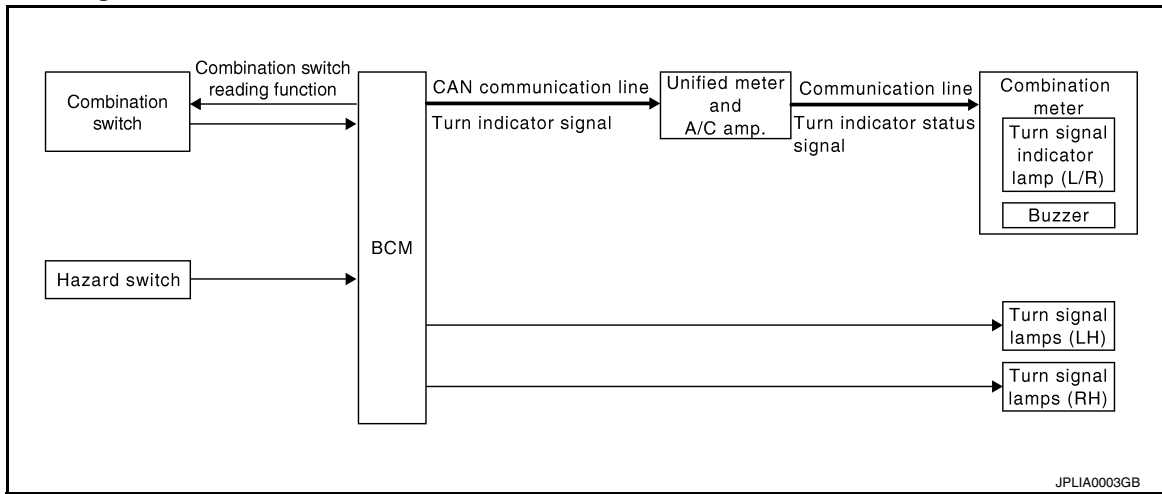
< SYSTEM DESCRIPTION >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

System Diagram

INFOID:0000000010576263



JPLIA0003GB

System Description

INFOID:0000000010576264

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 by the terminal 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.

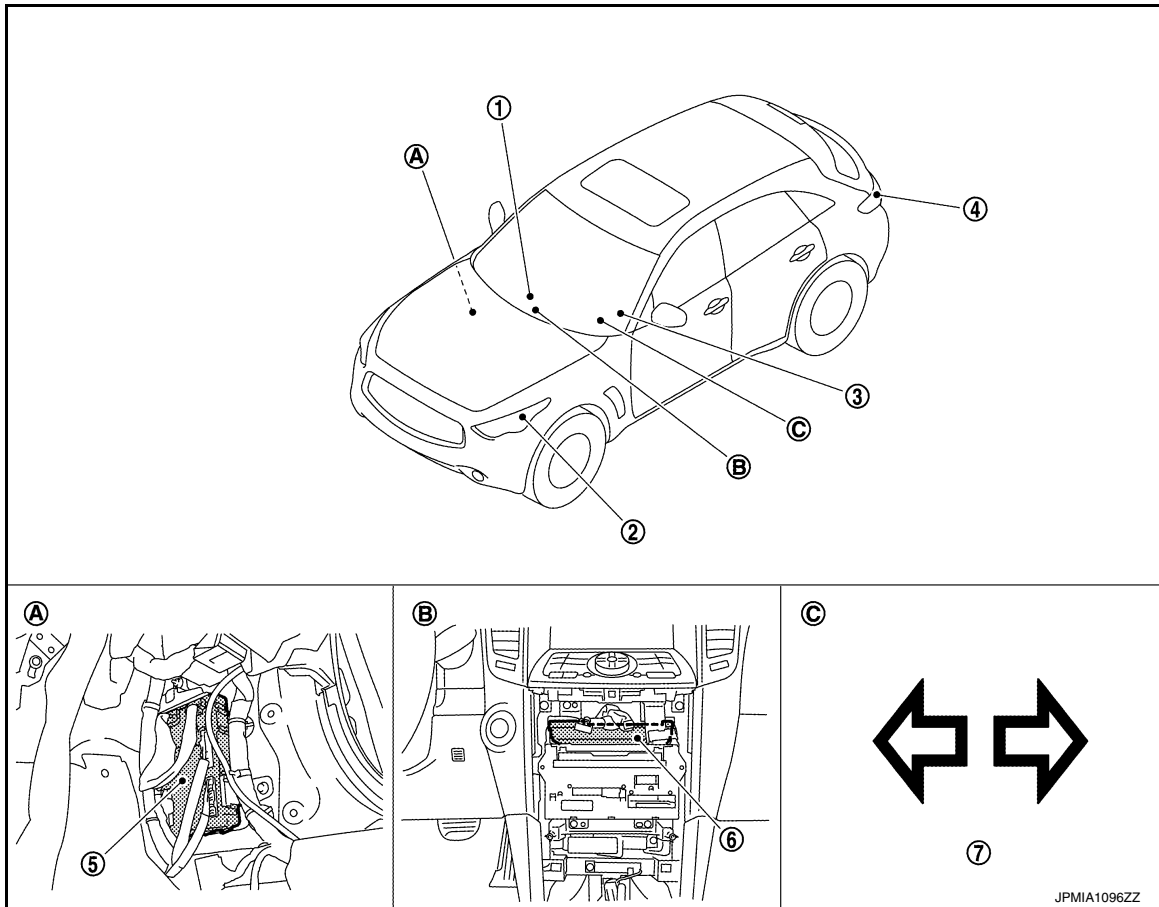
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:0000000010576265



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

Component Description

INFOID:0000000010576266

Part	Description
BCM	• Detects 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-11, "System Diagram" .
Hazard switch (Multifunction switch)	Refer to EXL-87, "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 the unified meter and A/C amp.)].

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

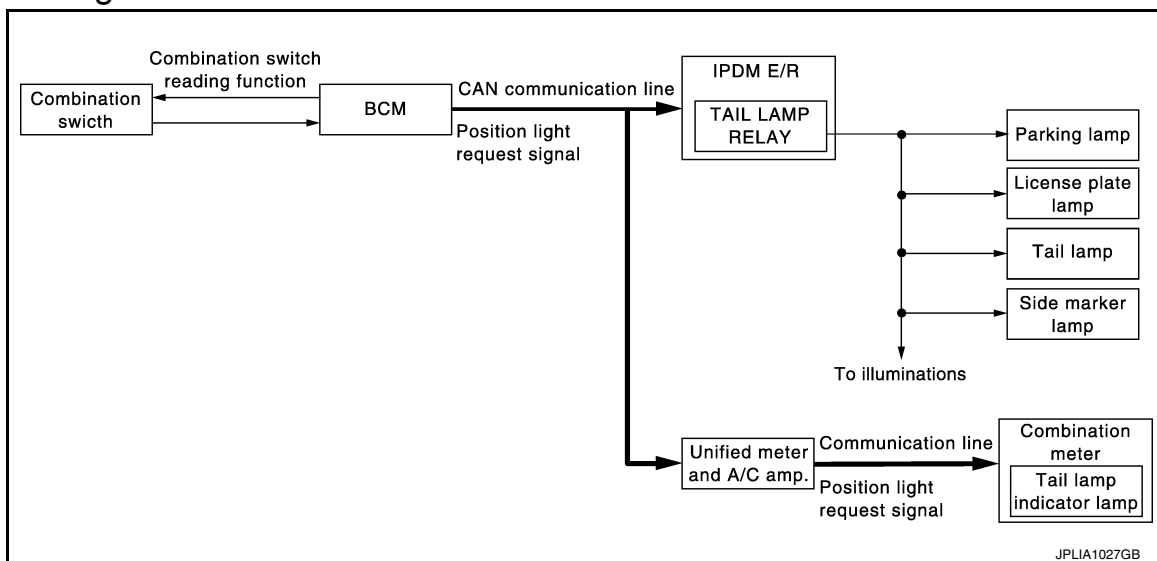
< SYSTEM DESCRIPTION >

[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

System Diagram

INFOID:0000000010576267



System Description

INFOID:0000000010576268

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
- IPDM E/R turns the integrated tail lamp relay ON and turns the parking lamp, license plate, side marker and tail lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

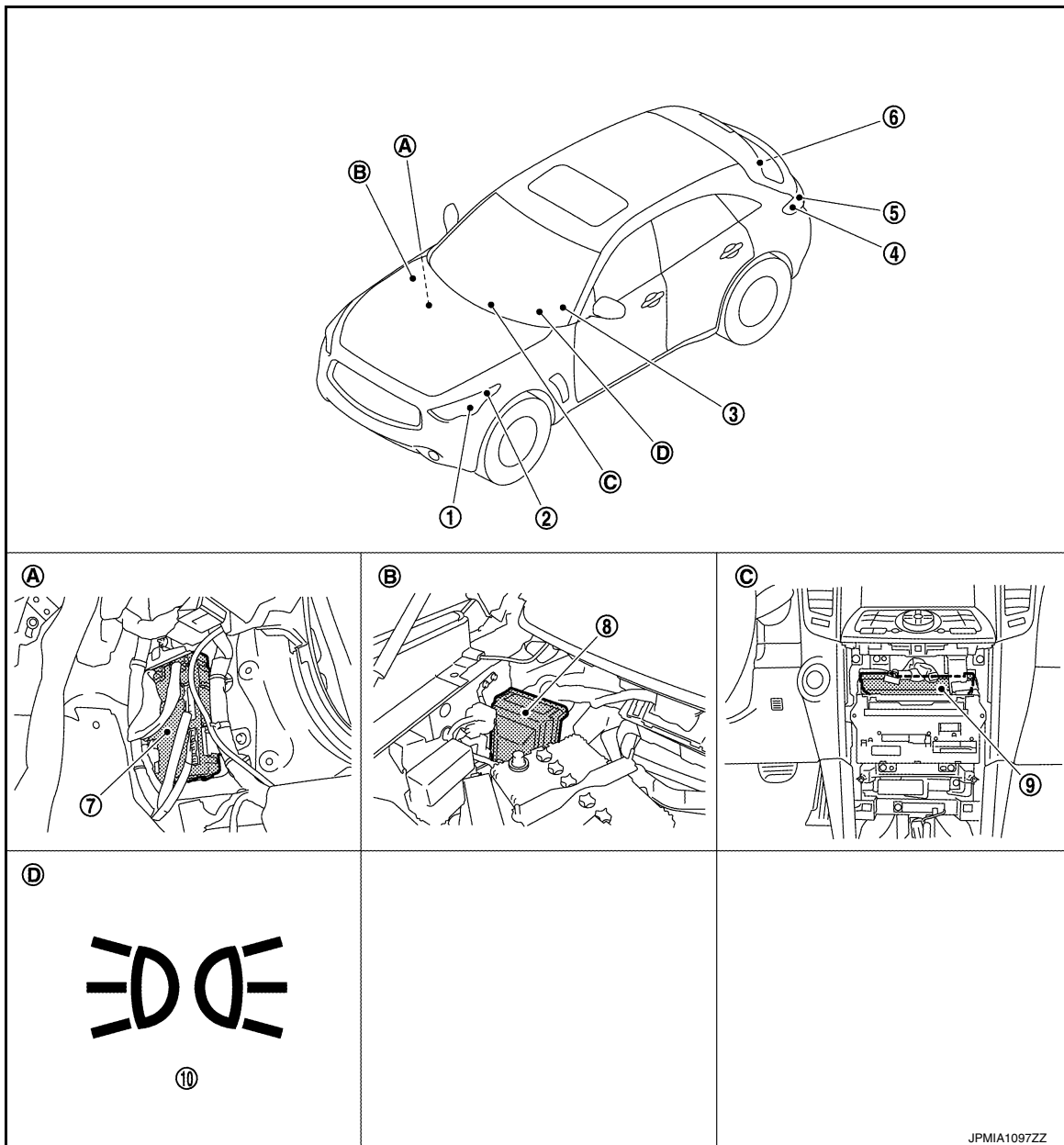
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:000000010576269



- | | | |
|-------------------------------------|--------------------------------|-------------------------------|
| 1. Parking lamp | 2. Front side marker lamp | 3. Combination switch |
| 4. Rear side marker lamp | 5. Tail lamp | 6. License plate lamp |
| 7. BCM | 8. IPDM E/R | 9. Unified meter and A/C amp. |
| 10. Tail lamp indicator lamp | | |
| A. Dash side lower (passenger side) | B. Engine room dash panel (RH) | C. Behind the cluster lid C |
| D. On the combination meter | | |

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Description

INFOID:0000000010576270

Part	Description
BCM	• Detects each switch condition by the combination switch reading function. • Judges the ON/OFF status of the parking, 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).
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-11, "System Diagram" .
Combination meter (Tail lamp indicator lamp)	Turn the tail lamp indicator lamp ON according to the request from BCM [with CAN communication (through the unified meter and A/C amp.)].

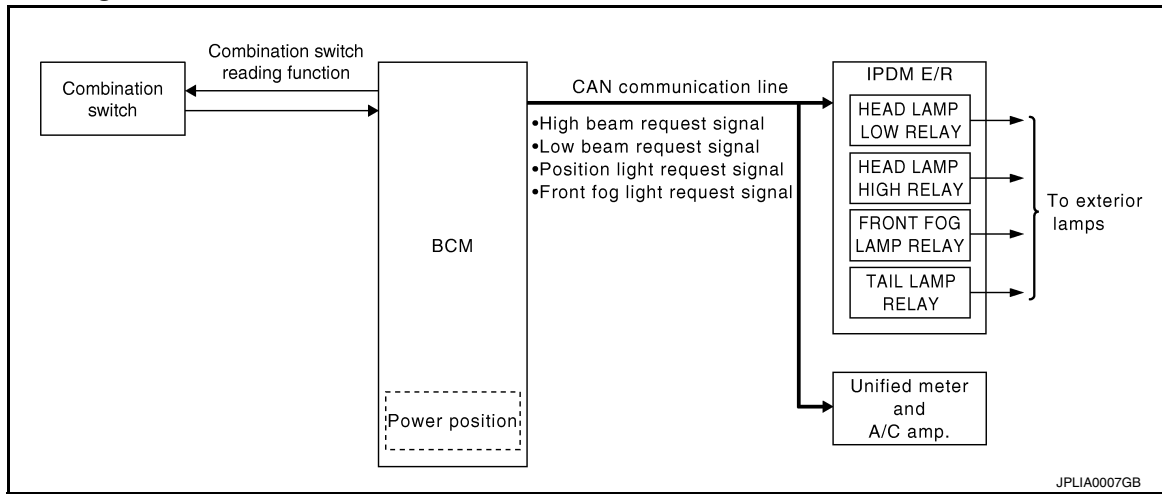
EXTERIOR LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

EXTERIOR LAMP BATTERY SAVER SYSTEM

System Diagram



System Description

INFOID:0000000010576272

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-13, "System Diagram"](#).

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 → 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.

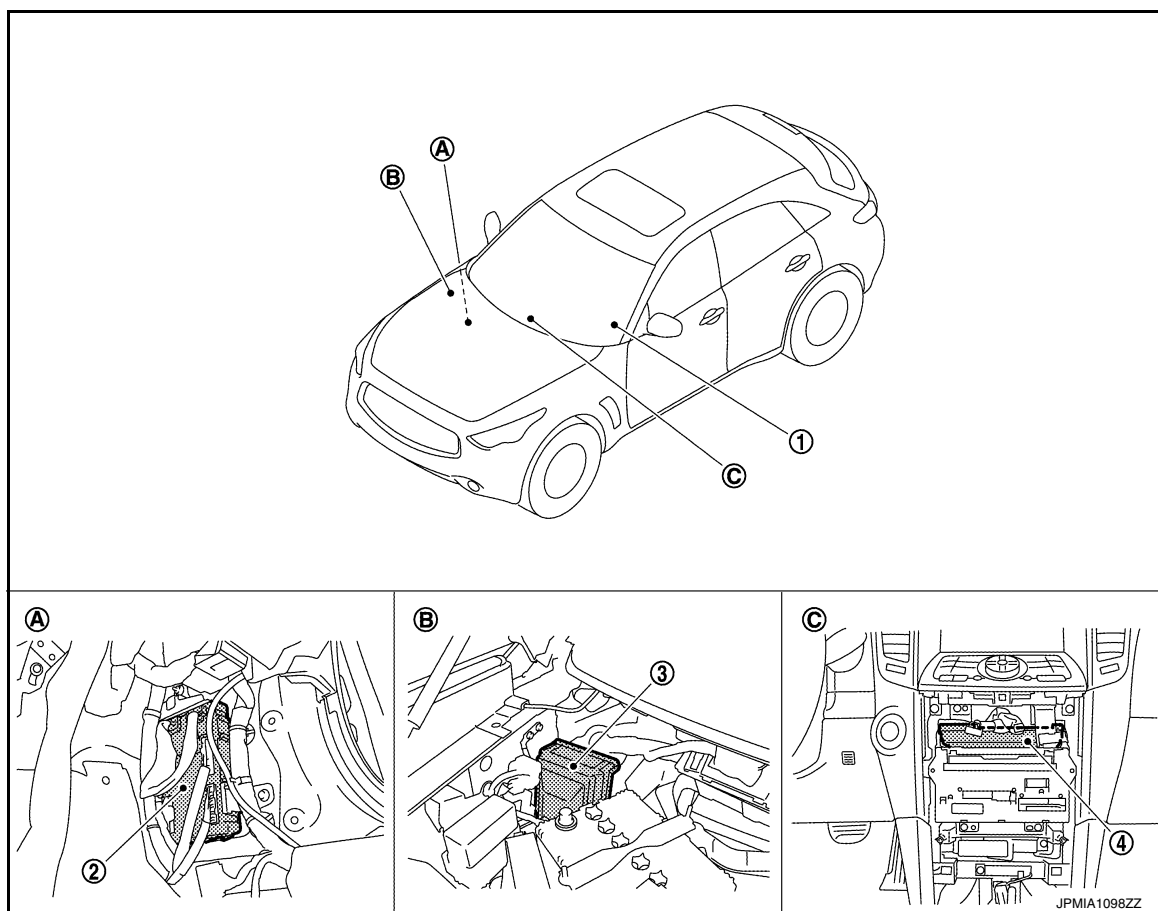
EXTERIOR LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:0000000010576273



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

Component Description

INFOID:0000000010576274

Part	Description
BCM	• Detects each switch condition by the combination switch reading function. • Judges the exterior lamp OFF according to the vehicle condition. Requests each relay OFF to IPDM E/R (with CAN communication).
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-11, "System Diagram" .

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011009262

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR 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	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×

NOTE:

*: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)

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

DIAGNOSIS SYSTEM (BCM)

[XENON TYPE]

< SYSTEM DESCRIPTION >

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

NOTE:

*: Power 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)

INFOID:0000000010576276

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

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

*: Factory setting

DATA MONITOR

NOTE:

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

Monitor item [Unit]	Description
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from unified meter and A/C amp. with CAN communication
KEY SW-SLOT [On/Off]	Key switch status input from key slot
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW1 [On/Off]	
HEAD LAMP SW2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

Monitor item [Unit]	Description
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
DOOR SW-BK [On/Off]	NOTE: The item is indicated, but not monitored.
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.
HEAD LAMP	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
	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: The item is indicated, but cannot be tested.
	Off	
CORNERING LAMP	RH	NOTE: The item is indicated, but cannot be tested.
	LH	
	Off	
ILL DIM SIGNAL	On	NOTE: The item is indicated, but cannot be tested.
	Off	

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000010576277

WORK SUPPORT

Service item	Setting item	Setting	
HAZARD ANSWER BACK	Lock/Unlk*	With locking/unlocking	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 Only	With locking only	
	Off	Without the function	

*: Factory setting

DATA MONITOR

NOTE:

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

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]	The switch status input from the request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from the request switch (passenger side)
PUSH SW [On/Off]	The switch status input from the push-button ignition switch
TURN SIGNAL R [On/Off]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch
RKE-LOCK [On/Off]	Lock signal status received from the remote keyless entry receiver
RKE-UNLOCK [On/Off]	Unlock signal status received from the remote keyless entry receiver
RKE-PANIC [On/Off]	Panic alarm signal status received from the remote keyless entry receiver

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000011009263

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 marker 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 driver door switch 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.
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 ignition switch OFF.

CAUTION:

- If auto active test mode cannot be actuated, check door switch system. Refer to [DLK-107, "Component Function Check"](#).
- Do not start the engine.

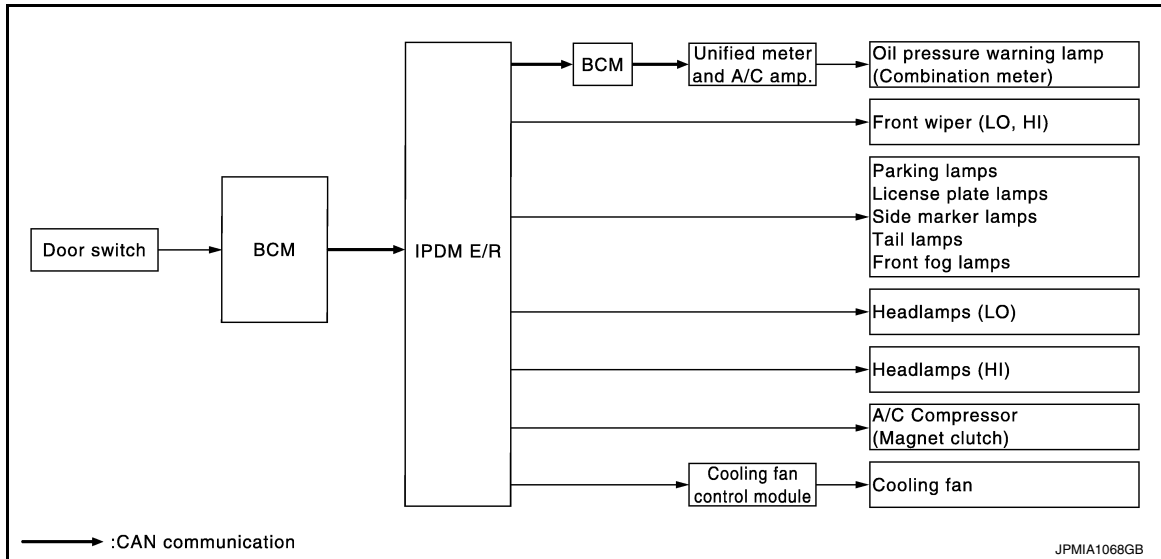
Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 5 steps are repeated 3 times.

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

*: Outputs duty ratio of 50% for 5 seconds → 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 • Parking lamps • License plate lamps • Side marker lamps • Tail lamps • Front fog lamps • Headlamp (HI, LO) • Front wiper	Perform auto active test. Does the applicable system operate?	YES BCM signal input circuit
		NO • Lamp or motor • Lamp or motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES • Unified meter and A/C amp. signal input circuit • CAN communication signal between unified meter and A/C amp. and ECM • CAN communication signal between ECM and IPDM E/R
		NO • Magnet clutch • Harness or connector between IPDM E/R and magnet clutch • IPDM E/R
Oil pressure warning lamp does not operate	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
		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)

[XENON TYPE]

< SYSTEM DESCRIPTION >

Symptom	Inspection contents		Possible cause
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	- ECM signal input circuit - CAN communication signal between ECM and IPDM E/R
		NO	- 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:0000000011009264

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-194. "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 stop position signal judged by IPDM E/R.

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[XENON TYPE]

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 /INHI/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]		NOTE: The item is indicated, but not monitored.
S/L STATE [LOCK/UNLOCK/UNKWN]		NOTE: The item is indicated, but not monitored.
DTRL REQ [Off]		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]		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]		NOTE: The item is indicated, but not monitored.

ACTIVE TEST

Test item

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

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (AFS)

CONSULT Function (ADAPTIVE LIGHT)

INFOID:0000000010576280

APPLICATION ITEM

Diagnostic mode	Description
ECU Identification	Allows confirmation of AFS 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.

*: Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-9. "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 ANGLE SIG [°]	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* [°]	The head lamp swivel angle value judged by AFS control unit received from the swivel position sensor signal input from the swivel actuator
SWVL SEN LH* [°]	
SWVL ANGLE RH* [°]	The swivel angle command value to the swivel motor judged by AFS control unit
SWVL ANGLE LH * [°]	

*: 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.

DIAGNOSIS SYSTEM (AFS)

< SYSTEM DESCRIPTION >

[XENON TYPE]

ACTIVE TEST

CAUTION:

Start the engine when using “ACTIVE TEST”.

Test item	Operation Item	Description
LOW BEAM TEST RIGHT	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.
	Origin Slow	Swivels the right headlamp to the swivel angle 0° in the speed at the initialization.
	Peak Slow	Swivels the right headlamp to the swivel angle approximately 15° in the speed at the initialization.
LOW BEAM TEST LEFT	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.
	Origin Slow	Swivels the left headlamp to the swivel angle 0° 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.
	Peak	Changes the aiming motor drive signal to approximately 15% of the battery voltage. Moves the headlamp upward and downward.

NOTE:

“Fast” operation speed is as three times fast as “Slow”.

DTC/CIRCUIT DIAGNOSIS

B2503, B2504 SWIVEL ACTUATOR

Description

INFOID:0000000010576281

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

INFOID:0000000010576282

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

*: 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.
4. Shift the selector lever to "N".
5. Steer to the right. (Rotate it once or more.)
6. Perform the self-diagnosis with CONSULT.

B2503, B2504 SWIVEL ACTUATOR

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Is "B2503" detected?

- YES >> Refer to [EXL-46, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "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-47, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000010576283

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			(-)	
Connector		Terminal	Ground	
RH	M16	9		
LH		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. Refer to [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

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

B2503, B2504 SWIVEL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AFS control unit			Headlamp swivel actuator		Continuity
Connector		Terminal	Connector	Terminal	
RH	M16	11	E29	8	Existed
		13		7	
		32		3	
		34		4	
LH		15	E59	3	
		17		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 control unit		Ground	Continuity	
Connector			Terminal	
RH	M16		11	Not existed
			13	
			32	
			34	
LH			15	
			17	
			36	
			38	

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5.

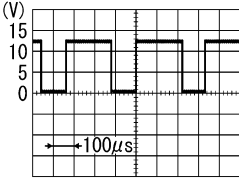
5.CHECK SWIVEL MOTOR CIRCUIT VOLTAGE OUTPUT

1. 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.

B2503, B2504 SWIVEL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals				Condition	Voltage (Approx.)
(+)		(-)			
AFS control unit				Swivel motor	
Connector	Terminal				
RH	M16	11	Ground	Active	 8 - 12 V
		32			
15					
LH		36			
		RH		13	
LH				34	
		RH		17	
LH				38	
		Stop		9.5 - 11.5 V	

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 control unit			Ground	
Connector		Terminal		
RH	M16	4		
LH		24		
				5 V

Is the measurement value normal?

YES >> GO TO 7.

NO >> GO TO 9.

7.CHECK SWIVEL POSITION SENSOR POWER SUPPLY CIRCUIT INPUT VOLTAGE

1. 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.

Terminals				Voltage (Approx.)
(+)			(−)	
Headlamp swivel actuator			Ground	
Connector		Terminal		
RH	E29	2		
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

B2503, B2504 SWIVEL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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

AFS control unit		Headlamp swivel actuator		Continuity
Connector	Terminal	Connector	Terminal	
RH	M16	E29	1	Existed
LH		E59	1	

Does continuity exist?

YES >> 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.

Terminals				Voltage (Approx.)
(+)			(−)	
AFS control unit			Ground	
Connector		Terminal		
RH	M16	2		
LH		27		
				0 V

Is the measurement value normal?

YES >> GO TO 10.

NO >> Replace AFS control unit.

10.CHECK SWIVEL POSITION SENSOR SHORT GROUND CIRCUIT

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

AFS control unit		Headlamp swivel actuator		Continuity
Connector	Terminal	Connector	Terminal	
RH	M16	E29	6	Existed
LH		E59	6	

Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

Component Inspection

INFOID:0000000010576284

1.CHECK SWIVEL MOTOR SINGLE PART

1. Disconnect the swivel actuator connector.
2. Check the resistance among each swivel actuator connector terminal.

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

B2503, B2504 SWIVEL ACTUATOR

< 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]

B2514 HEIGHT SENSOR UNUSUAL [RR]

Description

INFOID:0000000010576285

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:0000000010576286

DTC DETECTION LOGIC

[B2514] Height sensor unusual [RR]

DTC detection condition	DTC erase condition	Possible cause
An applicable DTC is indicated when any of the following conditions is detected continuously for 2 seconds or more. - The height sensor power supply is 6 V or more, or 4 V or less. - The height sensor signal is 0.25 V or less, or 4.75 V or more.	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

1. Start the engine.
2. Turn the headlamp ON.
3. Select the self-diagnosis with CONSULT.
4. Check the self-diagnosis result. Refer to [EXL-207. "DTC Index"](#).

Is "B2514" detected?

YES >> Refer to [EXL-51. "Diagnosis Procedure"](#).

NO >> Refer to [GI-47. "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000010576287

1.CHECK HEIGHT SENSOR POWER SUPPLY OUTPUT

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			
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.

B2514 HEIGHT SENSOR UNUSUAL [RR]

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals			Voltage (Approx.)
(+)		(-)	
AFS control unit		Ground	
Connector	Terminal		
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.
4. Check the voltage between the height sensor harness connector and the ground.

Terminals			Voltage (Approx.)
(+)		(-)	
Height sensor		Ground	
Connector	Terminal		
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.
3. 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	
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 sensor		Ground	Continuity
Connector	Terminal		
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 (Approx.)
(+)		(-)	
AFS control unit		Ground	
Connector	Terminal		
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.
3. 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	
M16	8	B32	3	Existed

Does continuity exist?

YES >> Replace the height sensor.

NO >> Repair the harnesses or connectors.

Component Inspection

INFOID:0000000010576288

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.
4. 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.)]
HI SEN OTP RR	Sensor lever position	Contact with stopper	0.9 V
		Moving between two positions	Smooth movement
		90° from stopper	4.5 V

Is the output value normal?

YES >> Height sensor is normal.

NO >> Replace the height sensor.

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

INFOID:0000000010576289

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

DTC Logic

INFOID:0000000010576290

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 the ignition ON.
2. Select the self-diagnosis with CONSULT.
3. Check the self-diagnosis result. Refer to [EXL-207, "DTC Index"](#).

Is "B2516" detected?

- YES >> Refer to [EXL-54, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000010576291

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-140, "Reference Value"](#).
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]

B2517 VEHICLE SPEED SIGNAL

Description

INFOID:0000000010576292

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

DTC Logic

INFOID:0000000010576293

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	- Unified meter and A/C amp. - AFS control unit

DTC CONFIRMATION PROCEDURE

1.DTC ERASE

Erase the DTC memory of AFS with CONSULT.

>> GO TO 2.

2.DTC CONFIRMATION

- Turn the ignition ON.
- Select the self-diagnosis with CONSULT.
- Check the self-diagnosis result. Refer to [EXL-207, "DTC Index"](#).

Is "B2517" detected?

- YES >> Refer to [EXL-55, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000010576294

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-95, "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.

B2519 LEVELIZER CALIBRATION

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

B2519 LEVELIZER CALIBRATION

Description

INFOID:0000000010576295

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

DTC Logic

INFOID:0000000010576296

[B2519] Levelizer calibration

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

Diagnosis Procedure

INFOID:0000000010576297

1.LEVELIZER ADJUSTMENT

Perform the levelizer adjustment.

>> Refer to [EXL-8, "LEVELIZER ADJUSTMENT : Description"](#).

B2521 ECU CIRCUIT

Description

INFOID:0000000010576298

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

DTC Logic

INFOID:0000000010576299

DTC DETECTION LOGIC

[B2521] ECU circuit

Error 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. - The swivel position sensor is shorted to the power supply or the ground. - The swivel position sensor signal is shorted to the ground. - The height sensor power supply is shorted to the power supply or the ground. - The height sensor signal is shorted to the ground. • AFS control unit RAM/ROM error	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 (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 the ignition ON.
2. Select the self-diagnosis with CONSULT.
3. Check the self-diagnosis result. Refer to [EXL-207, "DTC Index"](#).

Is "B2521" detected?

YES >> Refer to [EXL-57, "Diagnosis Procedure"](#).

NO >> Refer to [GI-47, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000010576300

1.CHECK EACH SENSOR POWER SUPPLY

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			
Connector	Terminal	Ground	
M16	4		
	6		
	24		
		5 V	

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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< DTC/CIRCUIT DIAGNOSIS >

2.CHECK EACH SENSOR SIGNAL

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

Terminals			Voltage (Approx.)
(+)	(-)		
AFS control unit		Ground	0.25 - 4.75 V
Connector	Terminal		
M16	9		
	28		
	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.
2. Disconnect AFS control unit connector.
3. Check continuity between the AFS control unit harness connector and the ground.

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

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace AFS control unit.

4.CHECK EACH SENSOR POWER SUPPLY CIRCUIT

1. 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		Ground	0 V
Connector	Terminal		
M16	4		
	6		
	24		

Is the measurement value normal?

YES >> Replace AFS control unit.

NO >> Repair the harnesses or connectors.

5.CHECK EACH SENSOR SIGNAL SHORT CIRCUIT

1. Turn the ignition switch OFF.
2. 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]

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

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace AFS control unit.

6.CHECK EACH SENSOR SIGNAL SHORT CIRCUIT

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

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

Is the measurement value normal?

YES >> Replace AFS control unit.

NO >> Repair the harnesses or connectors.

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EXL

C0126 STEERING ANGLE SENSOR SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

C0126 STEERING ANGLE SENSOR SIGNAL

Description

INFOID:0000000010576301

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

DTC Logic

INFOID:0000000010576302

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.
3. Select the self-diagnosis with CONSULT.
4. Check the self-diagnosis result. Refer to [EXL-207, "DTC Index"](#).

Is "C0126" detected?

- YES >> Refer to [EXL-60, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000010576303

1.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 [BRC-120, "DTC 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]

C0428 STEERING ANGLE SENSOR CALIBRATION

Description

INFOID:0000000010576304

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

DTC Logic

INFOID:0000000010576305

[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:0000000010576306

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 [BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Description"](#).

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000010576307

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-35. "CAN Communication Signal Chart"](#).

DTC Logic

INFOID:0000000010576308

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:0000000010576309

1. PERFORM SELF DIAGNOSTIC

1. Turn the ignition switch ON and wait for 2 seconds or more.
2. Select the self-diagnosis with CONSULT.
3. Check the self-diagnosis result.

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-25. "Trouble Diagnosis Flow Chart"](#).
 NO >> Refer to [GI-47. "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000010576310

DTC DETECTION LOGIC

[U1000] CAN communication circuit

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

Diagnosis Procedure

INFOID:0000000010576311

1.REPLACE AFS CONTROL UNIT

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

>> Replace AFS control unit.

EXL

POWER SUPPLY AND GROUND CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000011009265

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	L
	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.
3. Check voltage between BCM harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground Battery voltage
Connector	Terminal	
M118	1	
M119	11	

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.

BCM		Ground	Continuity
Connector	Terminal		
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

INFOID:0000000011009266

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]

Signal name	Fuses and fusible link No.
Battery power supply	D
	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 ground.

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

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

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

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

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

AFS CONTROL UNIT

AFS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000010576314

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

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals			Voltage (Approx.)
(+)		(-)	
AFS control unit		Ground	
Connector	Terminal		
M16	1		
			Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair the harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Check continuity between the AFS control unit harness connectors and the ground.

AFS control unit		Ground	Continuity
Connector	Terminal		
M16	25		Existed

Does continuity exist?

YES >> Repair the harness or connector.

NO >> Power supply and ground circuit are normal.

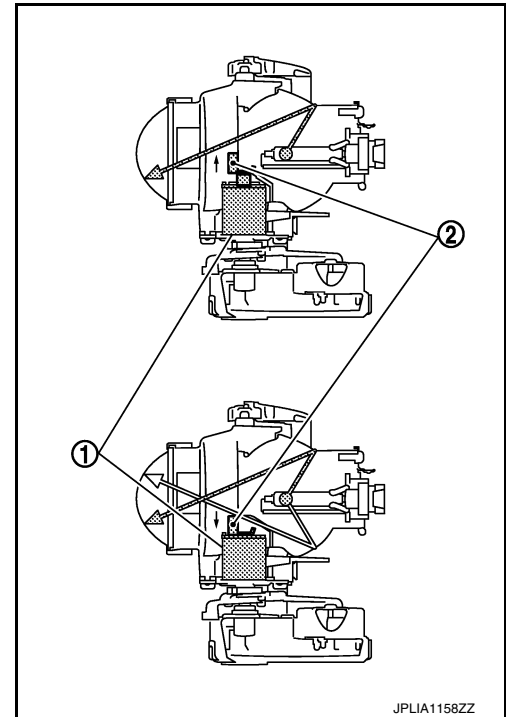
HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000010576317

The high beam solenoid drives the mobile valve shade. And the mobile valve shade switches the high beam and low beam of headlamp.

- When the headlamp high relay is turned ON, magnetic force is applied to the high beam solenoid (1) by a current. The mobile valve shade (2) is switched to the high beam position.
- When the headlamp high relay is turned OFF, the current stops. The mobile valve shade returns to the low beam position automatically.



Component Function Check

INFOID:0000000010576318

1.CHECK HEADLAMP (HI) OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [PCS-10. "Diagnosis Description"](#).
2. Check that the headlamp switches to the high beam.

Ⓟ CONSULT ACTIVE TEST

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. With operating the test items, check that the headlamp switches to the high beam.

Hi : Headlamp switches to the high beam.

Off : Headlamp OFF

NOTE:

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

Does the headlamp switch to the high beam?

- YES >> Headlamp (HI) circuit is normal.
 NO >> Refer to [EXL-67. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576319

1.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

Ⓟ CONSULT ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. 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.

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals				Test item	Voltage (Approx.)
(+)		(-)			
IPDM E/R			Ground	EXTERNAL LAMPS	
Connector		Terminal			
RH	E8	89		Hi	Battery voltage
					Off
LH	E8	90	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.
3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector.

IPDM E/R		Front combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E8	E28	1	Existed
LH		E58	1	

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 FRONT COMBINATION 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		Ground	Continuity
Connector	Terminal		
RH	E8	89	Not existed
LH		90	

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.)

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

5.CHECK HEADLAMP (HI) GROUND OPEN CIRCUIT

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

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

Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

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HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP (LO) CIRCUIT

Description

INFOID:0000000010576320

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-72, "Description"](#).

Component Function Check

INFOID:0000000010576321

1.CHECK HEADLAMP (LO) OPERATION

⊗IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [PCS-10, "Diagnosis Description"](#).
2. Check that the headlamp is turned ON.

ⓅCONSULT ACTIVE TEST

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

Low : Headlamp ON
Off : Headlamp OFF

Is the headlamp turned ON?

- YES >> Headlamp (LO) is normal.
NO >> Refer to [EXL-70, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576322

1.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

ⓅCONSULT ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the headlamp connector.
3. 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	Voltage (Approx.)
(+)			(-)		
IPDM E/R			Ground	EXTERNAL LAMPS	
Connector		Terminal			
RH	E8	83		Low	Battery voltage
				Off	0 V
LH		84		Low	Battery voltage
				Off	0 V

Is the measurement value normal?

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

2.CHECK HEADLAMP (LO) 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 headlamp harness connector.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

IPDM E/R		Headlamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E8	E25	1	Existed
LH				

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		
RH	E8	83	Not existed
LH			

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

Check continuity between the headlamp harness connector and the ground.

Headlamp		Ground	Continuity
Connector	Terminal		
RH	E25	2	Existed
LH	E55		

Does continuity exist?

YES >> Perform the xenon headlamp diagnosis. Refer to [EXL-72, "Description"](#).

NO >> Repair the harnesses or connectors.

XENON HEADLAMP

Description

INFOID:0000000010576323

OUTLINE

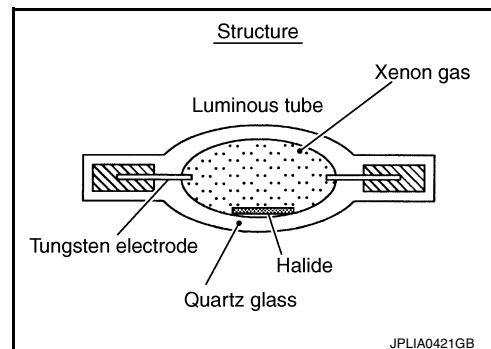
- The lamp light source is by the arch discharge by applying high voltage into the xenon gas-filled bulb instead of the halogen bulb filament.
- Sight becomes more natural and brighter because the amount of light are gained adequately and the color of light is sunshine-like white.
- The xenon bulb drops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

ILLUMINATION PRINCIPLE

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

NOTE:

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



PRECAUTIONS FOR TROUBLE DIAGNOSIS

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

WARNING:

- **Never touch the harness, HID control unit, the inside and metal part of lamp when turning the headlamp ON or operating the 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

INFOID:0000000010576324

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 >> GO TO 2.

2.CHECK HID CONTROL UNIT

Install the normal HID control unit to the applicable headlamp. Check that the lamp is turned ON.

Is the headlamp turned ON?

XENON HEADLAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

YES >> Replace HID control unit.

NO >> GO TO 3.

3.CHECK XENON HEADLAMP HOUSING ASSEMBLY

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

Is the headlamp turned ON?

YES >> Replace the front combination lamp. (Xenon headlamp housing voltage converter malfunctions.)

NO >> Xenon headlamp is normal. Check the headlamp control system.

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HEADLAMP LEVELIZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP LEVELIZER CIRCUIT

Description

INFOID:0000000010576325

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:0000000010576326

1.CHECK AIMING MOTOR OPERATION

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 (Reference value)	10 m (32.8 ft)-forward light axis change refer- ence quantity (Approx.)
LEVELIZER TEST		
Origin	0°	—
Peak	2.5°	450 mm (17.9 in)

Is the operation normal?

- YES >> Headlamp levelizer circuit is normal.
NO >> Refer to [EXL-74. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576327

1.CHECK AIMING MOTOR DRIVE SIGNAL OUTPUT

CONSULT ACTIVE TEST

1. Start the engine.
2. Turn the light switch 2ND.
3. 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	Voltage (Approx.)
(+)		(-)			
AFS control unit				LEVELIZER TEST	
Connector		Terminal			
RH	M16	19		Origin	8.8 V
				Peak	1.9 V
LH		40		Origin	8.8 V
				Peak	1.9 V

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.
3. Check continuity between the AFS control unit harness connector and the aiming motor harness connector.

HEADLAMP LEVELIZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AFS control unit		Aiming motor		Continuity
Connector	Terminal	Connector	Terminal	
RH	M16	E26	2	Existed
LH		E56	2	

Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses and connectors.

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 the AFS control unit harness connector and the ground.

AFS control unit			Ground	Continuity
Connector		Terminal		
RH	M16	19		Not existed
LH		40		

Does continuity exist?

YES >> Repair the harness and connectors.

NO >> Replace AFS control unit.

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000010576328

1.CHECK FRONT FOG LAMP OPERATION

⊗IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [PCS-10, "Diagnosis Description"](#).
2. Check that the front fog lamp is turned ON.

ⓅCONSULT ACTIVE TEST

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

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

Is the front fog lamp turned ON?

- YES >> Front fog lamp circuit is normal.
NO >> Refer to [EXL-76, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576329

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/15A*

*: TYPE 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			Ground	Continuity
Connector		Terminal		
RH	E8	86		Not existed
LH		87		

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

ⓅCONSULT ACTIVE TEST

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

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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

Terminals				Test item	Voltage (Approx.)
(+)			(-)		
IPDM E/R			Ground	EXTERNAL LAMPS	
Connector		Terminal			
RH	E8	86		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

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

IPDM E/R		Front fog lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E8	E34	1	Existed
LH		E64	1	

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			Ground	Continuity
Connector		Terminal		
RH	E34	2		Existed
LH	E64	2		

Does continuity exist?

YES >> Replace the front fog lamp.

NO >> Repair the harnesses or connectors.

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000010576330

1.CHECK PARKING LAMP OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [PCS-10, "Diagnosis Description"](#).
2. Check that the parking lamp is turned ON.

Ⓜ CONSULT 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-78, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576331

1.CHECK PARKING LAMP FUSE

1. Turn the ignition switch OFF.
2. 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.

TYPE A

IPDM E/R		Ground	Continuity
Connector	Terminal		
RH	91		Not existed
LH	92		

TYPE B

IPDM E/R		Ground	Continuity
Connector	Terminal		
E9	91		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.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

4.CHECK PARKING LAMP OUTPUT VOLTAGE

CONSULT ACTIVE TEST

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

TYPE A

Terminals				Test item	Voltage (Approx.)
(+)		(-)			
IPDM E/R			Ground	EXTERNAL LAMPS	
Connector		Terminal			
RH	E9	91		TAIL	Battery voltage
					Off
LH	E9	92		TAIL	Battery voltage
				Off	0 V

TYPE B

Terminals			Test item	Voltage (Approx.)
(+)		(-)		
IPDM E/R			EXTERNAL LAMPS	
Connector	Terminal			
E9	91		Ground	Battery voltage
			Ground	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.

TYPE A

IPDM E/R			Front combination lamp		Continuity
Connector	Terminal		Connector	Terminal	
RH	E9	91	E28	4	Existed
LH		92	E58	4	

TYPE B

IPDM E/R			Front combination lamp		Continuity
Connector	Terminal		Connector	Terminal	
RH	E9	91	E28	4	Existed
LH			E58	4	

Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

6. CHECK PARKING LAMP GROUND OPEN CIRCUIT

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

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

Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:0000000010576332

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:0000000010576333

1.CHECK TURN SIGNAL LAMP

Ⓐ 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-81, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576334

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

Ⓑ CONSULT ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector or the rear combination lamp connector.
3. Turn the ignition switch ON.
4. 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.

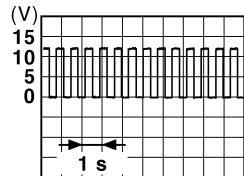
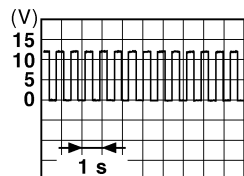
EXL

TURN SIGNAL LAMP CIRCUIT

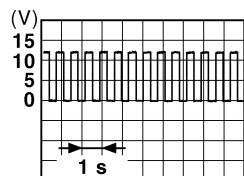
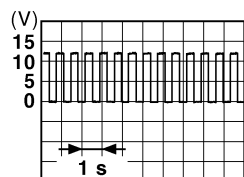
[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Front

Terminals			Test item	Voltage (Approx.)	
(+)		(-)			
BCM			FLASHER		
Connector	Terminal				
RH	M119	17	Ground		
					Off
LH		18			
				Off	0 V

Rear

Terminals			Test item	Voltage (Approx.)
(+)		(-)		
BCM			FLASHER	
Connector		Terminal		
RH	M120	20	Ground	
LH		25		
			Off	0 V

Is the measurement value normal?

YES >> GO TO 3.

NO >> Replace BCM.

3. CHECK TURN SIGNAL LAMP OPEN CIRCUIT

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

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Front turn signal lamp

BCM		Front combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	M119	17	E28	Existed
LH		18	E58	

Rear turn signal lamp

BCM		Rear combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	M120	20	B232	Existed
LH		25	B60	

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.

Front

BCM			Ground	Continuity
Connector		Terminal		
RH	M119	17		Not existed
LH		18		

Rear

BCM			Ground	Continuity
Connector		Terminal		
RH	M120	20		Not existed
LH		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.

Front turn signal lamp

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

Rear turn signal lamp

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

Does continuity exist?

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

NO >> Repair the harnesses or connectors.

A

B

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OPTICAL SENSOR

Description

INFOID:0000000010576335

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

Component Function Check

INFOID:0000000010576336

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

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 SENSOR	Optical sensor	When illuminating	3.1 V or more *
		When shutting off light	0.6 V or less

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

Is the item status normal?

- YES >> Optical sensor is normal.
 NO >> Refer to [EXL-84, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576337

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.

Terminals			Voltage (Approx.)
(+)		(-)	
Optical sensor		Ground	
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.

Terminals			Voltage (Approx.)
(+)		(-)	
Optical sensor		Ground	
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

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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

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

*: 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

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
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		Ground	Continuity
Connector	Terminal		
M94	1		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

6.CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M94	3	M123	137	Existed

Does continuity exist?

YES >> Replace BCM.

NO >> Repair the harnesses or connectors.

7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and the BCM connector.

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

3. Check continuity between the optical sensor harness connector and the BCM harness connector.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
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		Ground	Continuity
Connector	Terminal		
M94	2		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HAZARD SWITCH

Description

INFOID:0000000010576338

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

Component Function Check

INFOID:0000000010576339

1.CHECK HAZARD SWITCH SIGNAL BY CONSULT

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 switch	While pressing the switch	On
		While not pressing the switch	Off

Is the item status normal?

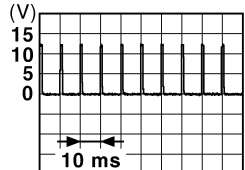
- YES >> Hazard switch circuit is normal.
NO >> Refer to [EXL-87, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576340

1.CHECK HAZARD SWITCH SIGNAL INPUT

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

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
BCM		Hazard switch	
Connector	Terminal	While pressing the switch	0 V
		While not pressing the switch	
M122	110	Ground	

JPMIA0012GB

Is the measurement value normal?

- YES >> Replace BCM.
NO >> GO TO 2.

2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

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

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

Does continuity exist?

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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		Ground	Continuity
Connector	Terminal		
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.

Multifunction switch		Ground	Continuity
Connector	Terminal		
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:0000000010576341

1.CHECK TAIL LAMP OPERATION

☒ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [PCS-10, "Diagnosis Description"](#).
2. Check that the tail lamp is turned ON.

☐ CONSULT ACTIVE TEST

1. 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

Is the tail lamp turned ON?

- YES >> Tail lamp circuit is normal.
NO >> Refer to [EXL-89, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576342

1.CHECK TAIL LAMP FUSE

1. Turn the ignition switch OFF.
2. 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.

2.CHECK TAIL LAMP OUTPUT VOLTAGE

☐ CONSULT ACTIVE TEST

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

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

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.

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
Connector		Terminal	Connector	Terminal	
RH	E5	7	B232	1	Existed
LH			B60	1	

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			Ground	Continuity
Connector		Terminal		
RH	B232	4		Existed
LH	B60	4		

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

INFOID:0000000010576343

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

IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [PCS-10, "Diagnosis Description"](#).
2. Check that the license plate lamp is turned ON.

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-91, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010576344

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

1. 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.

IPDM E/R		License plate lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E5	D117	1	Existed
LH		D112	1	

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			Ground	Continuity
Connector	Terminal			
RH	D117	2		Existed
LH	D112	2		

Does continuity exist?

YES >> Replace the license plate lamp.

NO >> Repair the harnesses or connectors.

HEADLAMP SYSTEM

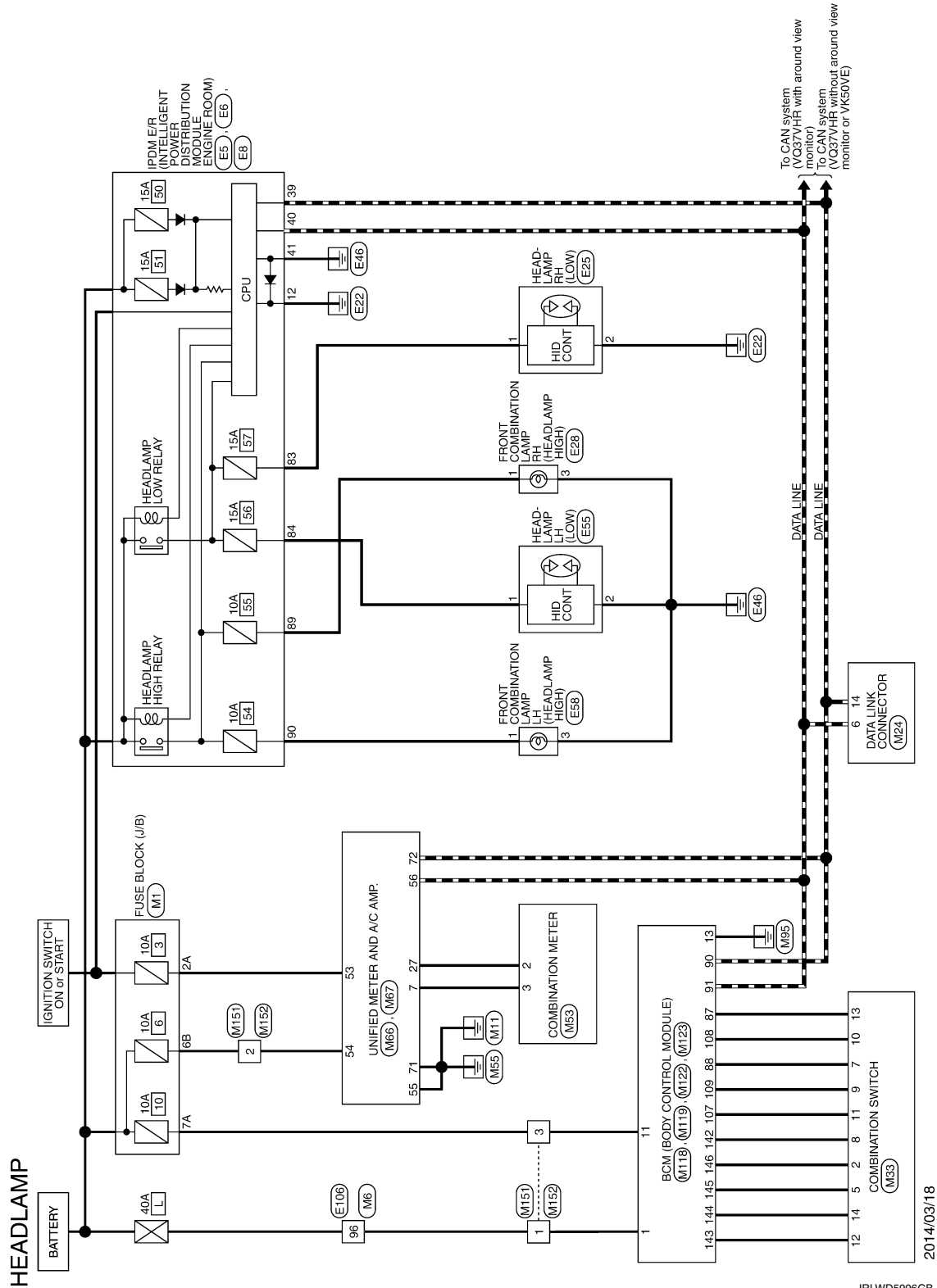
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP SYSTEM

Wiring Diagram - HEADLAMP -

INFOID:0000000010576345



HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

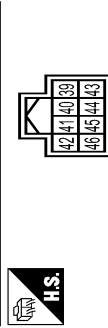
HEADLAMP

Connector No.	E5
Connector Name	IPM/ER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH80FW-CS12-M4-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
4	V	-
5	L	-
7	R	-
10	SB	-
12	B	-
13	Y	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	Y	-
28	BG	-
30	GR	-
36	G	-

Connector No.	E6
Connector Name	IPM/ER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH80FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-

44	W	-
45	G	-
46	BR	-

Connector No.	E8
Connector Name	IPM/ER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
83	R	-
84	P	-
86	W	-
88	G	-
89	BR	-
90	Y	-

Connector No.	E25
Connector Name	HEADLAMP RH
Connector Type	E02FGY-RS



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

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS04FB-PR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	V	-
3	B	-
4	P	-

Connector No.	E55
Connector Name	HEADLAMP LH
Connector Type	E02FGY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	B	-

Connector No.	E58
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RS04FB-PR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	B	-
4	BG	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-

HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP

16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
20	Y	- [Without ICC]
21	BR	-
22	R	- [With ICC]
22	V	- [Without ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	L	- [Without ICC]
25	Y	- [With ICC]
26	SHIELD	-
28	G	-
29	LG	-
30	BG	-
32	W	-
32	Y	-
33	Y	-
34	BG	-
37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
59	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
69	L	-
70	SHIELD	-
71	G	-
72	G	-

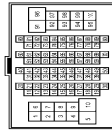
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FTW-M2



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH06MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat]
3	SB	- [With Auto aircon seat]
4	LG	-
5	GR	-
6	W	-
7	G	-
8	W	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC]
20	W	- [With ICC]
21	BR	- [Without ICC]
21	R	- [With ICC]
22	L	- [Without ICC]
22	R	- [With ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	W	- [Without ICC]
25	Y	- [With ICC]
26	SHIELD	-
28	GR	-
29	V	-
30	BG	-
32	W	-

33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-
54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-
65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	V	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-
91	R	-
92	R	-
93	GR	-

HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP

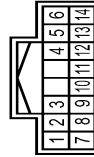
Terminal No.	Color	Wire	Signal Name [Specification]
95	G	-	-
96	W	-	-
97	W	-	-
98	SHELD	-	-
100	Y	-	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color	Wire	Signal Name [Specification]
3	LG	-	-
4	B	-	-
5	B	-	-
6	L	-	-
7	GR	-	-
8	G	-	-
11	SB	-	-
12	P	-	-
13	L	-	-
14	P	-	-
16	BG	-	-

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	P	-	FR WASHER (-)
2	SB	-	OUTPUT 4
3	BG	-	FR WASHER (+)
4	G	-	IGN
5	L	-	OUTPUT 3
6	B	-	GROUND
7	V	-	INPUT 3
8	BG	-	OUTPUT 5
9	Y	-	INPUT 2
10	R	-	INPUT 4
11	LG	-	INPUT 1
12	P	-	OUTPUT 1
13	BR	-	INPUT 5
14	G	-	OUTPUT 2

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	BG	-	BATTERY POWER SUPPLY
2	LG	-	COMMUNICATION SIGNAL (METER->AMP)
3	GR	-	COMMUNICATION SIGNAL (AMP->METER)
5	B	-	GROUND
6	W	-	ALTERNATOR SIGNAL
7	P	-	AIR BAG SIGNAL
10	G	-	SECURITY INDICATOR SIGNAL
15	B	-	GROUND
16	B	-	METER CONTROL SWITCH GROUND
21	R	-	IGNITION SIGNAL
24	BR	-	COMMUNICATION SIGNAL (LCD->AMP)
25	V	-	COMMUNICATION SIGNAL (AMP->LCD)
26	R	-	VEHICLE SPEED SIGNAL (8-PULSE)
27	V	-	PARKING BRAKE SWITCH SIGNAL
28	W	-	VEHICLE SPEED SIGNAL
29	SB	-	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
30	G	-	PASSENGER SEAT BELT WARNING SIGNAL
31	L	-	WASHER LEVEL SWITCH SIGNAL

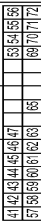
Terminal No.	Color	Wire	Signal Name [Specification]
34	B	-	ILLUMINATION CONTROL SIGNAL
36	LG	-	SELECT SWITCH SIGNAL
37	SB	-	ENTER SWITCH SIGNAL
38	L	-	TRIP AB RESET SWITCH SIGNAL
39	P	-	ILLUMINATION CONTROL SWITCH SIGNAL (-)
40	BG	-	ILLUMINATION CONTROL SWITCH SIGNAL (+)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
5	L	-	MANUAL MODE SHIFT UP SIGNAL
6	BG	-	PADDLE SHIFTER UP SIGNAL
7	GR	-	COMMUNICATION SIGNAL (AMP->METER)
8	L	-	VEHICLE SPEED SIGNAL (2-PULSE)
9	SB	-	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
10	W	-	MANUAL MODE SIGNAL
11	G	-	NON-MANUAL MODE SIGNAL
14	BR	-	COMMUNICATION SIGNAL (LCD->AMP)
20	L	-	ION SENSOR SIGNAL
23	Y	-	AT SNOW SWITCH SIGNAL
25	V	-	MANUAL MODE SHIFT DOWN SIGNAL
26	G	-	PADDLE SHIFTER DOWN SIGNAL
27	LG	-	COMMUNICATION SIGNAL (METER->AMP)
28	R	-	VEHICLE SPEED SIGNAL (8-PULSE)
30	V	-	PARKING BRAKE SWITCH SIGNAL
34	Y	-	COMMUNICATION SIGNAL (AMP->LCD)
38	L	-	BLOWER MOTOR CONTROL SIGNAL

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
41	V	-	ACC POWER SUPPLY
42	Y	-	FUEL LEVEL SENSOR SIGNAL
43	R	-	INTAKE SENSOR SIGNAL
44	LG	-	IN-VEHICLE SENSOR SIGNAL
45	P	-	AMBIENT SENSOR SIGNAL
46	BG	-	SUNLOAD SENSOR SIGNAL
47	V	-	GAS SENSOR SIGNAL
53	G	-	IGNITION POWER SUPPLY
54	BG	-	BATTERY POWER SUPPLY
55	B	-	GROUND
56	L	-	CANH
57	W	-	BRAKE FLUID LEVEL SWITCH SIGNAL
58	B	-	FUEL LEVEL SENSOR GROUND
59	GR	-	INTAKE SENSOR GROUND
60	L	-	IN-VEHICLE SENSOR GROUND
61	BR	-	AMBIENT SENSOR GROUND
62	SB	-	SUNLOAD SENSOR GROUND
63	R	-	ION MODE SIGNAL
65	BG	-	ECV SIGNAL
69	L	-	A/C LAN SIGNAL
70	R	-	EACH DOOR MOTOR POWER SUPPLY
71	B	-	GROUND
72	P	-	CAN-L

HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

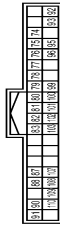
[XENON TYPE]

HEADLAMP

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FW-LC



Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH



Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH

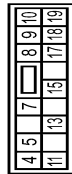


Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	BAT (F/L)
2	Y	POWER WINDOW POWER SUPPLY (BAT)
3	BG	POWER WINDOW POWER SUPPLY (PAP)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-LCS



Terminal No.	Color Of Wire	Signal Name [Specification]
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	V	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	NATS ANT AMP-
81	W	NATS ANT AMP+
82	P	IGN RELAY (F/B) CONT
83	GR	KEYLESS ENTRY RECEIVER SIGNAL
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CANL
91	L	CANH
92	LG	KEY SLOT ILL
93	V	ON IND
95	BG	ACC RELAY CONT
96	GR	ANT SHIFT SELECTOR POWER SUPPLY
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW

Terminal No.	Color Of Wire	Signal Name [Specification]
112	GR	RAIN SENSOR SERIAL LINK
113	P	OPTICAL SENSOR
116	BR	STOP LAMP SW 1
118	P	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
123	W	IGN P/B
124	LG	PASSENGER DOOR SW
132	BG	POWER WINDOW SW COMM
134	GR	LOCK IND
137	B	RECEIVER/SENSOR GND
138	Y	SENSOR POWER SUPPLY
140	R	SHIFT NP
141	G	SECURITY INDICATOR OUTPUT
142	BG	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
150	GR	DRIVER DOOR SW
151	G	REAR WINDOW DEFROGGER RELAY CONT

Terminal No.	Color Of Wire	Signal Name [Specification]
4	P	INT ROOM LAMP PWR SUPPLY (BAT SAVE)
5	V	PASSENGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP OUTPUT
8	V	ALL DOOR, FUEL LID LOCK OUTPUT
9	G	DRIVER DOOR, FUEL LID UNLOCK OUTPUT
10	BR	REAR DOOR UNLOCK OUTPUT
11	R	BAT (FUSE)
13	B	GROUND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT)
18	BG	TURN SIGNAL LH (FRONT)
19	SB	ROOM LAMP TIMER

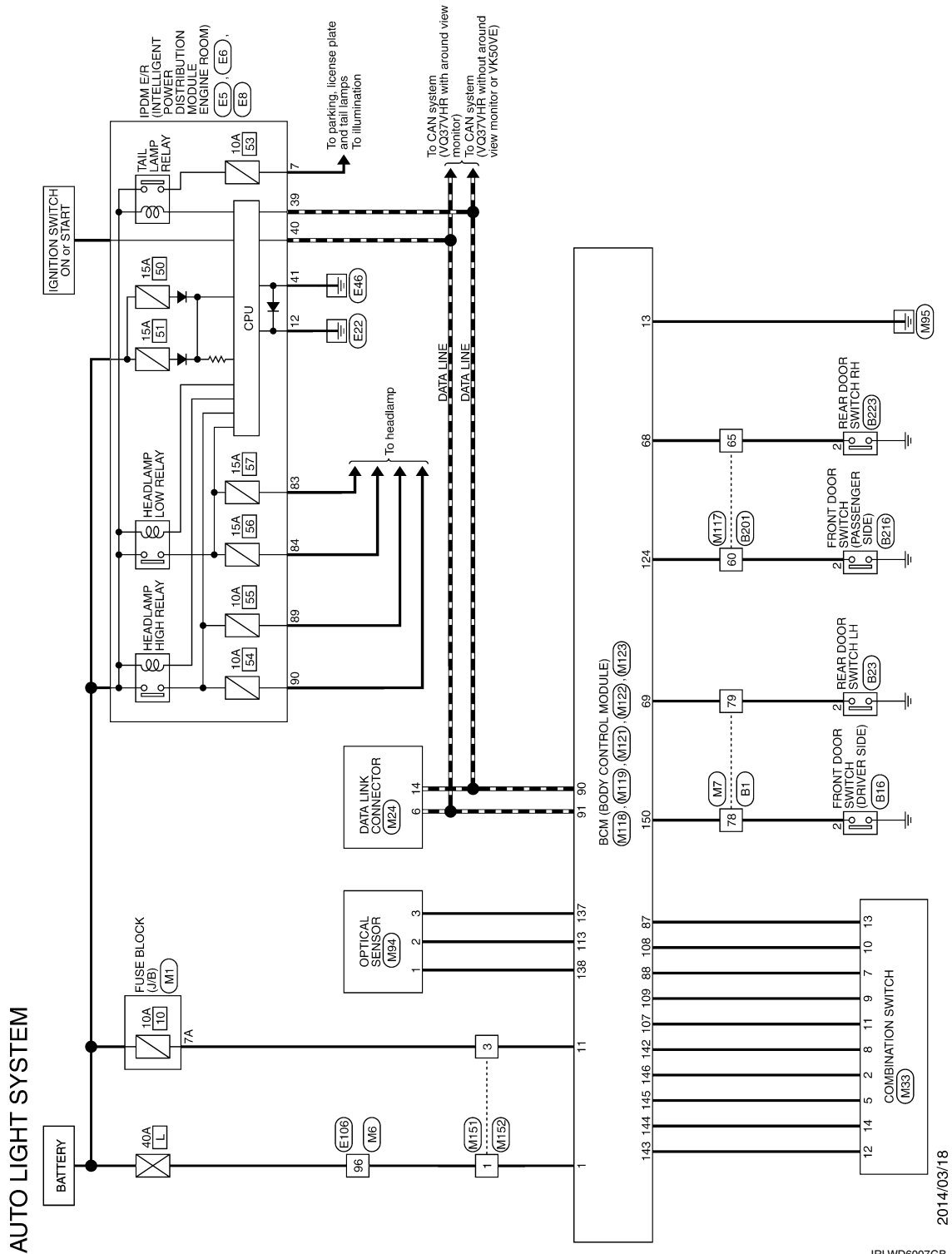
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	
2	Y	
3	R	

JRLW06000GB

AUTO LIGHT SYSTEM

Wiring Diagram - AUTO LIGHT SYSTEM -

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A
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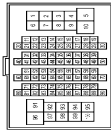
AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

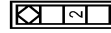
AUTO LIGHT SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



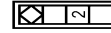
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-
3	W	-
4	G	-
5	P	-
6	B	-
7	SB	-
8	GR	-
9	SB	-
10	B	-
11	G	-
12	R	-
13	W	-
14	SHIELD	-
15	L	-
16	P	-
17	SB	-
18	GR	-
19	SB	-
20	B	-
21	V	-
22	P	-
23	BR	-
24	GR	-
25	B	-
26	W	-
27	SB	-
28	B	-
29	SB	-
30	GR	-
31	SB	-
32	GR	-
33	SB	-
34	L	-
35	P	-
36	L	-
37	P	-
38	L	-
39	P	-
40	LG	-
41	V	-
42	Y	-
43	SB	-
44	Y	-
45	V	-
46	W	-
47	B	-
48	P	-
49	R	-
50	G	-
51	SHIELD	-
52	BR	-
53	Y	-
54	SHIELD	-

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	GR	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-
3	BR	-
4	SB	-
5	B	-
6	GR	-
7	W	-
8	G	-
9	SHIELD	-
10	L	-
11	P	-
12	LG	-
13	V	-
14	Y	-
15	SHIELD	-
16	W	-
17	SB	-
18	L	-
19	P	-
20	LG	-
21	V	-
22	Y	-
23	SB	-
24	W	-
25	B	-
26	GR	-
27	SB	-
28	L	-
29	P	-
30	L	-
31	P	-
32	LG	-
33	V	-
34	Y	-
35	SB	-
36	W	-
37	B	-
38	GR	-
39	SB	-
40	L	-
41	P	-
42	LG	-
43	V	-
44	Y	-
45	SB	-
46	W	-
47	B	-
48	P	-
49	R	-
50	G	-
51	SHIELD	-
52	BR	-
53	Y	-
54	SHIELD	-

AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

54	L	-
55	SB	-
60	GR	-
61	LG	-
62	SB	-
63	P	-
64	BR	-
65	BG	-
66	Y	-
67	W	-
69	G	-
71	SB	-
72	V	-
73	LG	-
74	W	-
75	BR	-
76	V	-
77	LG	-
80	BG	-
82	P	-
83	Y	-
84	R	-
85	SB	-
86	GR	-
87	L	-
91	V	-
92	W	-
93	R	-
94	LG	-
95	GR	-
96	W	-
97	G	-
98	BG	-
99	L	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	2
Color Of Wire	GR
Signal Name [Specification]	-

Connector No.	B223
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	2
Color Of Wire	BG
Signal Name [Specification]	-

Connector No.	E5
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



Terminal No.	Color Of Wire	Signal Name (Specification)
4	V	-
5	L	-
7	R	-
10	SB	-
12	B	-
13	Y	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	Y	-
28	BG	-
30	GR	-
36	G	-

Connector No.	E6
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH88FW-M4



Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-
44	W	-
45	G	-
46	BP	-

Connector No.	E8
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
83	R	-
84	P	-
86	W	-
88	G	-
89	BR	-
90	Y	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-

A
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AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
20	Y	- [Without ICC]
21	BR	-
22	R	- [With ICC]
22	V	- [Without ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	L	- [Without ICC]
25	Y	- [With ICC]
26	SHIELD	-
28	LG	-
29	LG	-
30	RG	-
32	W	-
33	Y	-
34	RG	-
37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
59	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
69	L	-
70	SHIELD	-
71	G	-

72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FM-M2



Terminal No.	Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH00MV-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat]
3	SB	- [With Auto aircon seat]
4	LG	-
5	GR	-
6	W	-
7	G	-
8	W	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC]
20	W	- [With ICC]
21	BR	- [Without ICC]
21	R	- [With ICC]
22	L	- [Without ICC]
22	R	- [With ICC]
23	G	-
24	L	- [Without ICC]
24	P	- [With ICC]
25	W	- [Without ICC]
25	Y	- [With ICC]
26	SHIELD	-
28	GR	-
29	V	-
30	BG	-
32	W	-

33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-
54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-
65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	V	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-
91	R	-
92	R	-
93	GR	-

AUTO LIGHT SYSTEM

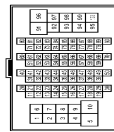
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

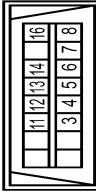
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	- [With Auto aircon seat]
1	Y	- [Without Auto aircon seat]
2	B	-
3	W	-
6	P	-
7	V	-
8	BG	-
10	W	-
11	BG	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	R	-
21	LG	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	W	-

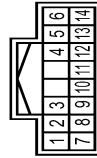
45	B	-
51	V	-
52	LG	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-
57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	BR	-
62	R	-
63	Y	-
64	L	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	V	-
71	W	-
72	B	-
73	W	-
74	LG	-
75	P	-
76	LG	-
77	SB	-
78	GR	-
79	R	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	W	-
86	Y	-
87	B	-
88	G	-
89	BG	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	R	-
99	BG	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	FR WASHER (-)
2	SB	OUTPUT 4
3	BG	FR WASHER (+)
4	G	IGN
5	L	OUTPUT 3
6	B	GROUND
7	V	INPUT 3
8	BG	OUTPUT 5
9	Y	INPUT 2

10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M94
Connector Name	OPTICAL SENSOR
Connector Type	TK03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	POWER
2	P	OUTPUT
3	B	GROUND

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	BR	-
3	V	-
4	SB	-
6	Y	-
7	B	-
8	W	-
10	W	-
11	SHIELD	-
20	R	-

AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

21	G	-
22	GR	-
23	V	-
24	W	-
25	R	-
26	P	-
27	L	-
28	SHIELD	-
31	W	-
32	W	-
33	SB	-
36	L	-
37	P	-
38	L	-
39	P	-
40	V	-
41	SB	- [With ICC]
42	V	- [Without ICC]
43	B	- [With ICC]
44	R	- [Without ICC]
45	G	- [With ICC]
46	BG	- [Without ICC]
47	B	- [With ICC]
48	P	- [Without ICC]
49	G	- [With ICC]
50	SHIELD	-
51	BG	-
52	GR	-
53	G	-
54	L	-
55	P	-
60	LG	-
61	R	-
62	SB	-
63	V	-
64	Y	-
65	BR	-
66	BG	-
67	W	-
69	G	-
71	SB	-
72	V	-

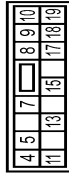
73	V	-
74	LG	-
75	BR	-
76	V	-
77	LG	-
80	R	-
82	Y	-
83	BG	-
84	W	-
85	SB	-
86	B	-
87	P	-
91	L	-
92	L	-
93	G	-
94	BG	-
95	V	-
96	G	-
97	G	-
98	L	-
99	LG	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



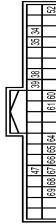
Terminal No.	Signal Name [Specification]
1	BAT (F/L)
2	POWER WINDOW POWER SUPPLY (BAT)
3	POWER WINDOW POWER SUPPLY (RAP)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Signal Name [Specification]
4	P
5	P
7	Y
8	V
9	G
10	BR
11	R
13	B
15	Y
17	W
18	BG
19	SB

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



64	L	I-KEY WARN BUZZER (ENG ROOM)
65	BG	REAR WIPER STOP POSITION
66	LG	BACK DOOR SW
67	P	BACK DOOR OPENER SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
112	GR	RAIN SENSOR SERIAL LINK
113	P	OPTICAL SENSOR
116	BR	STOP LAMP SW 1
118	P	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
123	W	IGN F/B
124	LG	PASSENGER DOOR SW
132	BG	POWER WINDOW SW COMM
134	GR	LOCK IND
137	B	RECEIVER/SENSOR GND
138	Y	SENSOR POWER SUPPLY
140	R	SHIFT NP
141	G	SECURITY INDICATOR OUTPUT
142	BG	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
150	GR	DRIVER DOOR SW
151	G	REAR WINDOW DEFROGGER RELAY CONT

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

Connector No.	M152
Connector Name	WIRE TO WIRE
Connector Type	M03MW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

JRLWD6013GB

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EXL

HEADLAMP AIMING CONTROL SYSTEM (MANUAL)

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP AIMING CONTROL SYSTEM (MANUAL)

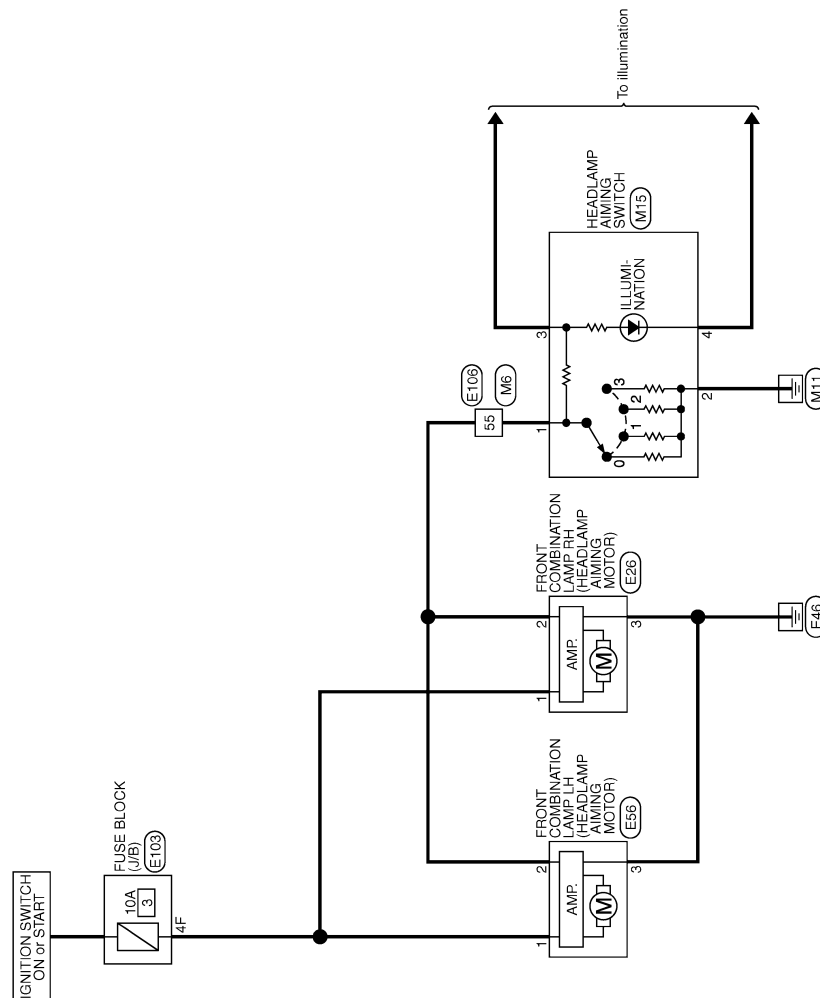
Description

INFOID:0000000010576347

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

Wiring Diagram - HEADLAMP AIMING CONTROL SYSTEM (MANUAL) - INFOID:0000000010576348

HEADLAMP AIMING CONTROL (MANUAL)



2009/07/29

JCLWA3825GB

HEADLAMP AIMING CONTROL SYSTEM (MANUAL)

< DTC/CIRCUIT DIAGNOSIS >

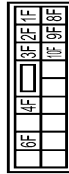
[XENON TYPE]

HEADLAMP AIMING CONTROL (MANUAL)

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RK03FB



Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



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

Connector No.	E56
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RK03FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	B	-

Terminal No.	Color Of Wire	Signal Name [Specification]
10F	L	-
1F	SB	-
2F	W	-
3F	Y	-
4F	G	-
6F	BG	-
8F	L	-
9F	R	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-

12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [Without ICC]
21	Y	- [Without ICC]
22	BR	- [With ICC]
23	V	- [Without ICC]
24	L	- [With ICC]
25	P	- [Without ICC]
26	Y	- [Without ICC]
27	W	- [With ICC]
28	SHIELD	-
29	G	-
30	LG	-
31	BG	-
32	W	-
33	Y	-
34	BG	-
37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
59	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-

65	BG	-
69	L	-
71	G	-
72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat]
3	SB	- [With Auto aircon seat]

HEADLAMP AIMING CONTROL SYSTEM (MANUAL)

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP AIMING CONTROL (MANUAL)

4	LG	-
5	GR	-
6	W	-
7	G	-
8	W	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC] - [With ICC]
21	BR	- [Without ICC] - [With ICC]
22	R	- [Without ICC] - [With ICC]
23	G	-
24	L	- [Without ICC] - [With ICC]
25	W	- [Without ICC] - [With ICC]
26	SHIELD	-
28	GR	-
29	V	-
30	BG	-
32	W	-
33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-

54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-
65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	V	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-
91	R	-
92	R	-
93	GR	-
95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M15
Connector Name	HEADLAMP AIMING SWITCH
Connector Type	A04FW



Terminal No.	Color	Wire	Signal Name [Specification]
1	SB	-	-
2	B	-	-
3	R	-	-
4	R	-	-

Component Inspection

1. CHECK HEADLAMP AIMING SWITCH

1. Remove the headlamp aiming switch.

JRLWD6023GB

INFOID:0000000010576349

HEADLAMP AIMING CONTROL SYSTEM (MANUAL)

< DTC/CIRCUIT DIAGNOSIS >

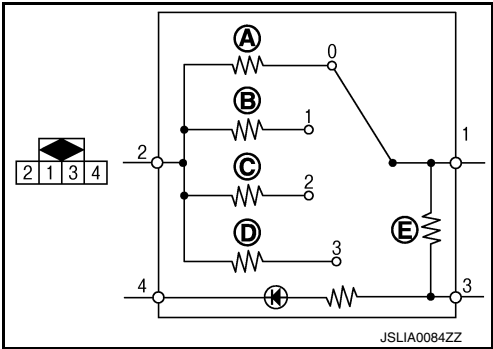
[XENON TYPE]

2. Check the resistance among each headlamp aiming switch terminal.

Headlamp aiming switch		Condition	Resistance (Approx.)
Terminal		Switch position	
1	2	0	A: 910 Ω
		1	B: 680 Ω
		2	C: 510 Ω
		3	D: 390 Ω
	3	—	E: 390 Ω

Is the measurement value normal?

- YES >> Headlamp aiming switch is normal.
NO >> Replace the headlamp aiming switch.



A
B
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DAYTIME RUNNING LIGHT SYSTEM

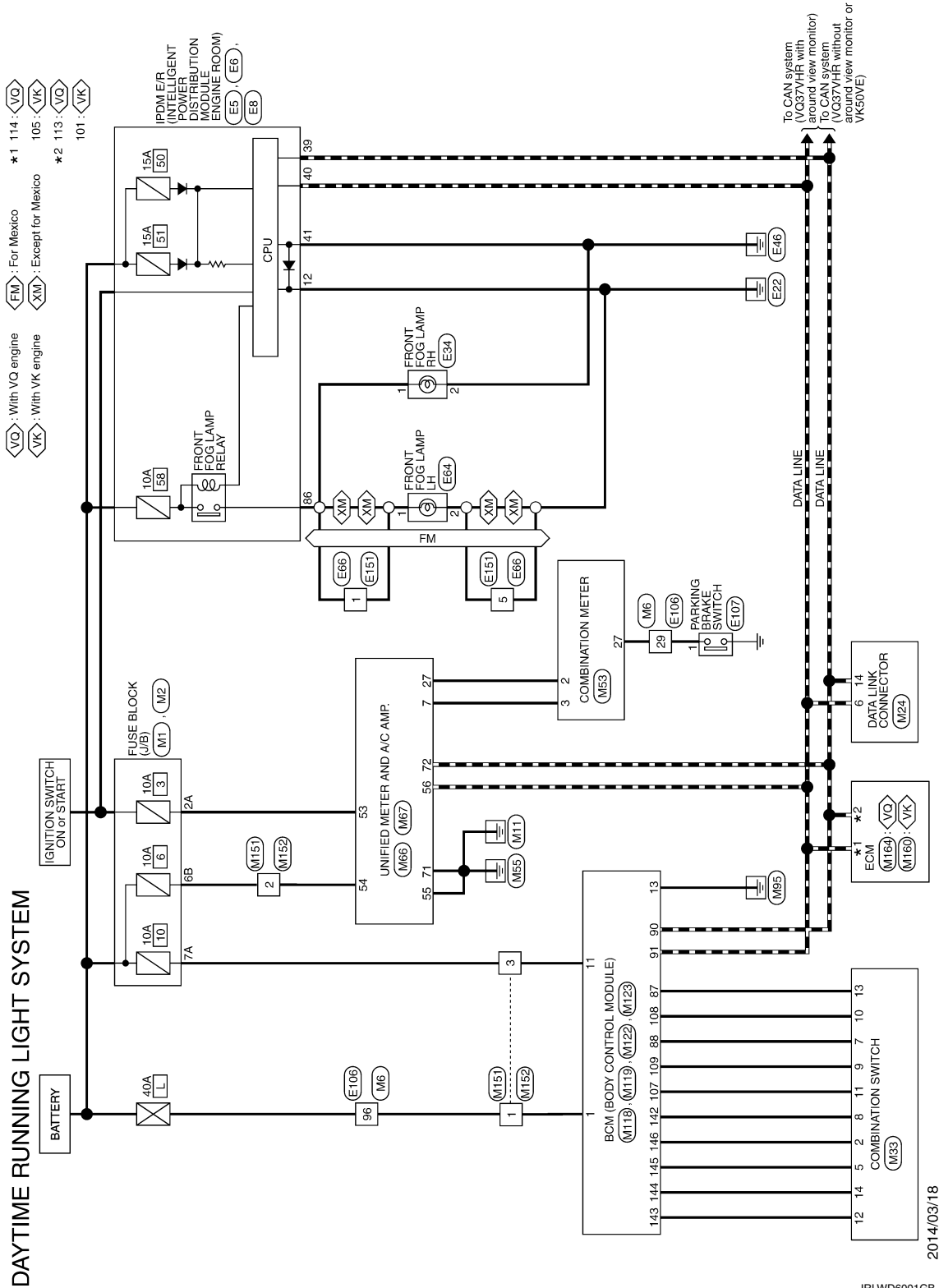
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram - DAYTIME LIGHT SYSTEM -

INFOID:000000010576350



DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

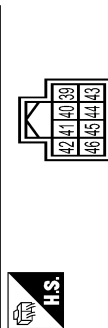
DAYTIME RUNNING LIGHT SYSTEM

Connector No.	E5
Connector Name	(POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM))
Connector Type	TH89FW-CS12-M4-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
4	V	-
5	L	-
7	R	-
10	SB	-
12	B	-
13	Y	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	Y	-
28	BG	-
30	GR	-
36	G	-

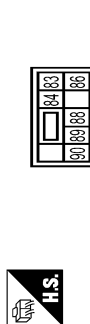
Connector No.	E6
Connector Name	(POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM))
Connector Type	TH89FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-

44	W	-
45	G	-
46	BR	-

Connector No.	E8
Connector Name	(POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM))
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
83	R	-
84	P	-
86	W	-
88	G	-
89	BR	-
90	Y	-

Connector No.	E34
Connector Name	FRONT FOG LAMP RH
Connector Type	FH202FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	BW	-

Connector No.	E64
Connector Name	FRONT FOG LAMP LH
Connector Type	FH202FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	- [Without around view monitor]
1	L	- [With around view monitor]
2	BW	- [Without around view monitor]
2	GR	- [With around view monitor]

Connector No.	E66
Connector Name	WIRE TO WIRE
Connector Type	RS08FB-FR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	L	-
3	Y	-
4	R	-
5	BW	-
6	BR	-
7	W	-
8	SHIELD	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
20	Y	- [Without ICC]
21	BR	-
22	R	- [With ICC]
22	V	- [Without ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	L	- [With ICC]
25	Y	- [Without ICC]
26	SHIELD	-
28	G	-
28	LG	-
30	BG	-
32	W	-
33	Y	-

DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

34	BG	-
37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
59	PD	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
69	L	-
70	SHIELD	-
71	G	-
72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-

96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	E107
Connector Name	PARKING BRAKE SWITCH
Connector Type	TB01FW



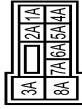
Terminal No.	1
Color	LG
Wire	-
Signal Name [Specification]	-

Connector No.	E151
Connector Name	WIRE TO WIRE
Connector Type	RS08MB-PR



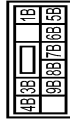
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	SHIELD	-
3	L	-
4	R	-
5	GR	-
6	G	-
7	W	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FM-M2



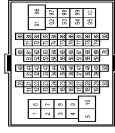
Terminal No.	Color Of Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1B	LG	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	L	-
8B	R	-
9B	BR	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name (Specification)
1	Wire	
2	BG	-
3	LG	- [Without Auto aircon seat]
4	SB	- [With Auto aircon seat]
5	GR	-
6	W	-
7	G	-
8	W	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC]
21	BR	- [With ICC]
22	L	- [Without ICC]
23	R	- [With ICC]
24	L	- [With ICC]
25	W	- [Without ICC]
26	Y	- [With ICC]
27	SHIELD	-
28	GR	-
29	V	-
30	BG	-

JRLWD6003GB

DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

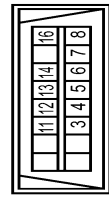
[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

33	Y	-	-	-	-
34	L	-	-	-	-
37	G	-	-	-	-
38	R	-	-	-	-
39	G	-	-	-	-
41	L	-	-	-	-
42	W	-	-	-	-
43	R	-	-	-	-
44	LG	-	-	-	-
45	GR	-	-	-	-
46	W	-	-	-	-
47	L	-	-	-	-
48	P	-	-	-	-
49	BG	-	-	-	-
50	LG	-	-	-	-
51	SB	-	-	-	-
52	Y	-	-	-	-
53	BG	-	-	-	-
54	BR	-	-	-	-
55	SB	-	-	-	-
59	SB	-	-	-	-
60	SB	-	-	-	-
61	V	-	-	-	-
62	P	-	-	-	-
63	R	-	-	-	-
64	L	-	-	-	-
65	BG	-	-	-	-
69	V	-	-	-	-
70	SHIELD	-	-	-	-
71	BG	-	-	-	-
72	GR	-	-	-	-
73	W	-	-	-	-
74	SB	-	-	-	-
76	V	-	-	-	-
77	V	-	-	-	-
78	Y	-	-	-	-
80	BG	-	-	-	-
81	L	-	-	-	-
82	W	-	-	-	-
83	Y	-	-	-	-
84	L	-	-	-	-
85	P	-	-	-	-
86	BR	-	-	-	-
87	P	-	-	-	-
88	V	-	-	-	-
89	G	-	-	-	-
90	P	-	-	-	-
91	R	-	-	-	-
92	R	-	-	-	-
93	GR	-	-	-	-

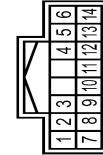
95	G	-	-	-	-
96	W	-	-	-	-
97	W	-	-	-	-
98	SHIELD	-	-	-	-
100	Y	-	-	-	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



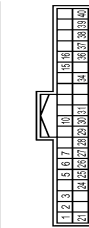
Terminal No.	Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Wire	Signal Name [Specification]
1	P	FR WASHER (-)
2	SB	OUTPUT 4
3	BG	FR WASHER (+)
4	G	IGN
5	L	OUTPUT 3
6	B	GROUND
7	V	INPUT 3
8	BG	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

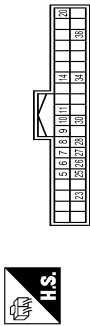
Connector No.	M55
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Wire	Signal Name [Specification]
1	BG	BATTERY POWER SUPPLY
2	LG	COMMUNICATION SIGNAL (METER->AMP.)
3	GR	COMMUNICATION SIGNAL (AMP->METER)
5	B	GROUND
6	W	ALTERNATOR SIGNAL
7	P	AIR BAG SIGNAL
10	G	SECURITY INDICATOR SIGNAL
15	B	GROUND
16	B	METER CONTROL SWITCH GROUND
21	R	IGNITION SIGNAL
24	BR	COMMUNICATION SIGNAL (LCD->AMP.)
25	Y	COMMUNICATION SIGNAL (AMP->LCD)
26	R	VEHICLE SPEED SIGNAL (8-PULSE)
27	V	PARKING BRAKE SWITCH SIGNAL
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL
29	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
30	G	PASSENGER SEAT BELT WARNING SIGNAL
31	L	WASHER LEVEL SWITCH SIGNAL

34	B	ILLUMINATION CONTROL SIGNAL
36	LG	SELECT SWITCH SIGNAL
37	SB	ENTER SWITCH SIGNAL
38	L	TRIP AIR RESET SWITCH SIGNAL
39	P	ILLUMINATION CONTROL SWITCH SIGNAL (-)
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



Terminal No.	Wire	Signal Name [Specification]
5	L	MANUAL MODE SHIFT UP SIGNAL
6	BG	PADDLE SHIFTER UP SIGNAL
7	GR	COMMUNICATION SIGNAL (AMP->METER)
8	L	VEHICLE SPEED SIGNAL (2-PULSE)
9	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
10	W	MANUAL MODE SIGNAL
11	G	NON-MANUAL MODE SIGNAL
14	BR	COMMUNICATION SIGNAL (LCD->AMP.)
20	L	ION SENSOR SIGNAL
23	Y	AT SNOW SWITCH SIGNAL
25	V	MANUAL MODE SHIFT DOWN SIGNAL
26	G	PADDLE SHIFTER DOWN SIGNAL
27	LG	COMMUNICATION SIGNAL (METER->AMP.)
28	R	VEHICLE SPEED SIGNAL (8-PULSE)
30	V	PARKING BRAKE SWITCH SIGNAL
34	Y	COMMUNICATION SIGNAL (AMP->LCD)
38	L	BLOWER MOTOR CONTROL SIGNAL

A
B
C
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E
F
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O
P

DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH



41	42	43	44	45	46	47				53	54	55	56
57	58	59	60	61	62	63	65			69	70	71	72

DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

Connector No.	M152
Connector Name	WIRE TO WIRE
Connector Type	M03MW-LC



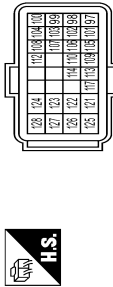
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

Connector No.	M160
Connector Name	ECM
Connector Type	RH24FGY-R28-R-LH-Z



Terminal No.	Color Of Wire	Signal Name [Specification]
97	R	ENGINE SPEED SIGNAL OUTPUT
98	G	SENSOR POWER SUPPLY Y
99	L	SENSOR POWER SUPPLY L
100	P	CAN COMMUNICATION LINE
101	SB	ASC/DC STEERING SWITCH
102	R	ACCELERATOR PEDAL POSITION SENSOR 1
103	L	CAN COMMUNICATION LINE
104	P	IGNITION SWITCH
105	P	STOP LAMP SWITCH
106	V	SENSOR GROUND
107	LG	FUEL PUMP CONTROL MODULE (FFCM) CHECK
108	GR	DATA LINK CONNECTOR
109	GR	SENSOR GROUND
110	G	TRANSMISSION RANGE SWITCH
111	BR	ASC/DC BRAKE SWITCH
112	R	POWER SUPPLY FOR ECM (BACK-UP)
113	W	SENSOR GROUND
114	W	FUEL TANK TEMPERATURE SENSOR
115	GR	POWER SUPPLY FOR ECM
116	B	ECM GROUND
117	R	FUEL PUMP CONTROL MODULE (FFCM)
118	B	ECM GROUND

Connector No.	M164
Connector Name	ECM
Connector Type	RH24FGY-R28-R-LH-Z

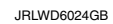


Terminal No.	Color Of Wire	Signal Name [Specification]
97	R	ACCELERATOR PEDAL POSITION SENSOR 1
98	P	ACCELERATOR PEDAL POSITION SENSOR 2 (WITH NAVI)
99	Y	ACCELERATOR PEDAL POSITION SENSOR 3 (WITH NAVI)
100	G	SENSOR POWER SUPPLY (WITH NAVI)
101	L	SENSOR POWER SUPPLY (WITH NAVI)
102	W	SENSOR GROUND
103	SB	ASC/DC STEERING SWITCH
104	LG	EVAP CONTROL SYSTEM PRESSURE SENSOR
105	G	SENSOR POWER SUPPLY (WITH NAVI)
106	L	SENSOR POWER SUPPLY (WITH NAVI)
107	BR	SENSOR GROUND (WITH NAVI)
108	GR	REFRIGERANT PRESSURE SENSOR
109	W	FUEL TANK TEMPERATURE SENSOR
110	BG	SENSOR POWER SUPPLY
111	V	SENSOR GROUND
112	G	PNP SIGNAL
113	R	ENGINE SPEED OUTPUT SIGNAL
114	V	ENGINE SPEED OUTPUT SIGNAL
115	W	ENGINE SPEED OUTPUT SIGNAL
116	P	ENGINE SPEED OUTPUT SIGNAL
117	L	CAN COMMUNICATION LINE
118	GR	CAN COMMUNICATION LINE
119	LG	DATA LINK CONNECTOR
120	P	STOP LAMP SWITCH
121	B	ECM GROUND
122	P	EVAP CANISTER VENT CONTROL VALVE
123	B	ECM GROUND
124	B	ECM GROUND
125	GR	POWER SUPPLY FOR ECM
126	BR	ASC/DC BRAKE SWITCH
127	B	ECM GROUND
128	B	ECM GROUND

[XENON TYPE]

FRONT FOG LAMP SYSTEM

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FRONT FOG LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

FRONT FOG LAMP

Connector No.	E5
Connector Name	(POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM))
Connector Type	TH89FW-CS12-M4-1V

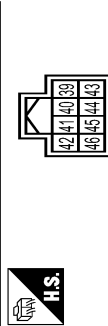


Connector No.	E8
Connector Name	(POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM))
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
4	V	-
5	L	-
7	R	-
10	SB	-
12	B	-
13	Y	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	Y	-
28	BG	-
30	GR	-
36	G	-

Connector No.	E6
Connector Name	(POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM))
Connector Type	TH89FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-

Connector No.	E64
Connector Name	FRONT FOG LAMP LH
Connector Type	FH202FB



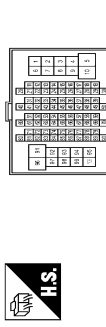
Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	- [Without around view monitor]
1	L	- [With around view monitor]
2	BW	- [Without around view monitor]
2	GR	- [With around view monitor]

Connector No.	E66
Connector Name	WIRE TO WIRE
Connector Type	RS08FB-FR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	L	-
3	Y	-
4	R	-
5	BW	-
6	BR	-
7	W	-
8	SHIELD	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
20	Y	- [Without ICC]
21	BR	-
22	R	- [With ICC]
22	V	- [Without ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	L	- [With ICC]
25	Y	- [Without ICC]
26	SHIELD	-
28	G	-
28	LG	-
30	BG	-
32	W	-
33	Y	-

FRONT FOG LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

FRONT FOG LAMP

34	BG	-	96	W	-	8A	L	-	29	V	-
37	Y	-	97	W	-				30	BG	-
38	GR	-	98	SHIELD	-				32	W	-
39	LG	-	100	Y	-				33	Y	-
41	LG	-							34	L	-
42	V	-							37	G	-
43	R	-							38	R	-
44	G	-							39	G	-
45	GR	-							41	L	-
46	W	-							42	W	-
47	L	-							43	R	-
48	P	-							44	LG	-
49	SB	-							45	GR	-
50	BR	-							46	W	-
51	B	-							47	L	-
52	Y	-							48	P	-
53	BG	-							49	BG	-
54	R	-							50	LG	-
55	SB	-							51	SB	-
59	P	-							52	Y	-
60	SB	-							53	BG	-
61	V	-							54	R	-
62	P	-							55	SB	-
63	LG	-							59	SB	-
64	L	-							60	SB	-
65	BG	-							61	V	-
69	L	-							62	P	-
70	SHIELD	-							63	R	-
71	G	-							64	L	-
72	G	-							65	BG	-
73	R	-							69	V	-
74	BR	-							70	SHIELD	-
76	L	-							71	BG	-
77	W	-							72	GR	-
78	Y	-							73	W	-
80	SB	-							74	SB	-
81	L	-							76	V	-
82	W	-							77	V	-
83	LG	-							78	Y	-
84	GR	-							80	BG	-
85	G	-							81	L	-
86	P	-							82	W	-
87	W	-							83	Y	-
88	BG	-							84	L	-
89	LG	-							85	P	-
90	BR	-							86	BR	-
91	GR	-							87	P	-
92	BR	-							88	V	-
93	SB	-							89	G	-
95	Y	-							90	P	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CST6-TM4

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

Terminal No.	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	
Color	G	BG	LG	LG	GR	W	G	W	P	BR	B	G	R	W	SHIELD	BR	L	P	G	GR	W	R	L	G	L	P	W
Off																											
Signal Name [Specification]	-	-	- [Without Auto aircon seat]	- [With Auto aircon seat]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- [Without ICC]	- [With ICC]	- [Without ICC]	- [With ICC]	-	- [Without ICC]	- [Without ICC]	- [With ICC]

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2

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

Terminal No.	1A	2A	3A	4A	5A	6A	7A
Color	BG	G	L	R	Y	W	R
Off							
Signal Name [Specification]	-	-	-	-	-	-	-

JRLWD6026GB

FRONT FOG LAMP SYSTEM

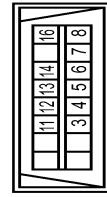
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

FRONT FOG LAMP

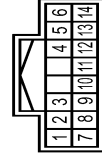
91	R	-
92	R	-
93	GR	-
95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FM-NH



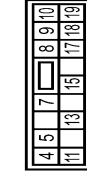
Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	FR WASHER (-)
2	SB	OUTPUT 4
3	BG	FR WASHER (+)
4	G	IGN
5	L	OUTPUT 3
6	B	GROUND
7	V	INPUT 3
8	BG	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



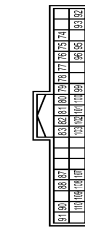
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	BAT (E/L)
2	V	POWER WINDOW POWER SUPPLY (BAT)
3	BG	POWER WINDOW POWER SUPPLY (CAP)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
4	P	INT BCM LAMP PWR SUPPLY (BAT SAME)
5	V	PASSENGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP OUTPUT
8	V	ALL DOOR FUEL ID LOCK OUTPUT
9	G	DRIVER DOOR FUEL ID LOCK OUTPUT
10	BR	REAR DOOR UNLOCK OUTPUT
11	R	BAT (FUSE)
13	B	GROUND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT)
18	BG	TURN SIGNAL LH (FRONT)
19	SB	ROOM LAMP TIMER

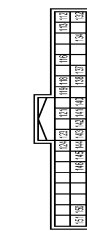
Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT-
79	BR	ROOM ANT+
80	GR	NAT'S ANT AMP.
81	W	NAT'S ANT AMP.

82	P	IGN RELAY (F/B) CONT
83	GR	KEYLESS ENTRY RECEIVER SIGNAL
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	ON IND
95	BG	ACC RELAY CONT
96	GR	AT SHIFT SELECTOR POWER SUPPLY
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
112	GR	RAIN SENSOR SERIAL LINK
113	P	OPTICAL SENSOR
116	BR	STOP LAMP SW 1
118	P	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
123	W	IGN F/B
124	LG	PASSENGER DOOR SW
132	BG	POWER WINDOW SW COMM
134	GR	LOCK IND
137	B	RECEIVER SENSOR GND
138	Y	SENSOR POWER SUPPLY
140	R	SHIFT NP
141	G	SECURITY INDICATOR OUTPUT
142	BG	COMBI SW OUTPUT 5

FRONT FOG LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

FRONT FOG LAMP

143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
150	GR	DRIVER DOOR SW
151	G	REAR WINDOW DEFROGGER RELAY CONT

Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

Connector No.	M152
Connector Name	WIRE TO WIRE
Connector Type	M03MW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

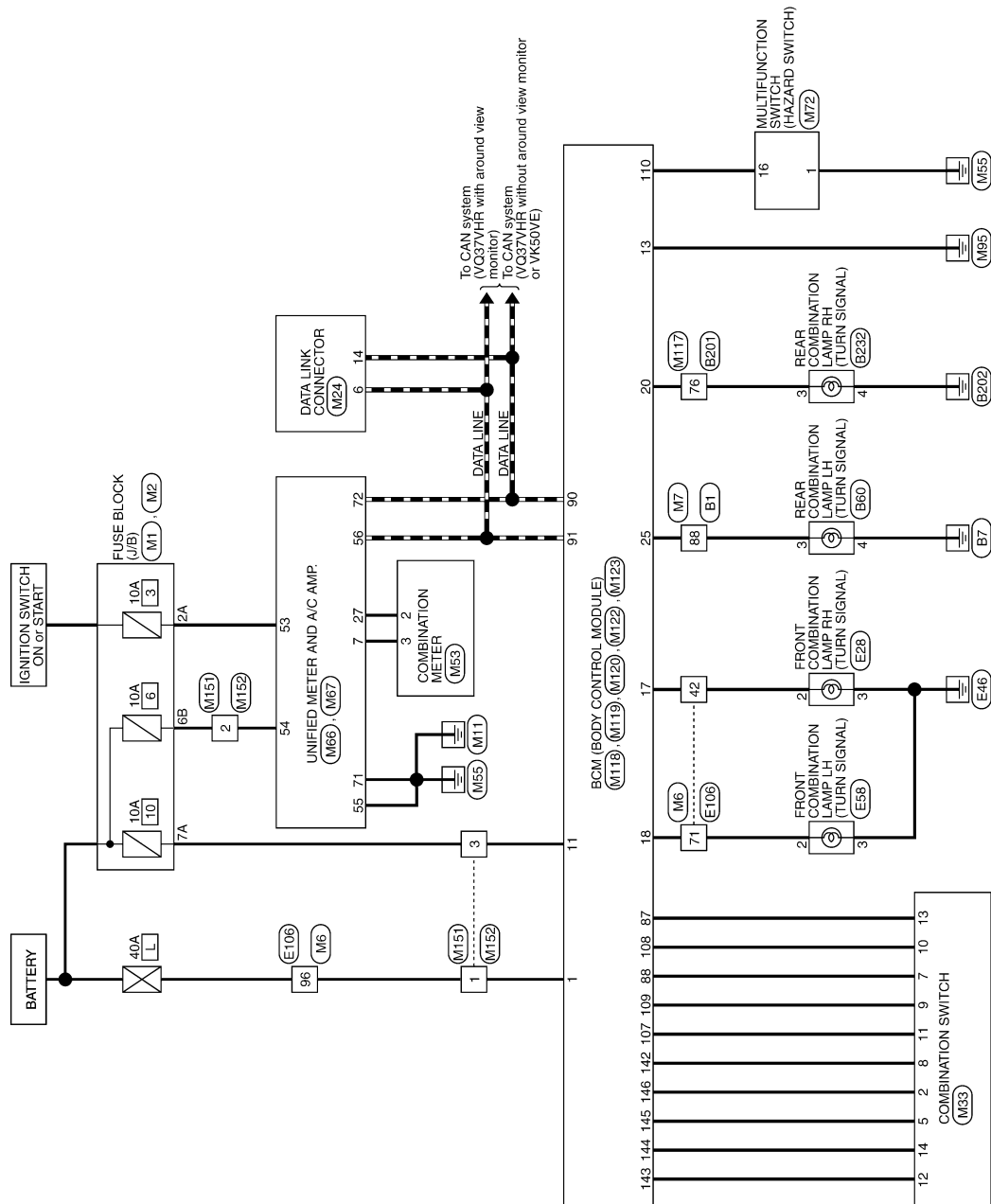
[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram - TURN AND HAZARD WARNING LAMPS -

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TURN SIGNAL AND HAZARD WARNING LAMPS



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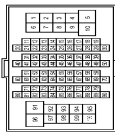
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



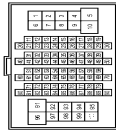
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-
3	W	-
6	G	-
7	P	-
8	B	-
10	SB	-
11	SB	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	Y	-
21	W	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	B	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	V	-
45	GR	-
51	V	-
52	SB	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-

Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	TH4MW-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	G	-
4	B	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-
3	BR	-
4	SB	-
6	B	-
7	GR	-
8	W	-
10	G	-
11	SHIELD	-
20	L	-
21	P	-
22	GR	-
23	LG	-
24	W	-
25	V	-

26	G	-
27	Y	-
28	SHIELD	-
31	W	-
32	GR	-
33	SB	-
36	L	-
37	P	-
38	L	-
39	P	-
40	LG	- [With ICC]
41	V	- [Without ICC]
41	SB	- [With ICC]
41	Y	- [Without ICC]
42	V	- [With ICC]
42	W	- [Without ICC]
43	B	- [Without ICC]
43	BR	- [With ICC]
44	R	-
45	G	-
46	B	- [With ICC]
46	SHIELD	- [Without ICC]
47	B	- [Without ICC]
47	L	- [With ICC]
48	P	-
48	R	- [Without ICC]
49	G	- [With ICC]
49	W	- [Without ICC]
50	SHIELD	-
51	W	-
52	R	-
53	G	-
54	L	-
55	SB	-
60	GR	-
61	LG	-
62	SB	-
63	P	-
64	BR	-
65	B	-
66	Y	-
67	W	-
69	G	-
71	SB	-
72	V	-
73	LG	-
74	W	-
75	BR	-
76	V	-

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Connector No.	Signal Name [Specification]
77	LG
80	BG
82	P
83	Y
84	R
85	SB
86	GR
87	L
91	V
92	W
93	R
94	LG
95	GR
96	W
97	G
98	BG
99	L



Connector No.	Signal Name [Specification]
E28	FRONT COMBINATION LAMP RH
Connector Type	RS4FB-FR



Terminal Color Of No.	Wire	Signal Name [Specification]
1	BR	-
2	V	-
3	B	-
4	P	-

Connector No.	Signal Name [Specification]
B232	REAR COMBINATION LAMP RH
Connector Type	TH44MW-NH



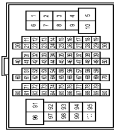
Terminal Color Of No.	Wire	Signal Name [Specification]
1	P	-
2	LG	-
3	V	-
4	B	-

Connector No.	Signal Name [Specification]
E58	FRONT COMBINATION LAMP LH
Connector Type	RS4FB-FR



Terminal Color Of No.	Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	B	-
4	BG	-

Connector No.	Signal Name [Specification]
E106	WIRE TO WIRE
Connector Type	TH80FM-CS16-TM4



Terminal Color Of No.	Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
21	Y	- [Without ICC]
22	BR	- [With ICC]
23	V	- [Without ICC]
24	L	- [With ICC]
25	P	- [Without ICC]
26	Y	- [Without ICC]
27	SHIELD	- [With ICC]
28	G	-
29	LG	-
30	BG	-
31	W	-
32	Y	-
33	W	-
34	BG	-

Terminal Color Of No.	Wire	Signal Name [Specification]
37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
58	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
69	L	-
70	SHIELD	-
71	G	-
72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

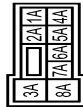
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[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

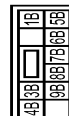
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

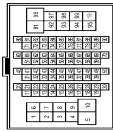
Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1B	LG	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	L	-
8B	R	-

9B	BR	-
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Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat]
4	SB	- [With Auto aircon seat]
5	SB	-
6	GR	-
7	W	-
8	W	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC]
21	W	- [With ICC]
22	BR	- [Without ICC]
23	L	- [With ICC]
24	R	-
25	P	- [Without ICC]
26	Y	- [With ICC]
27	SHIELD	-
28	GR	-

29	V	-
30	BG	-
32	W	-
33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-
54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-
65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	V	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-

91	R	-
92	R	-
93	GR	-
95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	- [With Auto aircon seat]
1	Y	- [Without Auto aircon seat]
2	B	-
3	W	-
6	P	-
7	V	-
8	BG	-
10	W	-
11	BG	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	R	-
21	LG	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

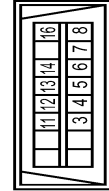
[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Terminal No.	Color Of Wire	Signal Name [Specification]
39	B	-
43	SB	-
44	W	-
45	B	-
51	V	-
52	LG	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-
57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	BR	-
62	R	-
63	Y	-
64	L	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	V	-
71	W	-
72	B	-
73	W	-
74	LG	-
75	P	-
76	LG	-
77	SB	-
78	GR	-
79	R	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	W	-
86	Y	-
87	B	-
88	G	-
89	BG	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	R	-

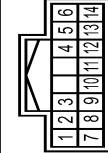
99	BG	-
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Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

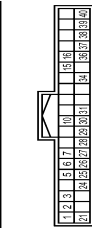
Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	FR WASHER (-)
2	SB	OUTPUT 4
3	BG	FR WASHER (+)
4	G	IGN
5	L	OUTPUT 3
6	B	GROUND

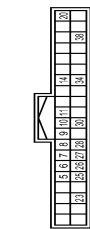
7	V	INPUT 3
8	BG	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



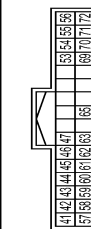
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	BATTERY POWER SUPPLY
2	LG	COMMUNICATION SIGNAL (METER->AMP.)
3	GR	COMMUNICATION SIGNAL (AMP->METER)
5	B	GROUND
6	W	ALTERNATOR SIGNAL
7	P	AIR BAG SIGNAL
10	G	SECURITY INDICATOR SIGNAL
15	B	GROUND
16	B	METER CONTROL SWITCH GROUND
21	R	IGNITION SIGNAL
24	BR	COMMUNICATION SIGNAL (LCD->AMP.)
25	Y	COMMUNICATION SIGNAL (AMP->LCD)
26	R	VEHICLE SPEED SIGNAL (8-PULSE)
27	V	PARKING BRAKE SWITCH SIGNAL
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL
29	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
30	G	PASSENGER SEAT BELT WARNING SIGNAL
31	L	WASHER LEVEL SWITCH SIGNAL
34	B	ILLUMINATION CONTROL SIGNAL
36	LG	ENTER SWITCH SIGNAL
37	SB	SELECT SWITCH SIGNAL
38	L	TRIP AIR RESET SWITCH SIGNAL
39	P	ILLUMINATION CONTROL SWITCH SIGNAL (-)
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
5	L	MANUAL MODE SHIFT UP SIGNAL
6	BG	PADDLE SHIFTER UP SIGNAL
7	GR	COMMUNICATION SIGNAL (AMP->METER)
8	L	VEHICLE SPEED SIGNAL (2-PULSE)
9	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
10	W	MANUAL MODE SIGNAL
11	G	NON-MANUAL MODE SIGNAL
14	BR	COMMUNICATION SIGNAL (LCD->AMP.)
20	L	ION SENSOR SIGNAL
23	Y	AT SNOW SWITCH SIGNAL
25	V	MANUAL MODE SHIFT DOWN SIGNAL
26	G	PADDLE SHIFTER DOWN SIGNAL
27	LG	COMMUNICATION SIGNAL (METER->AMP.)
28	R	VEHICLE SPEED SIGNAL (8-PULSE)
30	V	PARKING BRAKE SWITCH SIGNAL
34	Y	COMMUNICATION SIGNAL (AMP->LCD)
38	L	BLOWER MOTOR CONTROL SIGNAL

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	ACC POWER SUPPLY
42	Y	FUEL LEVEL SENSOR SIGNAL
43	R	INTAKE SENSOR SIGNAL

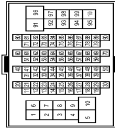
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Terminal No.	Signal Name [Specification]
44	IN-VEHICLE SENSOR SIGNAL
45	P
46	BG
47	V
53	G
54	BG
55	B
56	L
57	W
58	B
59	GR
60	L
61	BR
62	SB
63	R
65	BG
69	L
70	R
71	B
72	P



Connector No.	Signal Name [Specification]
M117	WIRE TO WIRE
M117	WIRE TO WIRE
M117	WIRE TO WIRE

Terminal No.	Signal Name [Specification]
46	SHIELD
47	B
48	P
49	R
50	G
51	W
52	SHIELD
53	BG
54	GR
55	G
56	L
57	P
58	LG
59	R
60	SB
61	V
62	Y
63	BR
64	BR
65	BR
66	BR
67	W
68	W
69	G
70	SB
71	V
72	V
73	V
74	LG
75	BR
76	V
77	LG
80	R
82	Y
83	BG
84	W
85	SB
86	B
87	P
91	L
92	L
93	G
94	BG
95	V
96	G
97	G
98	L
99	LG

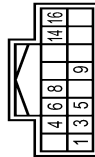


Connector No.	Signal Name [Specification]
M118	BCM (BODY CONTROL MODULE)
M118	BCM (BODY CONTROL MODULE)
M118	BCM (BODY CONTROL MODULE)

Terminal No.	Signal Name [Specification]
1	GR
2	BR
3	V
4	SB
6	Y
7	B
8	W
10	W
11	SHIELD
20	R
21	G
22	GR
23	V
24	W
25	R
26	P
27	L
28	SHIELD
31	W
32	W
33	SB
36	L
37	P
38	L
39	P
40	V
41	SB
42	V
43	B
44	R
45	G
46	BG



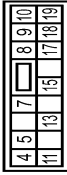
Connector No.	Signal Name [Specification]
M72	MULTIFUNCTION SWITCH
M72	MULTIFUNCTION SWITCH
M72	MULTIFUNCTION SWITCH



Terminal No.	Signal Name [Specification]
1	B
3	V
4	R
5	R
6	SB
8	LG
9	BR
14	SB
16	G



Connector No.	Signal Name [Specification]
M119	BCM (BODY CONTROL MODULE)
M119	BCM (BODY CONTROL MODULE)
M119	BCM (BODY CONTROL MODULE)



Terminal No.	Signal Name [Specification]
4	P
5	V
7	Y
8	V
9	G
10	BR
11	R
13	B
15	Y
17	W
18	BG
19	SB

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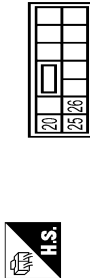
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

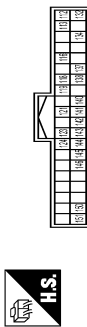
Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MS12FW-CS



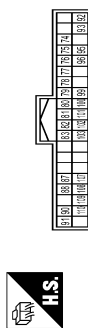
96	GR	AT SHIFT SELECTOR POWER SUPPLY
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW

Terminal No.	Signal Name [Specification]
20	TURN SIGNAL RH (REAR)
25	TURN SIGNAL LH (REAR)
26	REAR WIPER OUTPUT

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH



Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FE-NH



Terminal No.	Signal Name [Specification]
74	PASSENGER DOOR ANT-
75	PASSENGER DOOR ANT+
76	DRIVER DOOR ANT-
77	DRIVER DOOR ANT+
78	ROOM ANT1
79	ROOM ANT1+
80	NATS ANT AMP
81	NATS ANT
82	IGN RELAY (FBI) CONT
83	KEYLESS ENTRY RECEIVER SIGNAL
87	COMBI SW INPUT 5
88	COMBI SW INPUT 3
90	CAN-L
91	CAN-H
92	KEY SLOT ILL
93	ON IND
95	ACC RELAY CONT

Terminal No.	Signal Name [Specification]
112	RAIN SENSOR SERIAL LINK
113	OPTICAL SENSOR
116	STOP LAMP SW 1
118	STOP LAMP SW 2
119	DR DOOR UNLOCK SENSOR
121	KEY SLOT SW
123	IGN F/B
124	PASSENGER DOOR SW
132	POWER WINDOW SW COMM
134	LOCK IND
137	RECEIVER SENSOR GND
138	SENSOR POWER SUPPLY
140	SHIFT NIP
141	SECURITY INDICATOR OUTPUT
142	COMBI SW OUTPUT 5
143	COMBI SW OUTPUT 1
144	COMBI SW OUTPUT 2
145	COMBI SW OUTPUT 3
146	COMBI SW OUTPUT 4
150	DRIVER DOOR SW
151	REAR WINDOW DEFOGGER RELAY CONT

Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Signal Name [Specification]
1	W
2	Y
3	R

Connector No.	M152
Connector Name	WIRE TO WIRE
Connector Type	M03MW-LC



Terminal No.	Signal Name [Specification]
1	W
2	Y
3	R

JRLWLD6035GB

[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



5	4	3	2	1
12	11	10	9	8
7	6	5	4	3

Connector No.	B28
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-AH



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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	R	-
3	SHIELD	-
4	L	-
5	G	-
6	R	-
7	R	-
8	B	-
9	LG	-
10	BR	-
11	BG	-
12	GR	-

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	MO8MW-GY-LC



1	2	3	4
5	6	7	8

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-
3	W	-
4	B	-
6	BR	-
7	G	-
8	SHIELD	-

Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	TH44MW-AH



1	2	3	4
---	---	---	---

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	G	-
4	B	-

Connector No.	B67
Connector Name	WIRE TO WIRE
Connector Type	NS16MR-CS



1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	G	-
3	SHIELD	-
5	G	-
8	BR	-
9	G	-
10	SHIELD	-
11	L	-
12	GR	-
13	R	-
14	R	-

Connector No.	B232
Connector Name	REAR COMBINATION LAMP RH
Connector Type	TH44MW-AH



1	2	3	4
---	---	---	---

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	LG	-
3	V	-
4	B	-

Connector No.	B241
Connector Name	WIRE TO WIRE
Connector Type	NS16FR-CS



7	6	5	4	3	2	1
16	15	14	13	12	11	10
9	8	7	6	5	4	3

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	G	-
3	SHIELD	-
5	G	-
8	LY	-
9	L/B	-
10	SHIELD	-
11	L	-
12	W	-
13	P	-
14	R	-

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

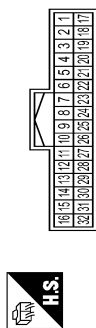
PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	M08FW-GY-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-
3	R	-
4	GR	-
5	LW	-
6	LB	-
7	LB	-
8	SHIELD	-

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	T152FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-
3	Y	-
4	SHIELD	-
5	R	-
6	G	-
7	Y	-
8	L	-
9	W	-
10	SHIELD	-
11	G	-
12	L	-
13	W	-

Terminal No.	Color Of Wire	Signal Name [Specification]
14	LG	-
15	BG	-
16	G	-
17	W	-
18	LG	-
19	BR	-
20	R	-
21	V	-
22	LG	-
23	P	-
24	BG	-
25	BG	-
26	GR	-
27	L	-
32	BG	-

Connector No.	D112
Connector Name	LICENSE PLATE LAMP LH
Connector Type	TK02FBR



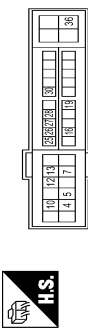
Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	B	-

Connector No.	D117
Connector Name	LICENSE PLATE LAMP RH
Connector Type	TK02FBR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	B	-

Connector No.	E5
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	T120FW-CS12-M4-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
4	V	-
5	L	-
6	R	-
7	R	-
10	SB	-
12	B	-
13	Y	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	Y	-
28	BG	-
30	GR	-
36	G	-

Connector No.	E6
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	T108FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-
44	W	-
45	G	-
46	BR	-

Connector No.	E9
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	T116FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
91	P	-
97	V	-
104	LG	-

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

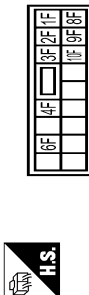
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PARKING, LICENSE PLATE AND TAIL LAMPS

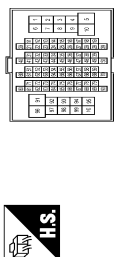
Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RSM4FB-PR



Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Signal Name [Specification]
1	BR
2	V
3	B
4	P

Connector No.	E56
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RSM4FB-PR



Terminal No.	Signal Name [Specification]
1	Y
2	G
3	B
4	BG

Terminal No.	Signal Name [Specification]
10F	L
1F	SB
2F	W
3F	Y
4F	G
6F	BG
8F	L
9F	R

Connector No.	E104
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Signal Name [Specification]
1	W
2	BR
3	L
4	Y
5	R
6	P
7	R
8	SHIELD
9	LG
10	BR
11	BG
12	GR

37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
56	P	-
58	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
66	L	-
69	L	-
70	SHIELD	-
71	G	-
72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-

Terminal No.	Signal Name [Specification]
1	G
2	BG
3	SB
4	LG
5	Y
6	W
7	G
8	V
9	R
10	BR
11	B
12	G
13	R
14	W
15	SHIELD
16	SB
17	L
18	P
19	G
20	W
20	Y
21	BR
22	R
22	V
23	G
24	L
24	P
25	L
25	Y
26	SHIELD
28	G
28	LG
30	BG
32	W
33	Y
34	BG

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

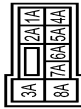
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[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS

97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

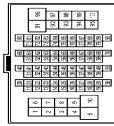
Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1B	LG	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	L	-
8B	R	-

9B	BR	-
----	----	---

Connector No.	M6
Connector Name	WIPE TO WIRE
Connector Type	TH0MMW-CS16-TM4

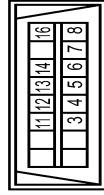


Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat] - [With Auto aircon seat]
4	SB	-
5	BR	-
6	GR	-
7	W	-
8	G	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC] - [With ICC]
21	BR	- [Without ICC] - [With ICC]
22	L	- [Without ICC] - [With ICC]
23	G	-
24	L	-
25	P	- [Without ICC] - [With ICC]
26	W	- [Without ICC] - [With ICC]
27	Y	-
28	SHIELD	-
29	GR	-

29	V	-
30	BG	-
32	W	-
33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-
54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-
65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	V	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-

91	R	-
92	R	-
93	GR	-
95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

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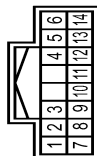
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

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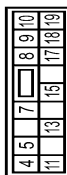
[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	M433
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
1	P		FR WASHER (-)
2	SB		OUTPUT 4
3	BG		FR WASHER (+)
4	G		IGN
5	L		OUTPUT 3
6	B		GROUND
7	V		INPUT 3
8	BG		OUTPUT 5
9	Y		INPUT 2
10	R		INPUT 4
11	LG		INPUT 1
12	P		OUTPUT 1
13	BR		INPUT 5
14	G		OUTPUT 2

Terminal No.	Color	Wire	Signal Name [Specification]
4	P		INT ROOM LAMP PWR SUPPLY (BAT SAME)
5	V		PASSENGER DOOR UNLOCK OUTPUT
7	Y		STEP LAMP OUTPUT
8	V		ALL DOOR FUEL ID LOCK OUTPUT
9	G		DRIVER DOOR FUEL ID LOCK OUTPUT
10	BR		REAR DOOR UNLOCK OUTPUT
11	R		BAT (FUSE)
13	B		GROUND
15	Y		ACC IND
17	W		TURN SIGNAL RH (FRONT)
18	BG		TURN SIGNAL LH (FRONT)
19	SB		ROOM LAMP TIMER

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FELC



Terminal No.	Color	Wire	Signal Name [Specification]
1	W		BAT (F/L)
2	V		POWER WINDOW POWER SUPPLY (BAT)
3	BG		POWER WINDOW POWER SUPPLY (PAP)

82	P		IGN RELAY (F/B) CONT
83	GR		KEYLESS ENTRY RECEIVER SIGNAL
87	BR		COMBI SW INPUT 5
88	V		COMBI SW INPUT 3
90	P		CAN-L
91	L		CAN-H
92	LG		KEY SLOT ILL
93	V		ON IND
95	BG		ACC RELAY CONT
96	GR		AT SHIFT SELECTOR POWER SUPPLY
99	R		SHIFT P
100	G		PASSENGER DOOR REQUEST SW
101	SB		DRIVER DOOR REQUEST SW
102	BG		BLOWER FAN MOTOR RELAY CONT
103	BR		KEYLESS ENTRY RECEIVER POWER SUPPLY
107	LG		COMBI SW INPUT 1
108	R		COMBI SW INPUT 4
109	Y		COMBI SW INPUT 2
110	G		HAZARD SW

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color	Wire	Signal Name [Specification]
112	GR		RAIN SENSOR SERIAL LINK
113	P		OPTICAL SENSOR
116	BR		STOP LAMP SW 1
118	P		STOP LAMP SW 2
119	SB		DR DOOR UNLOCK SENSOR
121	BR		KEY SLOT SW
123	W		IGN F/B
124	LG		PASSENGER DOOR SW
132	BG		POWER WINDOW SW COMM
134	GR		LOCK IND
137	B		RECEIVER SENSOR GND
138	Y		SENSOR POWER SUPPLY
140	R		SHIFT NP
141	G		SECURITY INDICATOR OUTPUT
142	BG		COMBI SW OUTPUT 5

Terminal No.	Color	Wire	Signal Name [Specification]
1	W		-
2	Y		-
3	R		-

143	P		COMBI SW OUTPUT 1
144	G		COMBI SW OUTPUT 2
145	L		COMBI SW OUTPUT 3
146	SB		COMBI SW OUTPUT 4
150	GR		DRIVER DOOR SW
151	G		REAR WINDOW DEFROGGER RELAY CONT

Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Color	Wire	Signal Name [Specification]
1	W		-
2	Y		-
3	R		-

Connector No.	M152
Connector Name	WIRE TO WIRE
Connector Type	M03MW-LC



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STOP LAMP

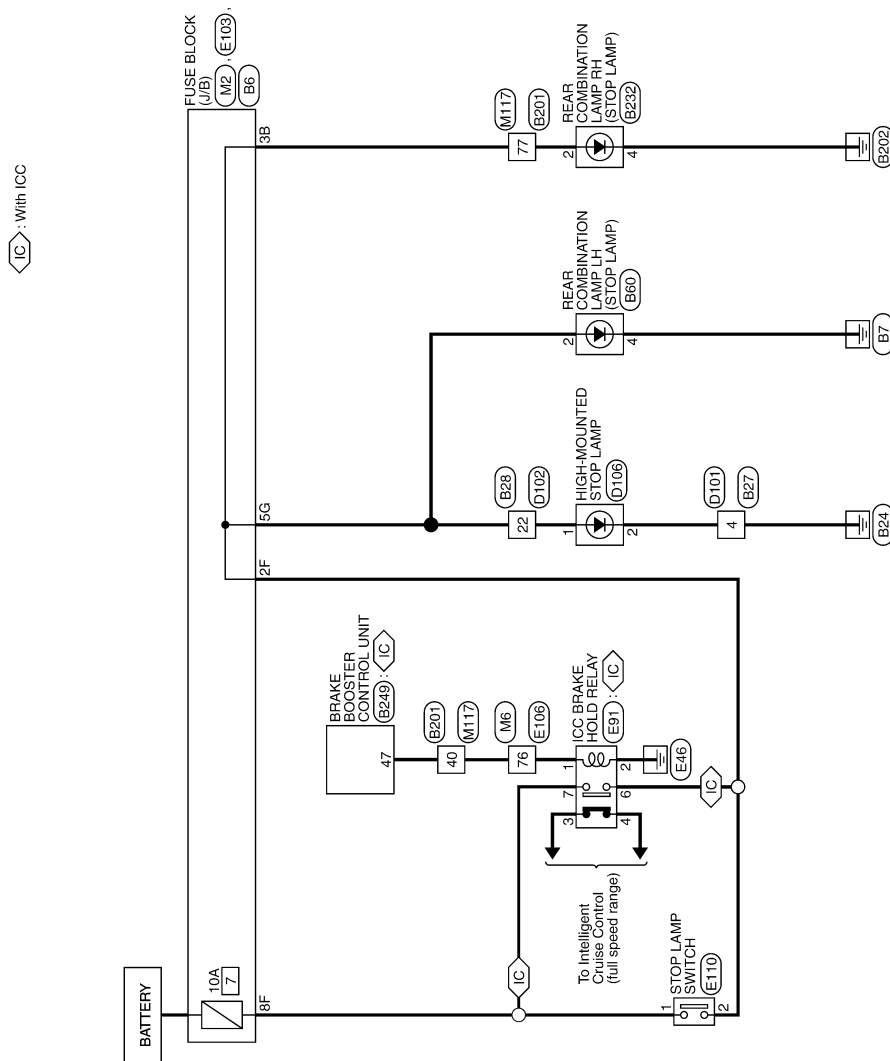
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[XENON TYPE]

STOP LAMP

Wiring Diagram - STOP LAMP -

INFOID:0000000010576354



STOP LAMP

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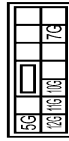
STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

STOP LAMP

Connector No.	B6
Connector Name	FUSE BLOCK (UB)
Connector Type	NS12FBR-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10G	W	-
11G	W	-
12G	GR	-
13G	LG	-
14G	BG	-

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	M08MM-GY-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-
3	W	-
4	B	-
6	BR	-
7	G	-
8	SHIELD	-

Connector No.	B28
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-AH



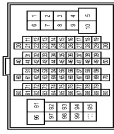
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	B	-
3	W	-
4	SHIELD	-
5	G	-
6	L	-
7	R	-
8	SHIELD	-
9	W	-
10	B	-
11	G	-
12	L	-
13	W	-
14	LG	-
15	BG	-
16	G	-
17	BG	-
18	V	-
19	W	-
20	B	-
21	G	-
22	LG	-
23	R	-
24	BG	-
25	BR	-
26	GR	-
27	L	-
32	BG	-

Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	TH04MW-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	G	-
4	B	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH60FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-
3	BR	-
4	SB	-
6	BG	-
7	GR	-
8	W	-
10	G	-
11	SHIELD	-
20	P	-
21	P	-
22	GR	-
23	LG	-
24	W	-
25	V	-

26	G	-
27	Y	-
28	SHIELD	-
31	W	-
32	GR	-
33	SB	-
36	L	-
37	P	-
38	L	-
39	P	-
40	LG	- [With ICC]
41	SB	- [Without ICC]
42	V	- [With ICC]
43	W	- [Without ICC]
44	B	- [With ICC]
45	BR	- [Without ICC]
46	R	- [With ICC]
47	G	-
48	BG	- [With ICC]
49	SHIELD	- [Without ICC]
50	W	-
51	W	-
52	R	-
53	G	-
54	L	-
55	SB	-
60	GR	-
61	LG	-
62	SB	-
63	P	-
64	BR	-
65	BG	-
66	Y	-
67	W	-
69	G	-
71	SB	-
72	V	-
73	LG	-
74	W	-
75	BR	-
76	V	-

STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

STOP LAMP

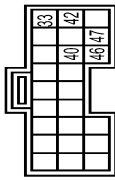
77	LG	-
80	BG	-
82	P	-
83	Y	-
84	R	-
85	SB	-
86	GR	-
87	L	-
91	V	-
92	W	-
93	R	-
94	LG	-
95	GR	-
96	W	-
97	G	-
98	BG	-
99	L	-

Connector No.	B232
Connector Name	REAR COMBINATION LAMP RH
Connector Type	TH4MW-AH



Terminal Color Of No.	Wire	Signal Name [Specification]
1	P	-
2	LG	-
3	V	-
4	B	-

Connector No.	B249
Connector Name	BRAKE BOOSTER CONTROL UNIT
Connector Type	TK24FGY



Terminal Color Of No.	Wire	Signal Name [Specification]
33	G	IGNITION
40	SB	IBA OFF SW
42	G	IGNITION
46	B	GROUND
47	LG	BRAKE HOLD RLY DRIVE SIGNAL

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	M08FW-GY-LC



Terminal Color Of No.	Wire	Signal Name [Specification]
1	G	-
2	B	-
3	R	-
4	GR	-
6	L/W	-
7	L/B	-
8	SHIELD	-

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-AH



Terminal Color Of No.	Wire	Signal Name [Specification]
1	G	-
2	L	-
3	Y	-
4	SHIELD	-
5	R	-
6	G	-
7	Y	-
8	L	-
9	W	-
10	SHIELD	-
11	G	-
12	L	-
13	W	-
14	LG	-
15	BG	-
16	G	-
17	W	-
18	LG	-
19	BR	-
20	R	-
21	V	-
22	LG	-
23	P	-
24	BG	-
25	BG	-
26	GR	-
27	L	-
32	BG	-

Connector No.	D106
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Type	TB02MW



Terminal Color Of No.	Wire	Signal Name [Specification]
1	LG	-
2	B	-

Connector No.	E91
Connector Name	ICC BRAKE HOLD RELAY
Connector Type	M08FGY-RUS



Terminal Color Of No.	Wire	Signal Name [Specification]
1	L	-
2	B	-
3	G	-
4	G	-
6	W	-
7	L	-

JRLW06038GB

[XENON TYPE]

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	PG	-
3	LG	- [Without Auto aircon seat]
5	SB	- [With Auto aircon seat]
4	G	-
5	GR	-
6	W	-
7	W	-
8	W	-
9	W	-
10	BR	-

STOP LAMP

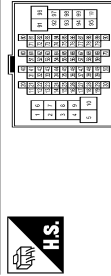
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

STOP LAMP

12	G	-	65	BG	-	7	B	-	66	BG	-
13	R	-	69	V	-	8	W	-	67	W	-
14	W	-	70	SHIELD	-	10	W	-	69	G	-
15	SHIELD	-	71	BG	-	11	SHIELD	-	71	SB	-
16	BR	-	72	GR	-	20	R	-	72	V	-
17	L	-	73	W	-	21	G	-	73	V	-
18	P	-	74	SB	-	22	GR	-	74	LG	-
19	G	-	76	V	-	23	V	-	75	BR	-
20	GR	-	77	V	-	24	W	-	76	V	-
21	BR	-	78	Y	-	25	R	-	77	LG	-
22	L	-	80	BG	-	26	P	-	80	R	-
23	G	-	81	L	-	27	L	-	82	Y	-
24	P	-	82	W	-	28	SHIELD	-	83	BG	-
25	W	-	83	Y	-	31	W	-	84	W	-
26	Y	-	84	L	-	32	W	-	85	SB	-
27	SHIELD	-	85	P	-	33	SB	-	86	B	-
28	GR	-	86	BR	-	36	L	-	87	P	-
29	V	-	87	P	-	37	P	-	91	L	-
30	BG	-	88	V	-	38	L	-	92	L	-
31	W	-	89	G	-	39	P	-	93	G	-
32	W	-	90	P	-	40	V	-	94	BG	-
33	Y	-	91	R	-	41	SB	-	95	V	-
34	L	-	92	R	-	42	Y	-	96	G	-
35	G	-	93	GR	-	43	W	-	97	G	-
36	Y	-	95	G	-	44	R	-	98	L	-
37	G	-	96	W	-	45	G	-	99	LG	-
38	R	-	97	W	-	46	BG	-			
39	G	-	98	SHIELD	-	47	SHIELD	-			
40	L	-	100	Y	-	48	L	-			
41	W	-			-	49	W	-			
42	W	-			-	50	SHIELD	-			
43	R	-			-	51	BG	-			
44	LG	-			-	52	GR	-			
45	GR	-			-	53	G	-			
46	W	-			-	54	L	-			
47	L	-			-	55	P	-			
48	P	-			-	60	LG	-			
49	BG	-			-	61	R	-			
50	LG	-			-	62	SB	-			
51	SB	-			-	63	V	-			
52	Y	-			-	64	Y	-			
53	BG	-			-	65	BR	-			
54	BR	-			-			-			
55	SB	-			-			-			
59	SB	-			-			-			
60	SB	-			-			-			
61	V	-			-			-			
62	P	-			-			-			
63	R	-			-			-			
64	L	-			-			-			

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	BR	-
3	V	-
4	SB	-
6	Y	-

BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

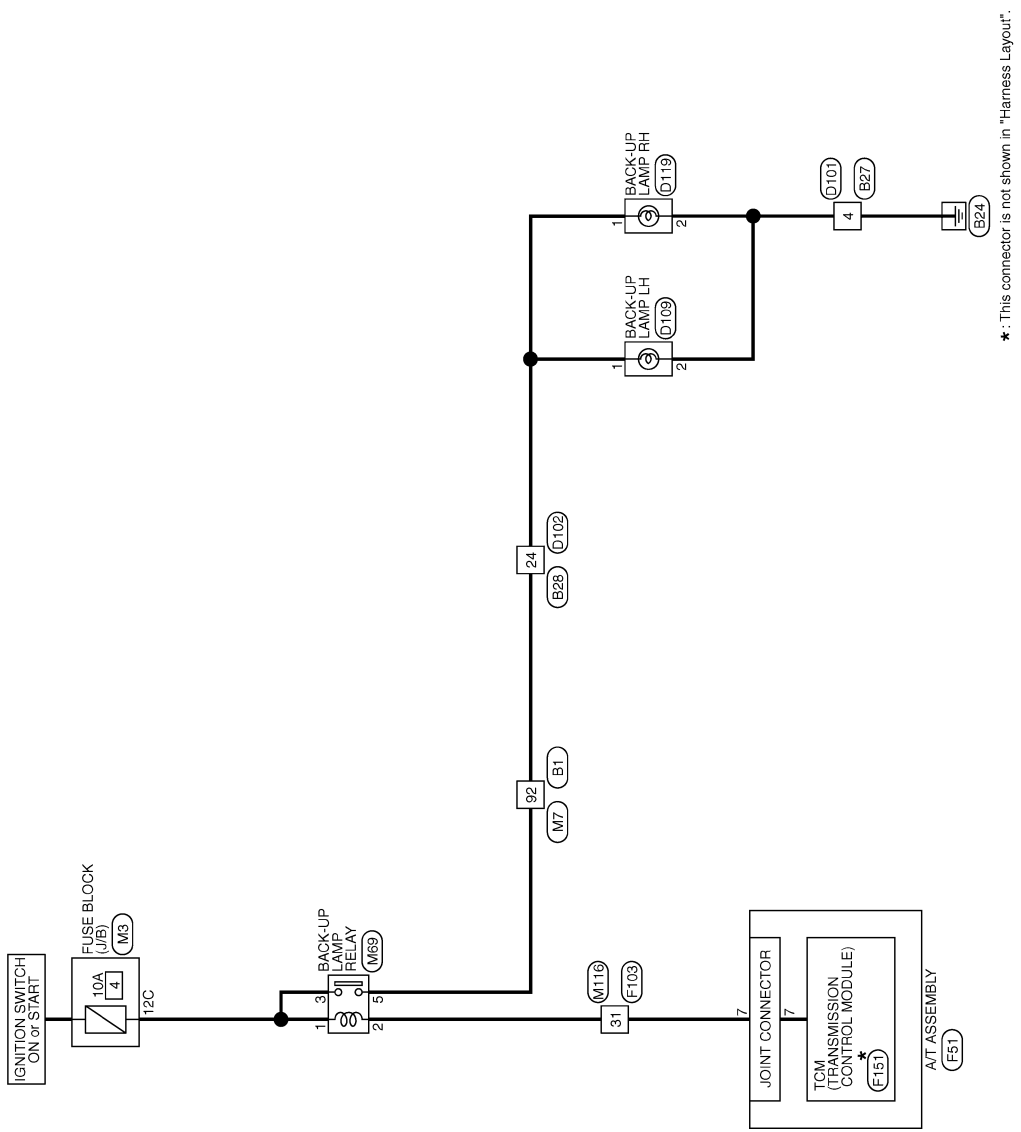
[XENON TYPE]

BACK-UP LAMP

Wiring Diagram - BACK-UP LAMP -

INFOID:0000000010576355

BACK-UP LAMP



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

2010/10/27

JCLWA4844GB

EXL

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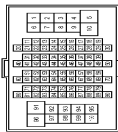
BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

BACK-UP LAMP

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH8/FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-
3	W	-
4	G	-
5	P	-
6	B	-
7	LG	-
8	SB	-
9	SB	-
10	R	-
11	W	-
12	SHIELD	-
13	L	-
14	P	-
15	B	-
16	Y	-
17	G	-
18	W	-
19	GR	-
20	W	-
21	W	-
22	V	-
23	P	-
24	BR	-
25	GR	-
26	W	-
27	B	-
28	W	-
29	B	-
30	SB	-
31	V	-
32	GR	-
33	W	-
34	W	-
35	SHIELD	-
36	Y	-
37	SHIELD	-

57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	P	-
62	GR	-
63	G	-
64	B	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	GR	-
71	G	-
72	B	-
73	W	-
74	V	-
75	RG	-
76	LG	-
77	L	-
78	GR	-
79	W	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	R	-
86	Y	-
87	B	-
88	G	-
89	BR	-
90	R	-
91	RG	-
92	BR	-
93	V	-
94	V	-
95	B	-
96	W	-
97	W	-
98	GR	-
99	W	-

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	M08MW-GY-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-
3	W	-
4	B	-
5	BR	-
6	G	-
7	SHIELD	-

Connector No.	B28
Connector Name	WIRE TO WIRE
Connector Type	TH82MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	B	-
3	W	-
4	SHIELD	-
5	G	-
6	L	-
7	R	-
8	SHIELD	-
9	W	-
10	B	-
11	G	-
12	L	-

13	W	-
14	LG	-
15	B	-
16	G	-
17	B	-
18	V	-
19	W	-
20	B	-
21	G	-
22	LG	-
23	R	-
24	B	-
25	BR	-
26	GR	-
27	L	-
32	B	-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	M08PW-GY-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-
3	R	-
4	GR	-
6	L/W	-
7	L/B	-
8	SHIELD	-

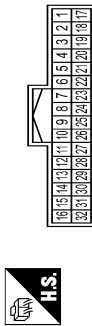
BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

BACK-UP LAMP

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-
3	Y	-
4	SHIELD	-
5	R	-
6	G	-
7	Y	-
8	L	-
9	W	-
10	SHIELD	-
11	G	-
12	L	-
13	W	-
14	LG	-
15	BG	-
16	G	-
17	W	-
18	LG	-
19	BR	-
20	R	-
21	V	-
22	LG	-
23	P	-
24	BG	-
25	BG	-
26	GR	-
27	L	-
32	BG	-

Connector No.	D109
Connector Name	BACK-UP LAMP LH
Connector Type	TB02FW-IV



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	-
2	B	-

Connector No.	D119
Connector Name	BACK-UP LAMP RH
Connector Type	TB02FW-IV



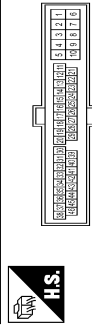
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	-
2	B	-

Connector No.	F151
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG-DGY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	IGNITION POWER SUPPLY
2	R	BATTERY POWER SUPPLY (MEMORY BACK-UP)
3	L	CAN-H
4	V	C-LINE
5	B	GROUND
6	Y	IGNITION POWER SUPPLY
7	R	BACK-UP LAMP RELAY
8	P	CAN-L
9	GR	STARTER RELAY (With VQ engine)
9	LG	STARTER RELAY (With VK engine)
10	B	GROUND

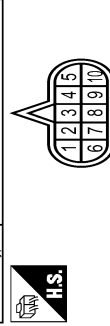
Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK38FW-AS10



Terminal No.	Color Of Wire	Signal Name [Specification]
2	G	-
3	W	-
4	GR	-
4	R	- [With VK engine]
5	B	- [With VQ engine]
5	R	- [With VK engine]
7	B	- [With VK engine]
9	W	- [With VK engine]
9	Y	- [With VQ engine]

Terminal No.	Color Of Wire	Signal Name [Specification]
10	GR	- [With VQ engine]
10	L	- [With VK engine]
19	O	-
20	Y	-
27	L	-
28	B	-
29	LG	-
31	R	-
34	LG	-
35	BR	-
36	W	-
37	Y	-
38	Y	-
43	P	-
44	L	-
45	Y	-
46	V	-

Connector No.	F151
Connector Name	TCM
Connector Type	SP10FG



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	IGNITION POWER SUPPLY
2	B	BATTERY POWER SUPPLY (MEMORY BACK-UP)
3	R	CAN-H
4	O	K-LINE
5	G	GROUND
6	GR	IGNITION POWER SUPPLY
7	L	BACK-UP LAMP RELAY
8	BR	CAN-L
9	Y	STARTER RELAY
10	W/B	GROUND

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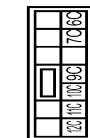
BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

BACK-UP LAMP

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	L	-
11C	LG	-
12C	R	-
6C	P	-
7C	B	-
9C	BG	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4

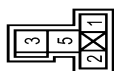


Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	- [With Auto aircon seat]
2	Y	- [Without Auto aircon seat]
3	W	-
6	P	-
7	V	-
8	BG	-
10	W	-
11	BG	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-

17	L	-
18	P	-
19	G	-
20	R	-
21	LG	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	W	-
45	B	-
51	V	-
52	LG	-
53	SHIELD	-
54	BR	-
55	V	-
56	SHIELD	-
57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	BR	-
62	R	-
63	Y	-
64	L	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	V	-
71	W	-
72	B	-
73	W	-
74	LG	-
75	P	-
76	LG	-
77	SB	-
78	GR	-
79	R	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-

85	W	-
86	Y	-
87	B	-
88	G	-
89	BG	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	R	-
99	BG	-

Connector No.	M69
Connector Name	BACK-UP LAMP RELAY
Connector Type	MS02FL-M2-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	W	-
3	R	-
5	BG	-

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK36MW-NS10



ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000011009267

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	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial position
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	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
	Rear wiper is not in STOP position	On
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
	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
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	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
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	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 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
	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 Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off
	PANIC button of the Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed and held	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	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
	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
BRAKE SW 1	The brake pedal is depressed when No. 7 fuse is blown	Off
	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
	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	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
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN 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
	Selector lever in P or N position	On

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	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 speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	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 (Selector lever is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The Intelligent Key is not inserted into key slot	Off
	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—
CONFIRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done

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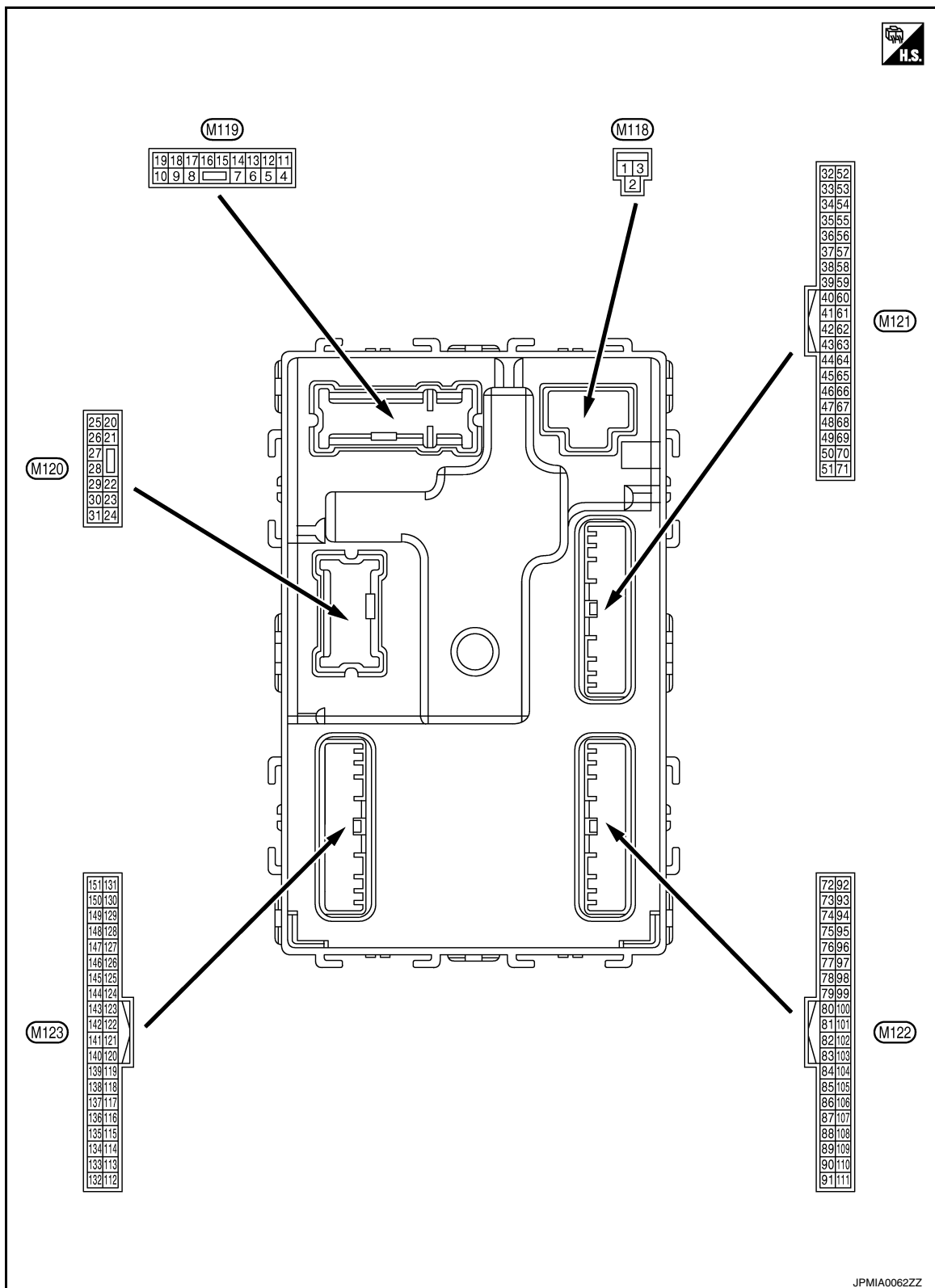
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

TERMINAL LAYOUT

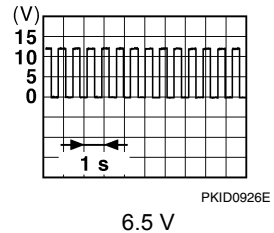


PHYSICAL VALUES

BCM (BODY CONTROL MODULE)

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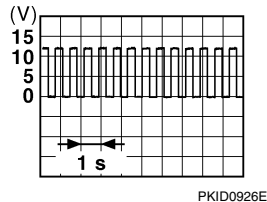
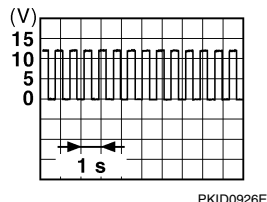
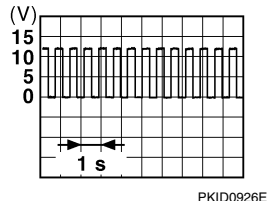
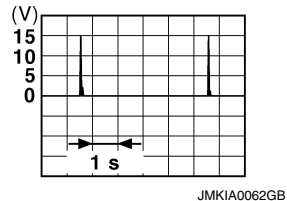
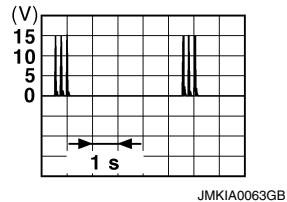
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
3 (BG)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
4 (P)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
5 (V)	Ground	Passenger door UN- LOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp control	Output	Step lamp	ON	0 V
					OFF	12 V
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH door UN- LOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	12 V
					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
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC or ON	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

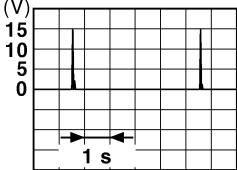
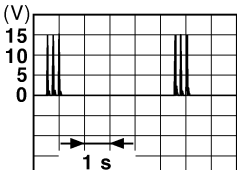
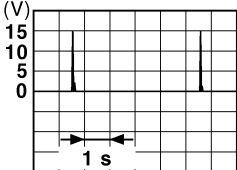
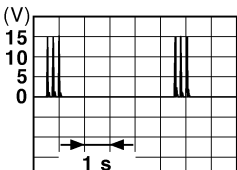
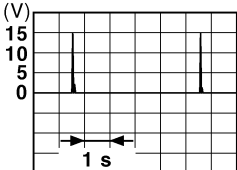
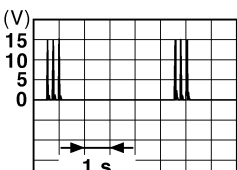
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 6.5 V
19 (SB)	Ground	Interior room lamp control	Output	Other than under condition		5.0 V
				- Interior room lamp timer is activated. (Door is unlocked. etc...) - Welcome light function is activated.		0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 6.5 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 6.5 V
26 (P)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Operated)	12 V
34 (SB)	Ground	Luggage room anten- na (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger com- partment	 JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
35 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (B)	Ground	Back door antenna (-)	Output	When the back door opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
39 (W)	Ground	Back door antenna (+)	Output	When the back door opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V

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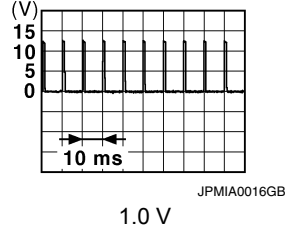
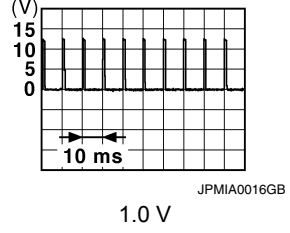
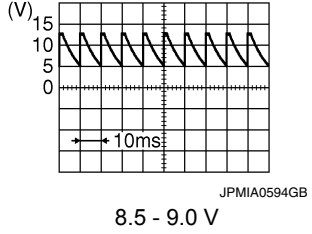
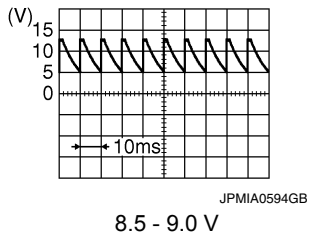
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BCM (BODY CONTROL MODULE)

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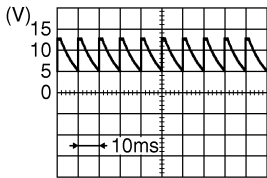
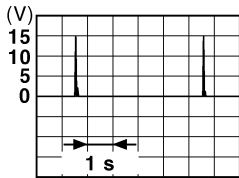
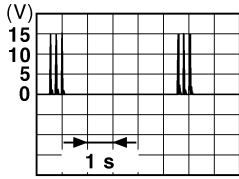
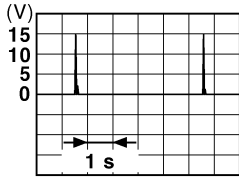
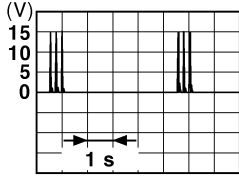
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
52 (LG)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	12 V
					When selector lever is not in P or N position	0 V
60 (SB)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ig- nition switch (Push switch)	Pressed	0 V
					Not pressed	12 V
61 (W)	Ground	Back door opener re- quest switch	Input	Back door re- quest switch	ON (Pressed)	0 V
					OFF (Not pressed)	
64 (L)	Ground	Intelligent Key warn- ing buzzer (Engine room)	Output	Intelligent Key warning buzzer (Engine room)	Sounding	0 V
					Not sounding	12 V
65 (BG)	Ground	Rear wiper stop posi- tion	Input	Rear wiper	In stop position	
					Not in stop position	0 V
66 (LG)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	12 V
					ON (Door open)	0 V
67 (P)	Ground	Back door opener switch	Input	Back door open- er switch	Pressed	0 V
					Not pressed	
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	
					ON (Door open)	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

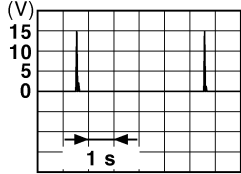
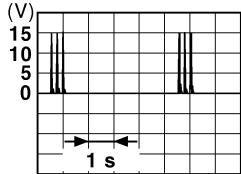
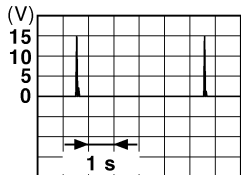
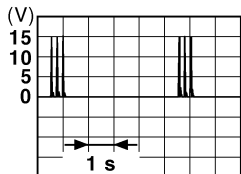
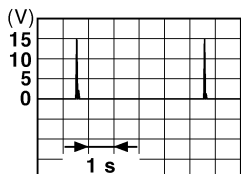
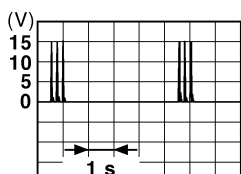
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	 8.5 - 9.0 V
					ON (Door open)	0 V
74 (SB)	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	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
75 (BR)	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	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

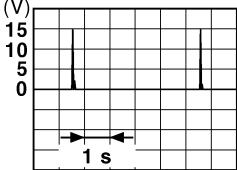
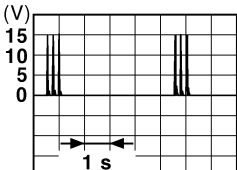
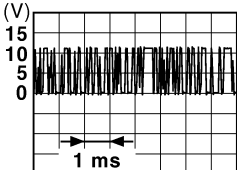
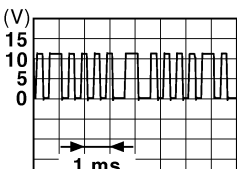
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
76 (V)	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	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
77 (LG)	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	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
78 (Y)	Ground	Room antenna (-) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger com- partment	 JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

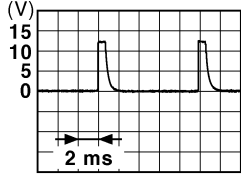
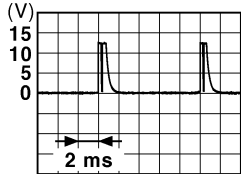
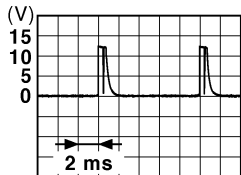
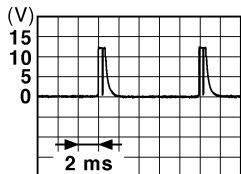
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
79 (BR)	Ground	Room antenna (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger com- partment	 JMKIA0063GB
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent 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 Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (P)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
83 (GR)	Ground	Remote keyless entry receiver communica- tion	Input/ Output		During waiting	 JMKIA0064GB
					When operating either button on the Intelli- gent Key	 JMKIA0065GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

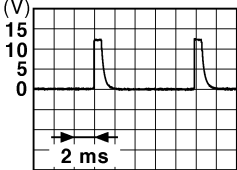
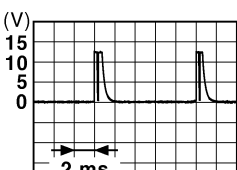
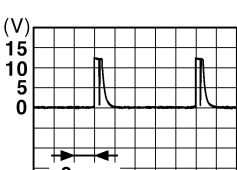
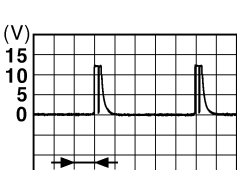
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	 1.4 V
				Front fog lamp switch ON (Wiper volume dial 4)	 1.3 V
				Rear wiper switch ON (Wiper volume dial 4)	 1.3 V
				Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7	 1.3 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

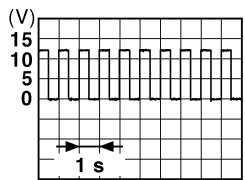
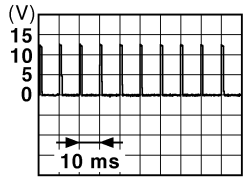
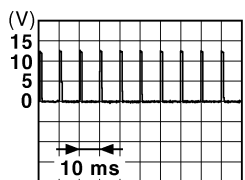
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper volume dial 4)  1.4 V
					Lighting switch HI (Wiper volume dial 4)  1.3 V
					Lighting switch 2ND (Wiper volume dial 4)  1.3 V
					Rear washer switch ON (Wiper volume dial 4)  1.3 V
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3  1.3 V
90 (P)	Ground	CAN-L	Input/ Output	—	—
91 (L)	Ground	CAN-H	Input/ Output	—	—

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

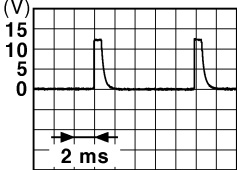
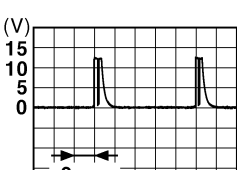
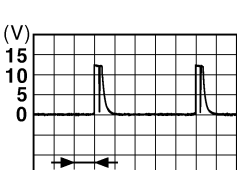
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	12 V
					Blinking	 JPMIA0015GB
					ON	0 V
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON or ACC	0 V
95 (BG)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	—	—	12 V
99 (R)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	12 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB
102 (BG)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
103 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		12 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

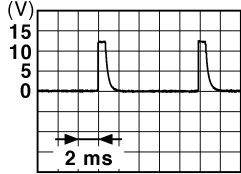
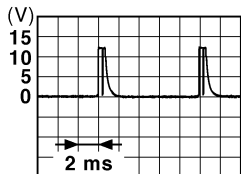
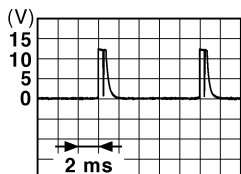
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper volume dial 4)	
				All switches OFF	 1.4 V
				Turn signal switch LH	 1.3 V
				Turn signal switch RH	 1.3 V
				Front wiper switch LO	 1.3 V
				Front washer switch ON	 1.3 V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

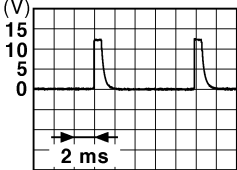
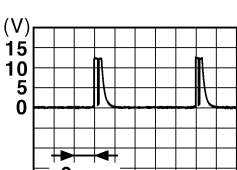
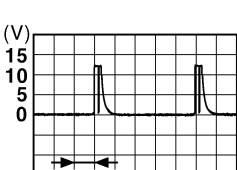
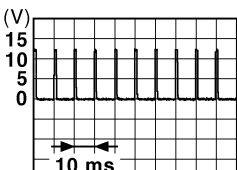
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	 1.4 V
				Lighting switch AUTO (Wiper volume dial 4)	 1.3 V
				Lighting switch 1ST (Wiper volume dial 4)	 1.3 V
				Rear wiper switch INT (Wiper volume dial 4)	 1.3 V
				Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	 1.3 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper volume dial 4)	All switches OFF  1.4 V
					Lighting switch PASS  1.3 V
					Lighting switch 2ND  1.3 V
					Front wiper switch INT/ AUTO  1.3 V
					Front wiper switch HI  1.3 V
					ON 0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF  1.1 V

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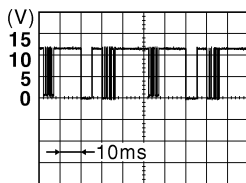
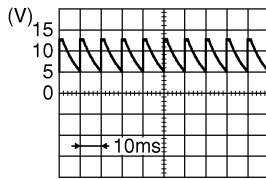
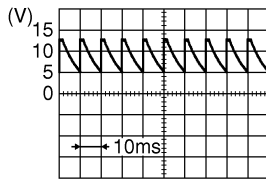
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

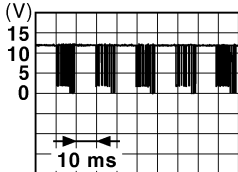
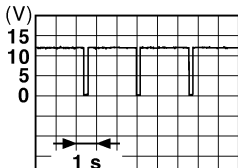
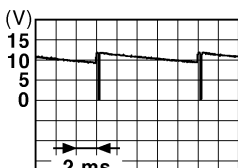
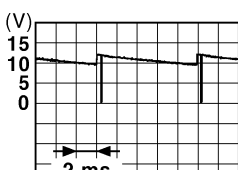
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
112 (GR)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		 JPMIA0156GB 8.7 V
113 (P)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
116 (BR)	Ground	Stop lamp switch 1	Input	—		Battery voltage
118 (P)	Ground	Stop lamp switch 2 (Without ICC)	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
		Stop lamp switch 2 (With ICC)		Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V
				Stop lamp switch ON (Brake pedal is depressed) or ICC brake 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)	 JPMIA0594GB 8.5 - 9.0 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input	When the Intelligent Key is inserted into key slot		12 V
				When the Intelligent Key is not inserted into key slot		0 V
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

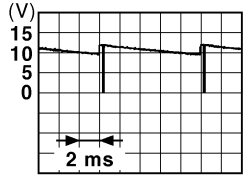
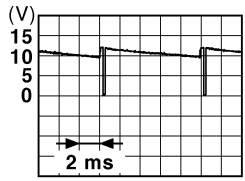
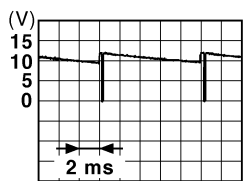
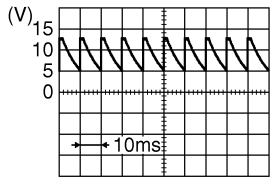
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)	
+	−	Signal name	Input/ Output				
132 (BG)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2 V	
				Ignition switch OFF or ACC		12 V	
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage	
					ON	0 V	
137 (B)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V	
138 (Y)	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V	
					ACC or ON	5.0 V	
140 (R)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	12 V	
					Except P and N positions	0 V	
141 (G)	Ground	Security indicator lamp	Output		ON	0 V	
						 JPMIA0014GB 11.3 V	
					OFF	12 V	
142 (BG)	Ground	Combination switch OUTPUT 5	Output		All switches OFF	0 V	
				Combination switch (Wiper volume dial 4)	Lighting switch 1ST	 JPMIA0031GB 10.7 V	
					Lighting switch HI		
					Lighting switch 2ND		
					Turn signal switch RH		
143 (P)	Ground	Combination switch OUTPUT 1	Output		All switches OFF (Wiper volume dial 4)	0 V	
				Combination switch	Front wiper switch HI (Wiper volume dial 4)	 JPMIA0032GB 10.7 V	
					Rear wiper switch INT (Wiper volume dial 4)		
					Any of the conditions be- low with all switches OFF		
					• Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 • Wiper volume dial 6 • Wiper volume dial 7		

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	
					Rear wiper switch ON (Wiper volume dial 4)	
					Rear washer switch ON (Wiper volume dial 4)	
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front wiper switch INT/ AUTO	
					Front wiper switch LO	
					Lighting switch AUTO	
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	 8.5 - 9.0 V
					ON (Door open)	0 V
151 (G)	Ground	Rear window defog- ger relay control	Output	Rear window de- fogger	Active	0 V
					Not activated	Battery voltage

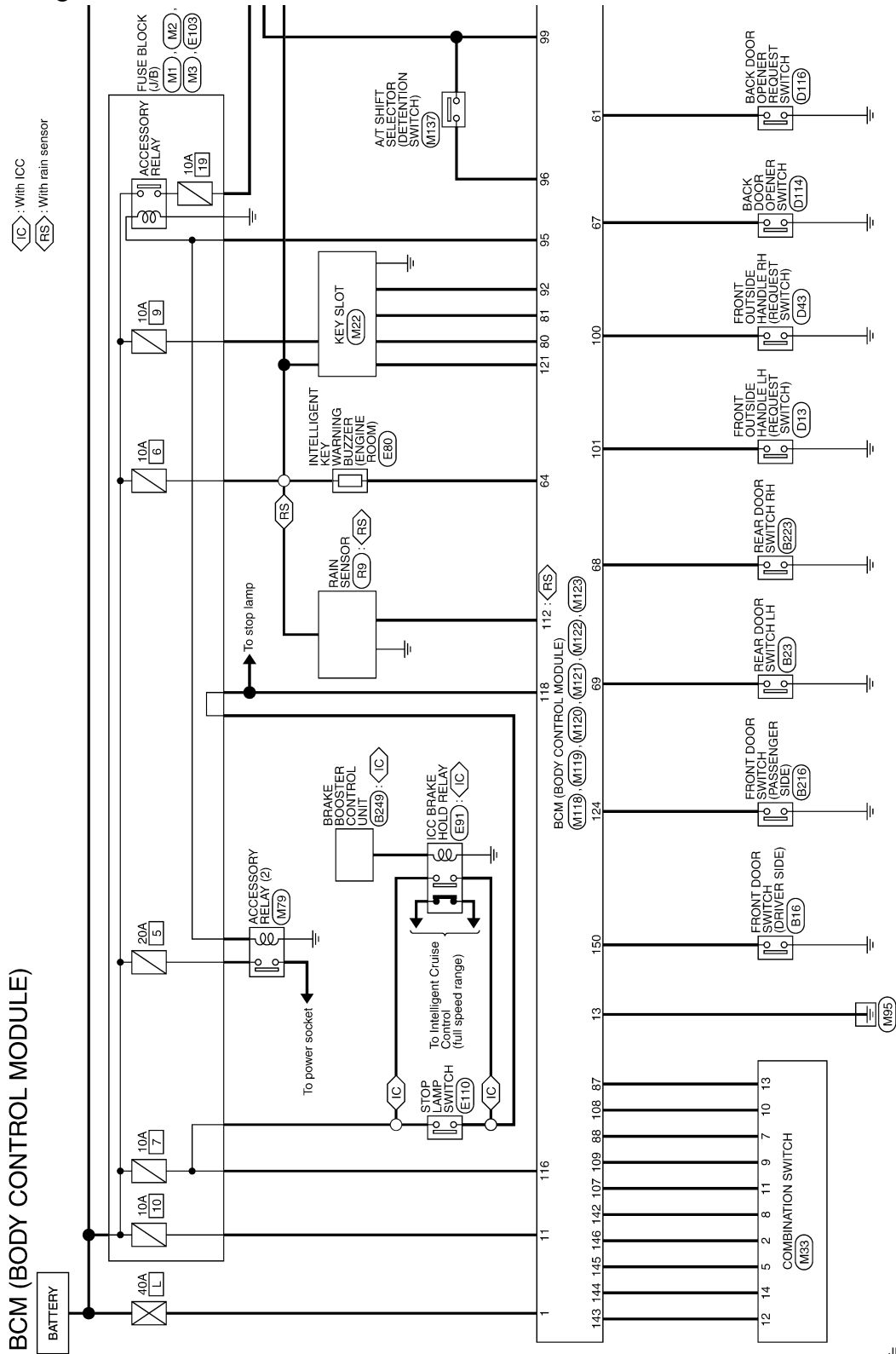
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Wiring Diagram - BCM -

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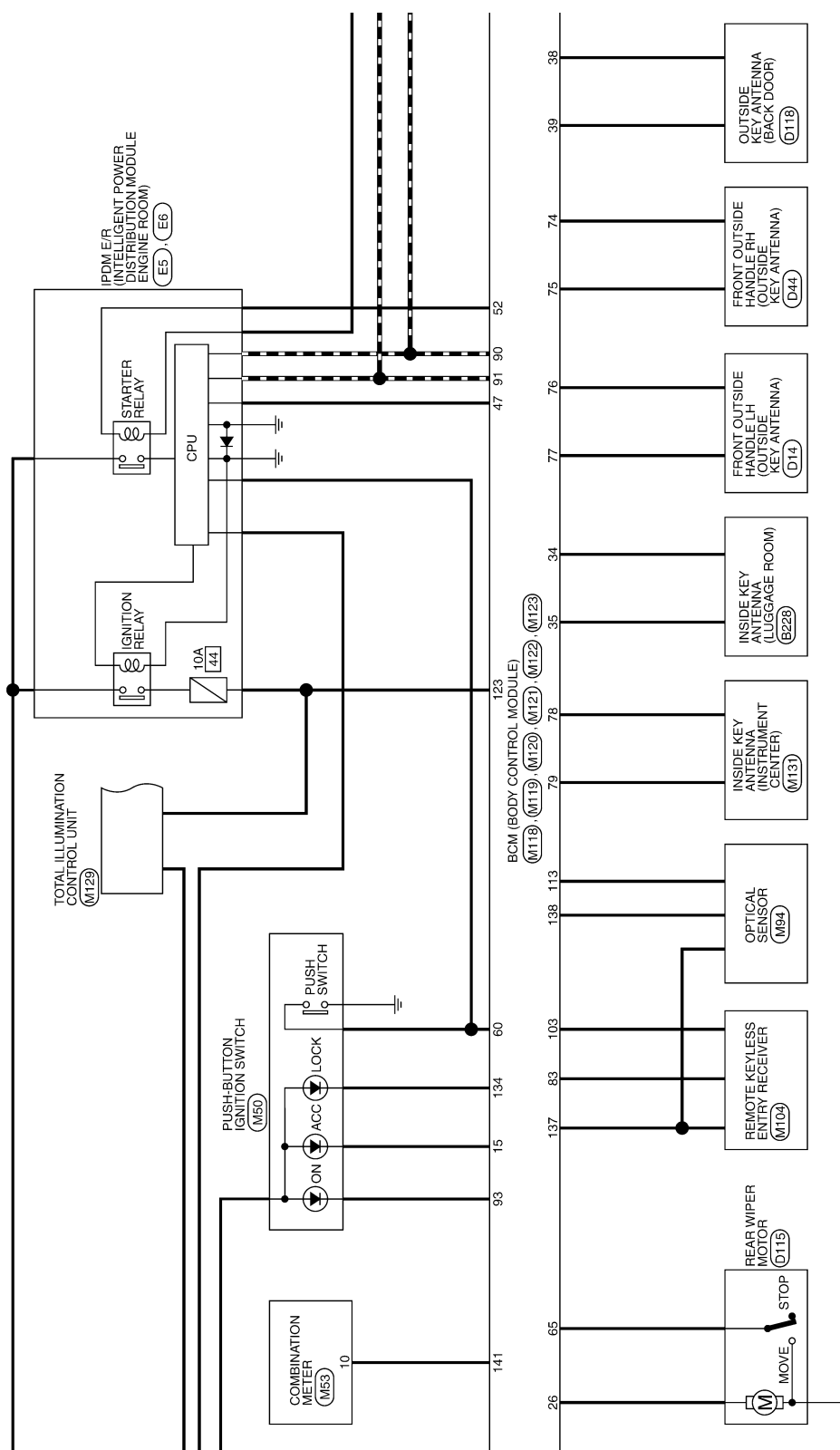


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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]



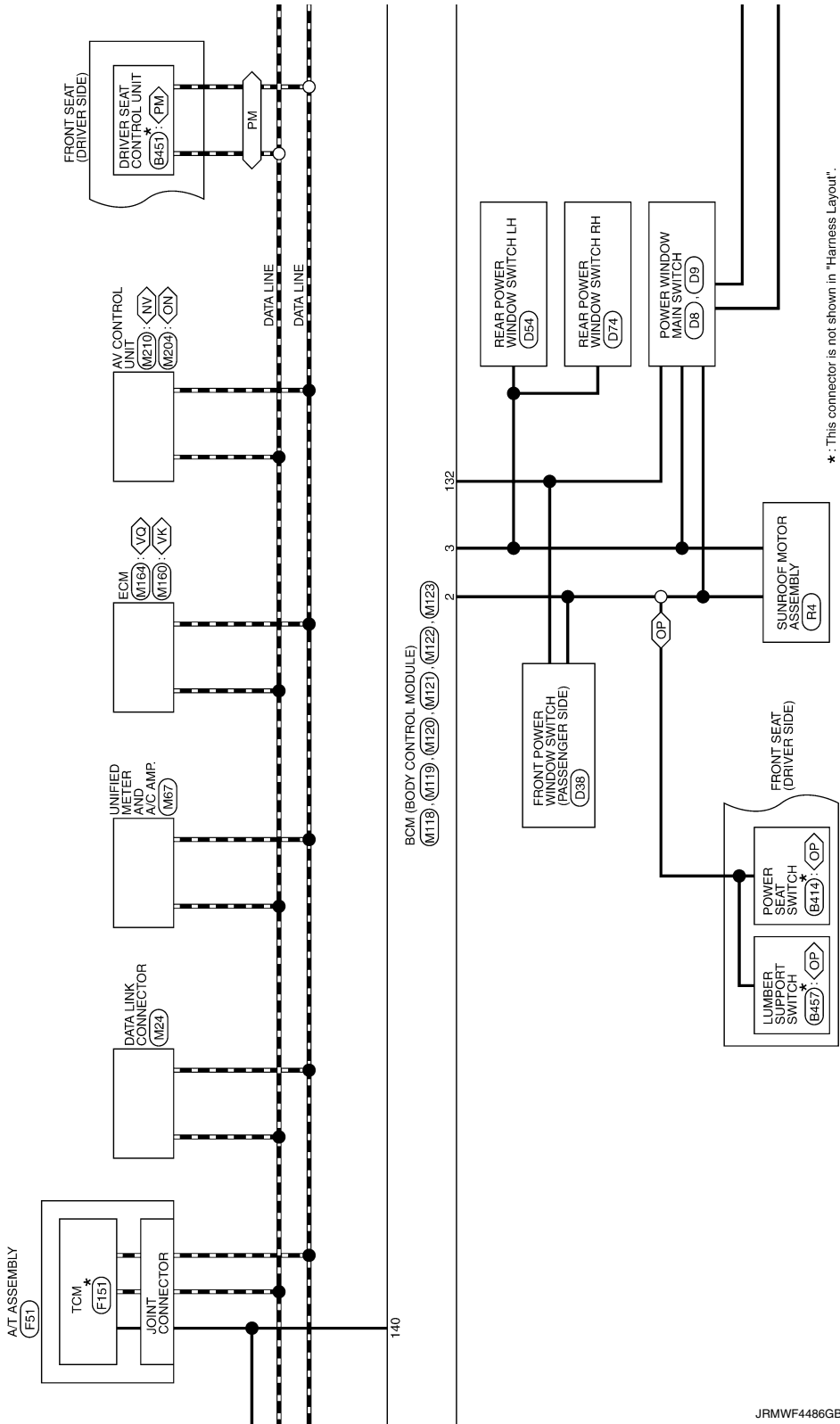
JRMWF4485GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

- VQ : With VQ engine
- VK : With VK engine
- NV : With NAVI
- ON : Without NAVI
- PM : With automatic drive positioner
- OP : Without automatic drive positioner



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

JRMWF4486GB

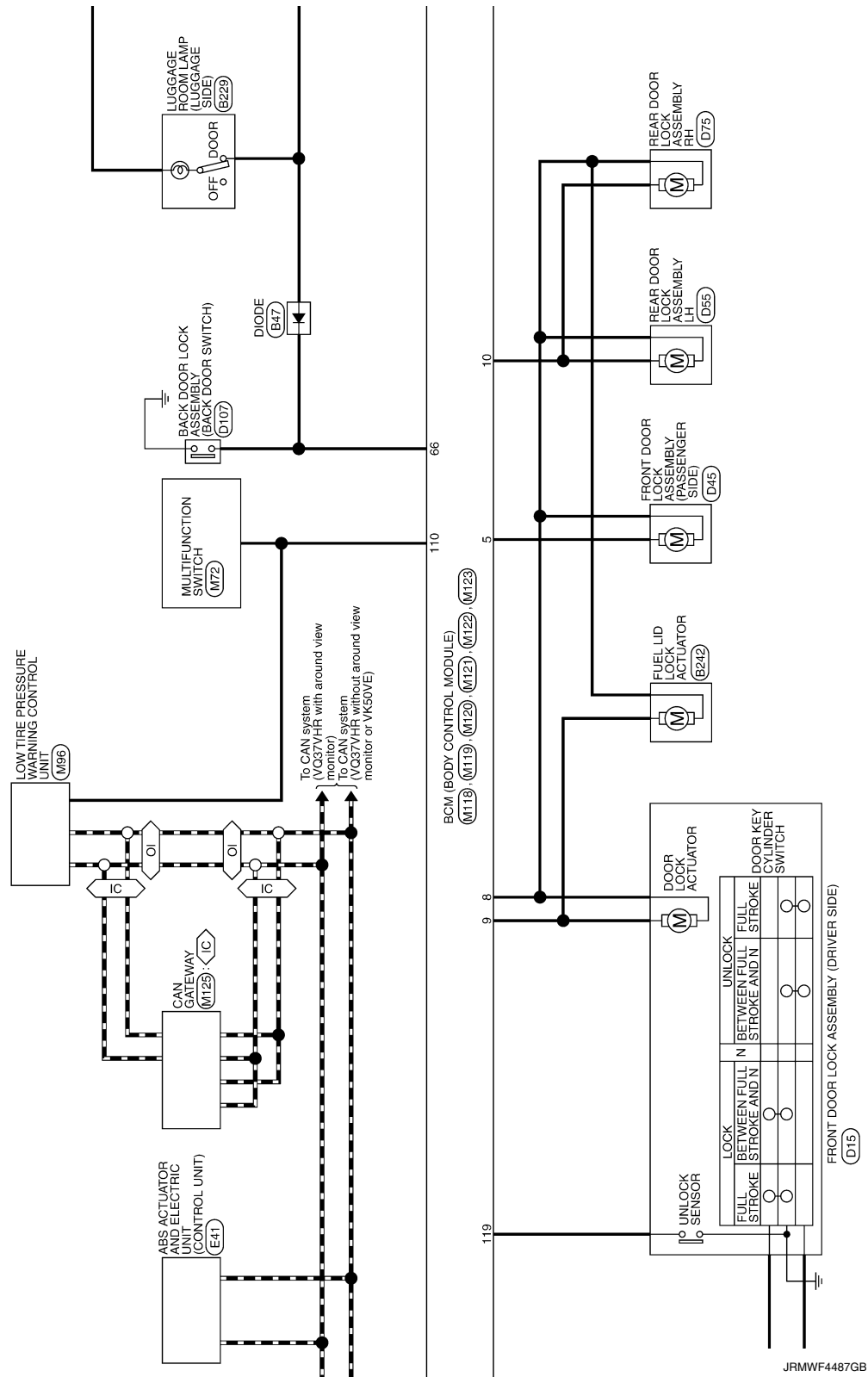
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

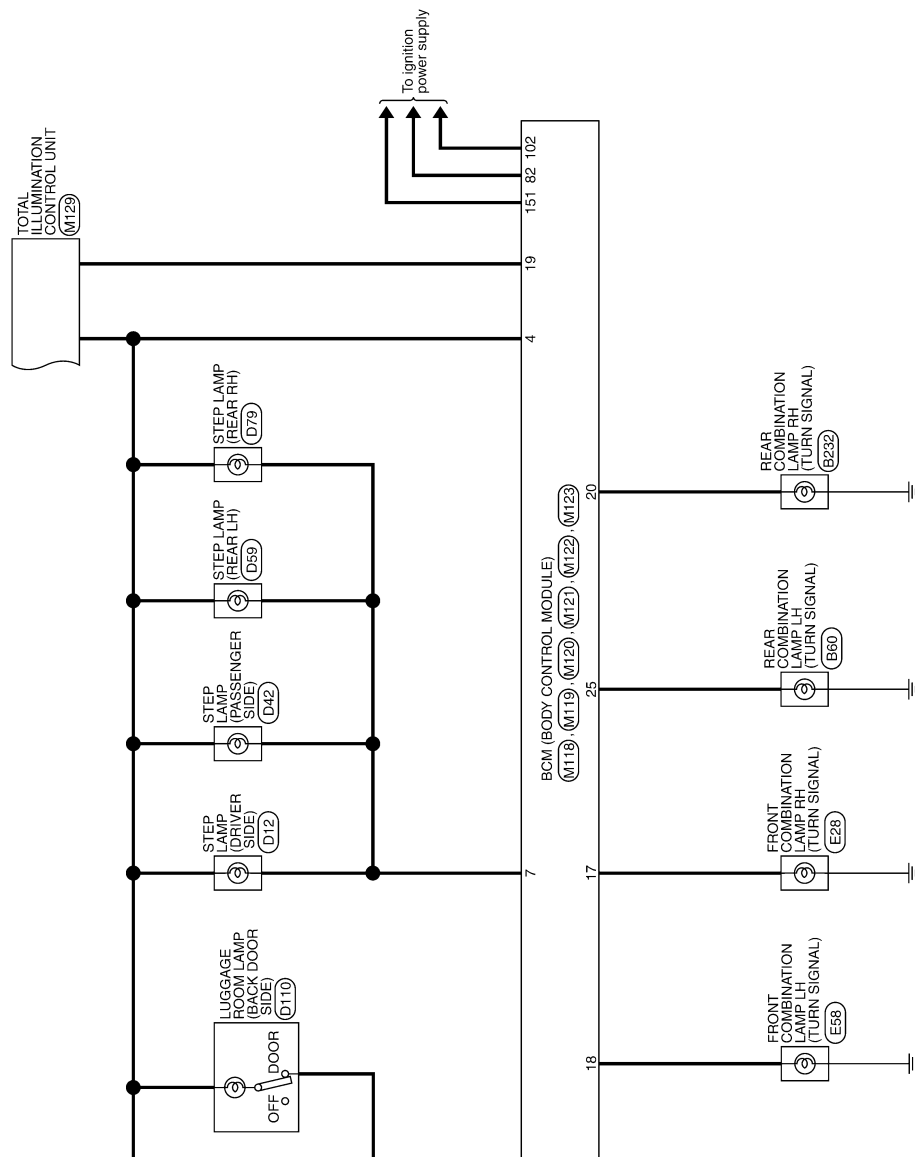
IC : With ICC
OI : Without ICC



BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]



JRMWF4488GB

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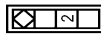
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

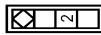
BCM (BODY CONTROL MODULE)

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Wire	Signal Name [Specification]
2	GR	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	Wire	Signal Name [Specification]
2	W	-

Connector No.	B47
Connector Name	DIODE
Connector Type	24335_C9000



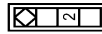
Terminal No.	Wire	Signal Name [Specification]
1	GR	-
2	V	-

Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	TH04MW-NH



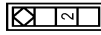
Terminal No.	Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	G	-
4	B	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	Wire	Signal Name [Specification]
2	GR	-

Connector No.	B223
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	Wire	Signal Name [Specification]
2	BG	-

Connector No.	B228
Connector Name	INSIDE KEY ANTENNA (LUGGAGE ROOM)
Connector Type	RKG2FGY



Terminal No.	Wire	Signal Name [Specification]
1	V	-
2	SB	-

Connector No.	B229
Connector Name	LUGGAGE ROOM LAMP (LUGGAGE SIDE)
Connector Type	TK03FW



Terminal No.	Wire	Signal Name [Specification]
1	W	-
2	L	-

Connector No.	B232
Connector Name	REAR COMBINATION LAMP RH
Connector Type	TH04MW-NH



Terminal No.	Wire	Signal Name [Specification]
1	P	-
2	LG	-
3	V	-
4	B	-

JRMWF4489GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

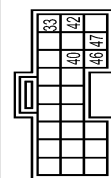
BCM (BODY CONTROL MODULE)

Connector No.	B242
Connector Name	FUEL LID LOCK ACTUATOR
Connector Type	MS04FW-LC



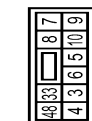
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	V	-

Connector No.	B249
Connector Name	BRAKE BOOSTER CONTROL UNIT
Connector Type	TK2AFGY



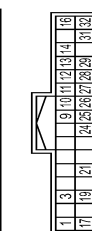
Terminal No.	Color Of Wire	Signal Name [Specification]
33	G	IGNITION
40	SB	IBA OFF SW
42	G	IGNITION
46	B	GROUND
47	LG	BRAKE HOLD RLY DRIVE SIGNAL

Connector No.	B414
Connector Name	POWER SEAT SWITCH
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
3	GY	-
4	P	-
5	W	-
6	V	-
7	LY	-
8	L	-
9	L/R	-
10	GW	-
33	R	-
48	B	-

Connector No.	B451
Connector Name	DRIVER SEAT CONTROL UNIT
Connector Type	TH32FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LW	RX
3	RY	CANH
9	W/G	PULSE (RECLINING)
10	P/B	PULSE (RR LIFTING)
11	BR	SLIDING SW (BACKWARD)
12	SB	RECLINING SW (BACKWARD)
13	LG/R	FRONT LIFTING SW (DOWNWARD)
14	GB	REAR LIFTING SW (DOWNWARD)
16	O	VCC
17	Y/R	TX

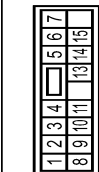
19	V	CAN-L
21	LY	P RANGE SW
24	R	PULSE (SLIDING)
25	Y/B	PULSE (RR LIFTING)
26	Y	SLIDING SW (FORWARD)
27	R/G	RECLINING SW (FORWARD)
28	W/B	FRONT LIFTING SW (UPWARD)
29	P/L	REAR LIFTING SW (UPWARD)
31	GR	SENSOR GND
32	B/W	GND (SIGNAL)

Connector No.	B457
Connector Name	LUMBAR SUPPORT SWITCH
Connector Type	NS04FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
33	R	-
48	B	-
57	W	-
58	L	-

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	LG	-
3	GR	-
4	V	-

5	SB	-
6	Y	-
7	BR	-
8	L	-
9	W	-
10	O	-
11	G	-
13	P	-
14	V	-
15	W	-

Connector No.	D9
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
17	B	-
19	Y	-

Connector No.	D12
Connector Name	STEP LAMP (DRIVER SIDE)
Connector Type	TB02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	SB	-

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	D13
Connector Name	FRONT OUTSIDE HANDLE LH (REQUEST SWITCH)
Connector Type	RK02FL-B



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-

Connector No.	D14
Connector Name	FRONT OUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA)
Connector Type	RK02MGY



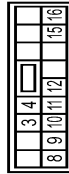
Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	V	-

Connector No.	D15
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	E06FGY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	R	-
3	G	-
4	B	-
5	V	-
6	V	-

Connector No.	D38
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	W	-
8	L	-
9	G	-
10	Y	-
11	B	-
12	P	-
15	R	-
16	V	-

Connector No.	D42
Connector Name	STEP LAMP (PASSENGER SIDE)
Connector Type	TB02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	R	-

Connector No.	D43
Connector Name	FRONT OUTSIDE HANDLE RH (REQUEST SWITCH)
Connector Type	RK02FL-B



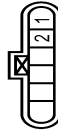
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	B	-

Connector No.	D44
Connector Name	FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA)
Connector Type	RK02MGY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	W	-

Connector No.	D45
Connector Name	FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE)
Connector Type	E06FGY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	LG	-

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	D54
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	L	-
3	R	-
4	L	-
5	G	-
6	L	-
7	B	-

Connector No.	D55
Connector Name	REAR DOOR LOCK ASSEMBLY LH
Connector Type	E06FGY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	G	-

Connector No.	D59
Connector Name	STEP LAMP (REAR LH)
Connector Type	TB02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	O	-

Connector No.	D74
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	P	-
3	R	-
4	L	-
5	G	-
6	L	-
7	B	-

Connector No.	D75
Connector Name	REAR DOOR LOCK ASSEMBLY RH
Connector Type	E06FGY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-

Connector No.	D79
Connector Name	STEP LAMP (REAR RH)
Connector Type	TB02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	O	-

Connector No.	D107
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LW	-
2	LB	-
3	G	-
4	L	-
5	W	-
6	LG	-
7	GR	-
8	GR	-

Connector No.	D110
Connector Name	LUGGAGE ROOM LAMP (BACK DOOR SIDE)
Connector Type	TK03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	L	-

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	D114
Connector Name	BACK DOOR OPENER SWITCH
Connector Type	TK02MBR-P



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

Connector No.	D115
Connector Name	REAR WIPER MOTOR
Connector Type	CJ04FM-IV



Terminal No.	Color Of Wire	Signal Name [Specification]
2	G	-
3	BG	-
4	B	-

Connector No.	D116
Connector Name	BACK DOOR OPENER REQUEST SWITCH
Connector Type	TK02MBR-P



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

Connector No.	D118
Connector Name	OUTSIDE KEY ANTENNA (BACK DOOR)
Connector Type	RK02EGY



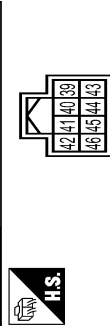
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	R	-

Connector No.	E5
Connector Name	IPDM/ER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH02FM-LCS12-M4-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
4	V	-
5	L	-
7	R	-
10	SB	-
12	B	-
13	Y	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	Y	-
28	BG	-
30	GR	-
36	G	-

Connector No.	E6
Connector Name	IPDM/ER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH03FM-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-
44	W	-

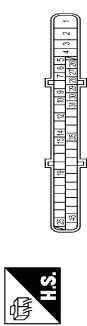
45	G
46	BR

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS04FB-PR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	V	-
3	B	-
4	P	-

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BAA42FB-AH24-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	G	LBWR
3	R	LBVR
4	B	GROUND
5	Y	DS FL
6	BG	DP RL
7	BR	DP BR
9	B	DP FR
10	W	DS FR
12	L	VAC
14	P	CANL
15	SHIELD	AGND

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	Signal Name [Specification]
19 P	UST
25 Y	BUS-L
26 R	DP FL
27 GR	DS RL
28 G	UZ
29 LG	DS RR
30 SB	BLS
31 R	VDC OFF SW
35 L	CANH
45 B	BUS-H

Connector No.	Signal Name [Specification]
E58	FRONT COMBINATION LAMP LH
ES4EB-FR	



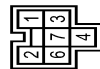
Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	B	-
4	BG	-

Connector No.	Signal Name [Specification]
E80	INTELLIGENT KEY WARNING BUZZER (BUZZER ROOM)
RK03FBR	



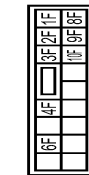
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	+BAT (VOL SMALL)
3	GR	BUZZER SIGNAL

Connector No.	Signal Name [Specification]
E91	ICC BRAKE HOLD RELAY
M06FGY-R-US	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	B	-
3	G	-
4	G	-
6	W	-
7	L	-

Connector No.	Signal Name [Specification]
E103	FUSE BLOCK (J/B)
NS16FW-CS	



Terminal No.	Color Of Wire	Signal Name [Specification]
10F	L	-
2F	SB	-
3F	W	-
4F	Y	-
6F	BG	-
8F	L	-
9F	R	-

Connector No.	Signal Name [Specification]
E110	STOP LAMP SWITCH
M04FW-LC	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	G	-
4	BR	-

Connector No.	Signal Name [Specification]
F51	AT ASSEMBLY
RK10FG-DGY	



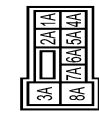
Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	IGNITION POWER SUPPLY
2	R	BATTERY POWER SUPPLY (MEMORY BACK-UP)
3	L	CANH
4	V	K-LINE
5	B	GROUND
6	Y	IGNITION POWER SUPPLY
7	R	BACK-UP LAMP RELAY
8	P	CANL
9	GR	STARTER RELAY (With VQ engine)
9	LG	STARTER RELAY (With VK engine)
10	B	GROUND

Connector No.	Signal Name [Specification]
F151	TCM
SP10FG	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	IGNITION POWER SUPPLY
2	B	BATTERY POWER SUPPLY (MEMORY BACK-UP)
3	R	CANH
4	O	K-LINE
5	G	GROUND
6	GR	IGNITION POWER SUPPLY
7	L	BACK-UP LAMP RELAY
8	BR	CANL
9	Y	STARTER RELAY
10	W/B	GROUND

Connector No.	Signal Name [Specification]
M1	FUSE BLOCK (J/B)
NS08FM-M2	



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



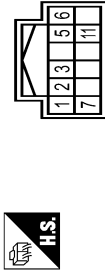
Terminal No.	Color Of Wire	Signal Name [Specification]
1B	LG	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	L	-
8B	R	-
9B	BR	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	L	-
11C	LG	-
12C	R	-
6C	P	-
7C	B	-
9C	BG	-

Connector No.	M22
Connector Name	KEY SLOT
Connector Type	TH12FW-AH



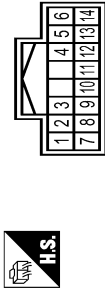
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	BAT
2	GR	CLOCK
3	W	DATA
4	Y	ILL BAT
5	LG	ILL
6	L	GROUND
7	B	KEY SWITCH SIGNAL
11	BR	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



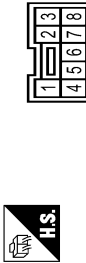
Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	FR WASHER (-)
2	SB	OUTPUT 4
3	BG	FR WASHER (+)
4	G	IGN
5	L	OUTPUT 3
6	B	GROUND
7	V	INPUT 3
8	BG	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

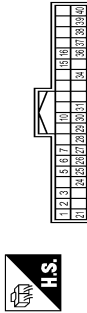
Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	R	-
3	BG	-
4	SB	-
5	GR	-
6	Y	-

7	V
8	P

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	BATTERY POWER SUPPLY
2	LG	COMMUNICATION SIGNAL (METER-AMP)
3	GR	COMMUNICATION SIGNAL (AMP->METER)
4	B	GROUND
5	W	ALTERNATOR SIGNAL
6	P	AIR BAG SIGNAL
7	G	SECURITY INDICATOR SIGNAL
15	B	GROUND
16	B	METER CONTROL SWITCH GROUND
21	R	IGNITION SIGNAL
24	BR	COMMUNICATION SIGNAL (LCD-AMP)
25	Y	COMMUNICATION SIGNAL (AMP->LCD)
26	R	VEHICLE SPEED SIGNAL (8-PULSE)
27	V	PARKING BRAKE SWITCH SIGNAL
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL
29	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
30	G	PASSENGER SEAT BELT WARNING SIGNAL
31	L	WASHER LEVEL SWITCH SIGNAL
34	B	ILLUMINATION CONTROL SIGNAL
36	LG	SELECT SWITCH SIGNAL
37	SB	ENTER SWITCH SIGNAL
38	L	TRIP AB RESET SWITCH SIGNAL
39	P	ILLUMINATION CONTROL SWITCH SIGNAL (-)
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)

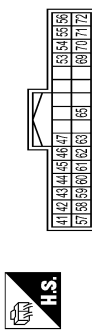
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

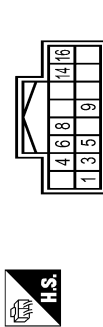
BCM (BODY CONTROL MODULE)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FM-NH



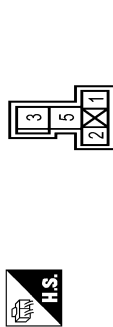
Terminal No.	Color	Wire	Signal Name [Specification]
41	V		ACC POWER SUPPLY
42	Y		FUEL LEVEL SENSOR SIGNAL
43	R		INTAKE SENSOR SIGNAL
44	LG		IN-VEHICLE SENSOR SIGNAL
45	P		AMBIENT SENSOR SIGNAL
46	BG		SUNLOAD SENSOR SIGNAL
47	V		GAS SENSOR SIGNAL
53	G		IGNITION POWER SUPPLY
54	BG		BATTERY POWER SUPPLY
55	B		GROUND
56	L		CANH
57	W		BRAKE FLUID LEVEL SWITCH SIGNAL
58	B		FUEL LEVEL SENSOR GROUND
59	GR		INTAKE SENSOR GROUND
60	L		IN-VEHICLE SENSOR GROUND
61	BR		AMBIENT SENSOR GROUND
62	SB		SUNLOAD SENSOR GROUND
63	R		ION MODE SIGNAL
65	BG		ECV SIGNAL
69	L		A/C LAN SIGNAL
70	R		EACH DOOR MOTOR POWER SUPPLY
71	B		GROUND
72	P		CANH

Connector No.	M72
Connector Name	MULTIFUNCTION SWITCH
Connector Type	TH16FM-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	B		GROUND
3	V		ACC
4	R		ILL
5	R		ILL CONT
6	SB		AV COMM (H)
8	LG		AV COMM (L)
9	BR		SW GND
14	SB		DISK EJECT SIGNAL
16	G		HAZARD ON

Connector No.	M79
Connector Name	ACCESSORY RELAY (2)
Connector Type	MS02FL-M2-LC



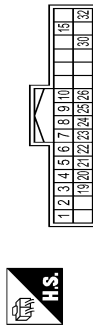
Terminal No.	Color	Wire	Signal Name [Specification]
1	G		-
2	B		-
3	LG		-
5	L		-

Connector No.	M94
Connector Name	OPTICAL SENSOR
Connector Type	TK03FW



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y		POWER
2	P		OUTPUT
3	B		GROUND

Connector No.	M96
Connector Name	LOW TIRE PRESSURE WARNING CONTROL UNIT
Connector Type	TH02FM-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	P		CAN+ (L)
2	L		CAN+ (H)
3	BG		RR TUNER (SIG)
4	L		RL TUNER (SIG)
5	R		FR TUNER (SIG)
6	P		FL TUNER (SIG)
7	SB		RR TUNER (VCC)
8	R		RL TUNER (VCC)
9	GR		FR TUNER (VCC)
10	G		FL TUNER (VCC)
15	Y		IGN
19	W		RR TUNER (RSSI)
20	BR		RL TUNER (RSSI)
21	LG		FR TUNER (RSSI)
22	V		FL TUNER (RSSI)
23	B		RR TUNER (GND)
24	Y		RL TUNER (GND)

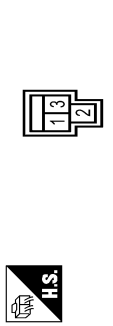
25	W		FR TUNER (GND)
26	P		FL TUNER (GND)
30	LG		BCM FLASHER
32	B		GROUND

Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JAB04FB



Terminal No.	Color	Wire	Signal Name [Specification]
1	B		GROUND
2	GR		SIGNAL OUTPUT
4	BR		BATTERY

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



Terminal No.	Color	Wire	Signal Name [Specification]
1	W		BAT (F/L)
2	Y		POWER WINDOW POWER SUPPLY (BAT)
3	BG		POWER WINDOW POWER SUPPLY (RAP)

A
B
C
D
E
F
G
H
I
J
K
EXL
M
N
O
P

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



4	5	7	8	9	10
11	13	15	17	18	19

Terminal No.	Color Of Wire	Signal Name [Specification]
4	P	INT ROOM LAMP PWR SUPPLY (BAT SAVE)
5	V	PASSENGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP OUTPUT
8	V	ALL DOOR FUEL LID LOCK OUTPUT
9	G	DRIVER DOOR FUEL LID UNLOCK OUTPUT
10	BR	REAR DOOR UNLOCK OUTPUT
11	R	BAT (FUSE)
13	B	GROUND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT)
18	BG	TURN SIGNAL LH (FRONT)
19	SB	ROOM LAMP TIMER

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



20	25	26
----	----	----

Terminal No.	Color Of Wire	Signal Name [Specification]
20	V	TURN SIGNAL RH (REAR)
25	G	TURN SIGNAL LH (REAR)
26	P	REAR WIPER OUTPUT

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
34	SB	LUGGAGE ROOM ANT-
35	V	LUGGAGE ROOM ANT+
38	B	BACK DOOR ANT-
39	W	BACK DOOR ANT+
47	Y	IGN RELAY (PRM FIB) CONT
52	LG	STARTER RELAY CONT
60	SB	END START SW
61	W	TRUNK REQUEST SW
64	L	LKEY WARN BUZZER (ENG ROOM)
65	BG	REAR WIPER STOP POSITION
66	LG	BACK DOOR SW
67	P	BACK DOOR OPENER SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT-
79	BR	ROOM ANT+

80	GR	NATS ANT AMP.
81	W	NATS ANT AMP.
82	P	IGN RELAY (FIB) CONT
83	GR	KEYLESS ENTRY RECEIVER SIGNAL
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	ON IND
95	BG	ACC RELAY CONT
96	GR	AT SHIFT SELECTOR POWER SUPPLY
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
112	GR	RAIN SENSOR SERIAL LINK
113	P	OPTICAL SENSOR
116	BR	STOP LAMP SW 1
118	P	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
123	W	IGN FIB
124	LG	PASSENGER DOOR SW
132	BG	POWER WINDOW SW COMM
134	GR	LOCK IND
137	B	RECEIVER SENSOR GND
138	Y	SENSOR POWER SUPPLY
140	R	SHIFT NP

141	G	SECURITY INDICATOR OUTPUT
142	BG	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
150	GR	DRIVER DOOR SW
151	G	REAR WINDOW DEFROGGER RELAY CONT

Connector No.	M125
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH



1	3	4	5	6
7	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
3	GR	BATTERY
4	L	CAN-H
5	B	GROUND
6	L	CAN-H
7	P	CAN-L
9	LG	IGNITION
10	P	CAN-L
11	B	GROUND
12	P	CAN-L

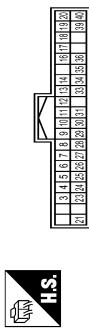
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	M123
Connector Name	TOTAL ILLUMINATION CONTROL UNIT
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
3	V		DDL2
4	L		TAIL LAMP SIGNAL
5	P		ACC SIGNAL
6	P		BAT SAVING SIGNAL
7	W		IGN SIGNAL
8	G		DOOR SW (AS)
9	BG		DOOR SW (RL)
10	SB		MOOD LAMP (FR ARMREST RH)
11	Y		MOOD LAMP (RR ARMREST RH)
12	P		MAP LAMP (AS)
13	G		PERSONAL LAMP (LH)
14	R		PERSONAL LAMP (RH)
16	GR		FOOT LAMP (RH)
17	LG		HSPL ILLUMINATIONS
18	L		MAP LAMP (DR)
19	R		PUSH ENG START SW LED
20	Y		AMBIENCE LAMP
21	R		BAT POWER SUPPLY
23	B		GROUND
24	B		ILL CONT INPUT
25	BR		DOOR SW (RR)
26	BR		MAP LAMP SW (DOOR)
27	R		MAP LAMP SW (ALL ON)
28	SB		ROOM LAMP TIMER
29	GR		DOOR SW (DR)
30	LG		MOOD LAMP (FR ARMREST LH)
31	BG		MOOD LAMP (RR ARMREST LH)
33	W		HSPL POWER SUPPLY 3
34	R		HSPL POWER SUPPLY 2
35	V		HSPL POWER SUPPLY 1
36	L		FOOT LAMP (LH)
39	B		PUDDLE LAMP (RH)
40	BG		PUDDLE LAMP (LH)

Connector No.	M131
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02MGY



Terminal No.	Color	Wire	Signal Name [Specification]
1	BR		-
2	Y		-



Terminal No.	Color	Wire	Signal Name [Specification]
1	W		-
2	V		-
3	L		-
4	B		-
5	G		-
7	BG		-
8	SB		-
9	B		-
10	GR		-
11	R		-

Connector No.	M160
Connector Name	ECM
Connector Type	RH24FGY-R28-LH-Z



Terminal No.	Color	Wire	Signal Name [Specification]
97	R		ENGINE SPEED SIGNAL OUTPUT
99	G		SENSOR POWER SUPPLY
100	L		SENSOR POWER SUPPLY
101	P		CAN COMMUNICATION LINE
102	SB		ASC/DC STEERING SWITCH
104	R		ACCELERATOR PEDAL POSITION SENSOR 1
105	L		CAN COMMUNICATION LINE
106	P		IGNITION SWITCH
108	P		ACCELERATOR PEDAL POSITION SENSOR 2
110	P		STOP LAMP SWITCH
111	V		SENSOR GROUND
112	LG		FUEL PUMP CONTROL MODULE (FFCM) CHECK
114	GR		DATA LINK CONNECTOR
115	GR		SENSOR GROUND
116	G		TRANSMISSION RANGE SWITCH
117	BR		ASC/DC BRAKE SWITCH
118	R		POWER SUPPLY FOR ECM (BACK-UP)
119	W		SENSOR GROUND
120	W		FUEL TANK TEMPERATURE SENSOR
121	GR		POWER SUPPLY FOR ECM
123	B		ECM GROUND
125	R		FUEL PUMP CONTROL MODULE (FFCM)
128	B		ECM GROUND

Connector No.	M164
Connector Name	ECM
Connector Type	RH24FGY-R28-LH-Z



Terminal No.	Color	Wire	Signal Name [Specification]
97	R		ACCELERATOR PEDAL POSITION SENSOR 1
98	P		ACCELERATOR PEDAL POSITION SENSOR 2
99	Y		ACCELERATOR PEDAL POSITION SENSOR 3
99	G		SENSOR POWER SUPPLY (With NAVI)
99	L		SENSOR POWER SUPPLY (Without NAVI)
100	W		SENSOR GROUND
101	SB		ASC/DC STEERING SWITCH
102	LG		EVAP CONTROL SYSTEM PRESSURE SENSOR
103	G		SENSOR POWER SUPPLY (With NAVI)
103	L		SENSOR POWER SUPPLY (Without NAVI)
104	BR		SENSOR GROUND (With NAVI)
104	GR		SENSOR GROUND (Without NAVI)
105	L		REFRIGERANT PRESSURE SENSOR
106	W		FUEL TANK TEMPERATURE SENSOR
107	BG		SENSOR POWER SUPPLY
108	V		SENSOR GROUND
109	G		PNP SIGNAL
110	R		ENGINE SPEED OUTPUT SIGNAL
112	V		ENGINE CANISTER VENT CONTROL SYSTEM PRESSURE SENSOR
112	W		ENGINE CANISTER VENT CONTROL SYSTEM PRESSURE SENSOR
113	P		CAN COMMUNICATION LINE
114	L		CAN COMMUNICATION LINE
117	GR		DATA LINK CONNECTOR
121	LG		EVAP CANISTER VENT CONTROL VALVE
122	P		STOP LAMP SWITCH
123	B		ECM GROUND
124	B		ECM GROUND
125	GR		POWER SUPPLY FOR ECM
126	BR		ASC/DC BRAKE SWITCH
127	B		ECM GROUND
128	B		ECM GROUND

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	M204
Connector Name	AV CONTROL UNIT
Connector Type	TH22FW-NH

Terminal No.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
Wire	LG	SB	LG	SB	P	LG	SB	LG	SB	P	LG	SB	LG	SB	P	LG	SB

Terminal No.	Wire	Signal Name [Specification]
76	LG	AV COMM (L)
77	SB	AV COMM (H)
78	LG	AV COMM (L)
79	SB	AV COMM (H)
80	P	CANL
81	L	CANH
82	BR	SW GND
86	SHIELD	SHIELD
87	L	TEL VOICE SIGNAL (+)
88	P	TEL VOICE SIGNAL (-)
92	R	VEHICLE SPEED SIGNAL (8-PULSE)
93	V	PARKING BRAKE SIGNAL
94	BG	REVERSE SIGNAL
95	G	IGNITION SIGNAL
96	SB	DISK EJECT SIGNAL
102	B	AUX GND
103	W	AUX AUDIO LH+
104	R	AUX AUDIO RH+

Connector No.	M210
Connector Name	AV CONTROL UNIT
Connector Type	TH22FW-NH

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Connector No.	R9
Connector Name	RAIN SENSOR
Connector Type	IAEB03FB

Terminal No.	1	2	3
Wire	BR	GR	B

Terminal No.	Wire	Signal Name [Specification]
1	BR	+B
2	GR	SIG
3	B	GROUND

Connector No.	R4
Connector Name	SUNROOF MOTOR ASSEMBLY
Connector Type	YEA10FGY

Terminal No.	1	2	3	4	5	6	7	8	9	10
Wire	GR	P	SW-BIT0	+B	SW-BIT1	SW-BIT2	SW-BIT3	SW-BIT4	SW-BIT5	SW-BIT6

Terminal No.	Wire	Signal Name [Specification]
1	GR	SW-BIT1
5	P	SW-BIT0
7	BR	+B
8	L	SPEED SENSOR (2P)
9	Y	TIMER (+IGN)
10	G	GROUND

Fail-safe

FAIL-SAFE CONTROL BY DTC

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

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[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 relay control signal - Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled - IGN relay (IPDM E/R) control signal: OFF (Battery voltage) - Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) - Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
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 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

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:

If rain sensor malfunction is detected when ignition switch is turned OFF ⇒ ON and front wiper switch is INT position, BCM operates a fail-safe control.

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

- More than 1 minute is passed after the rear wiper stops.
- Turn rear wiper switch OFF.
- 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 - U1010: CONTROL UNIT(CAN)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Priority	DTC
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP/CLUTCH SW • B2605: PNP/CLUTCH SW • B2608: STARTER RELAY • B260A: IGNITION RELAY • B260F: ENG STATE SIG LOST • B2614: BCM • B2615: BCM • B2616: BCM • B2617: BCM • B2618: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2623: INSIDE ANTENNA
6	B26E7: TPMS CAN COMM

DTC Index

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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 [EXL-33, "COMMON ITEM : CONSULT Function \(BCM - COMMON ITEM\)"](#).

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warn- ing lamp ON	Reference
No DTC is detected. Further testing may be required.	—	—	—	—
U1000: CAN COMM	—	—	—	BCS-39
U1010: CONTROL UNIT(CAN)	—	—	—	BCS-40
U0415: VEHICLE SPEED SIG	—	—	—	BCS-41
B2190: NATS ANTENNA AMP	×	—	—	SEC-47
B2191: DIFFERENCE OF KEY	×	—	—	SEC-50
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-51
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-53
B2195: ANTI SCANNING	×	—	—	SEC-54
B2553: IGNITION RELAY	—	×	—	PCS-53
B2555: STOP LAMP	—	×	—	SEC-55

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warn- ing lamp ON	Reference
B2556: PUSH-BTN IGN SW	—	×	×	SEC-57
B2557: VEHICLE SPEED	×	×	×	SEC-59
B2560: STARTER CONT RELAY	×	×	×	SEC-60
B2562: LOW VOLTAGE	—	×	—	BCS-42
B2601: SHIFT POSITION	×	×	×	SEC-61
B2602: SHIFT POSITION	×	×	×	SEC-64
B2603: SHIFT POSI STATUS	×	×	×	SEC-66
B2604: PNP/CLUTCH SW	×	×	×	SEC-69
B2605: PNP/CLUTCH SW	×	×	×	SEC-71
B2608: STARTER RELAY	×	×	×	SEC-73
B260A: IGNITION RELAY	×	×	×	PCS-55
B260F: ENG STATE SIG LOST	×	×	×	SEC-75
B2614: BCM	—	×	×	PCS-57
B2615: BCM	—	×	×	PCS-59
B2616: BCM	—	×	×	PCS-61
B2617: BCM	×	×	×	SEC-77
B2618: BCM	×	×	×	PCS-63
B261A: PUSH-BTN IGN SW	—	×	×	SEC-79
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-82
B2621: INSIDE ANTENNA	—	×	—	DLK-101
B2623: INSIDE ANTENNA	—	×	—	DLK-103
B26E7: TPMS CAN COMM	—	—	—	BCS-43
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-76

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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

Reference Value

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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 %
AC COMP REQ	Engine running	A/C switch OFF	Off
		A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
	Lighting switch 1ST, 2ND, HI or AUTO (light is illuminated)		On
HL LO REQ	Lighting switch OFF		Off
	Lighting switch 2ND HI or AUTO (light is illuminated)		On
HL HI REQ	Lighting switch OFF		Off
	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND or AUTO (light is illuminated)	Front fog lamp switch OFF	Off
		• Front fog lamp switch ON • Daytime running light activated (Only for Canada)	On
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	Stop
		Front wiper switch INT	1LOW
		Front wiper switch LO	Low
		Front wiper switch HI	Hi
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	Off
		Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
PUSH SW	Release the push-button ignition switch		Off
	Press the push-button ignition switch		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
	At engine cranking		On

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition		Value/Status
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On
ST/INHI RLY	Ignition switch ON		Off
	At engine cranking		INHI → ST
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF		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 selector lever in P position		On
S/L RLY -REQ	NOTE: The item is indicated, but not monitored.		Off
S/L STATE	NOTE: The item is indicated, but not monitored.		UNLOCK
DTRL REQ	NOTE: The item is indicated, but not monitored.		Off
OIL P SW	Ignition switch OFF, ACC or engine running		Open
	Ignition switch ON		Close
HOOD SW	Close the hood		Off
	Open the hood		On
HL WASHER REQ	NOTE: The item is indicated, but not monitored.		Off
THFT HRN REQ	Not operation		Off
	- Panic alarm is activated - Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
HORN CHIRP	Not operating		Off
	Door locking with Intelligent Key (horn chirp mode)		On
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitored.		Off

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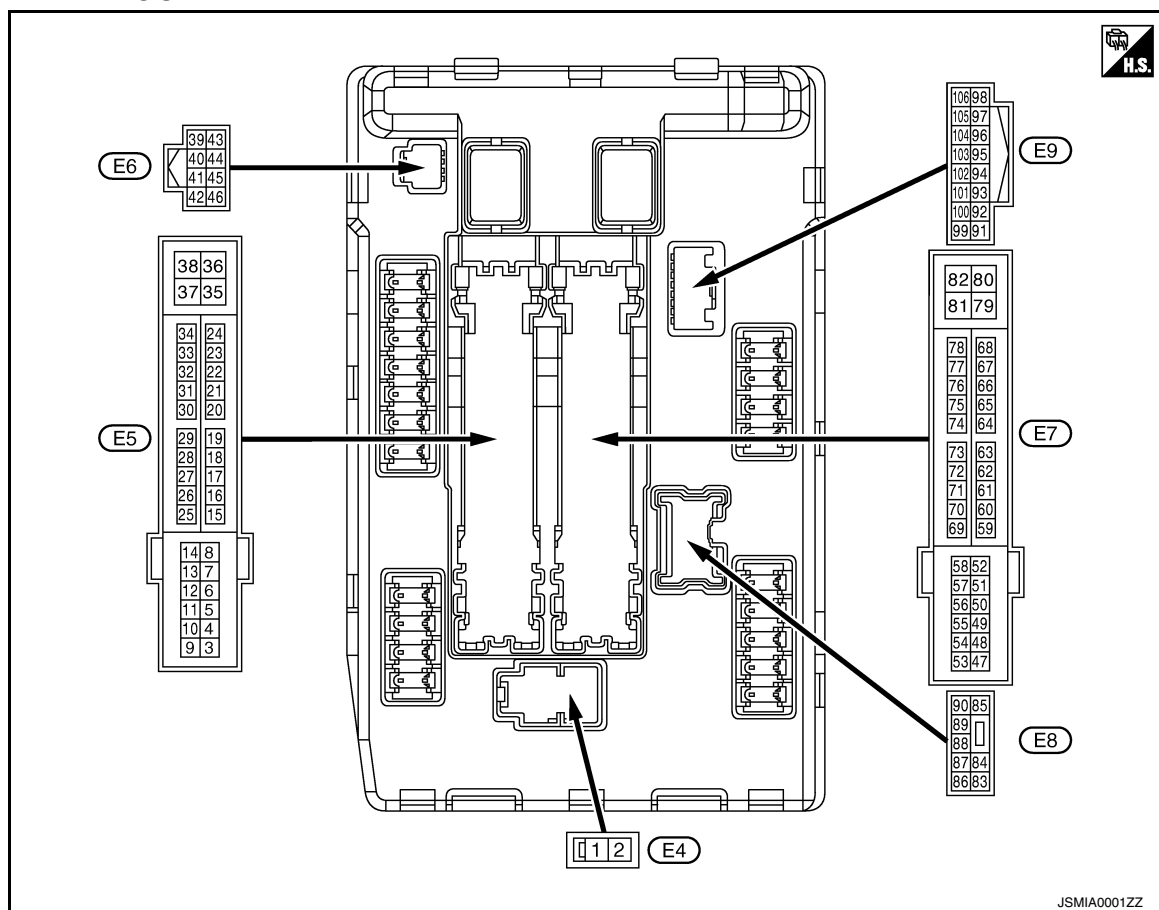
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
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 (V)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch LO	Battery voltage
5 (L)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch HI	Battery voltage
7 (R)	Ground	Tail, license plate lamps & interior lamps	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
10*1 (SB)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON		0 V

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
13 (Y)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V
				- Approximately 1 second after turning the ignition switch ON - Engine running		Battery voltage
16 (LG)	Ground	Front wiper stop position	Input	Ignition switch ON	Front wiper stop position	0 V
					Any position other than front wiper stop position	Battery voltage
19 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
25 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
26*2 (R)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
27 (Y)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V
28 (BG)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V
				Release the 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 switch OFF		Battery voltage
39 (P)	—	CAN-L	Input/ Output	—		—
40 (L)	—	CAN-H	Input/ Output	—		—
41 (B)	Ground	Ground	—	Ignition switch ON		0 V
42 (Y)	Ground	Cooling fan relay control	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
43 (SB)	Ground	A/T shift selector (Detention switch)	Input	Ignition switch ON	- Press the selector button (Selector lever P) - Selector lever in any position other than P	Battery voltage
					Release the selector button (selector lever P)	0 V
44 (W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
45 (G)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
46 (BR)	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
48 (L)	Ground	A/C relay power supply	Output	Engine running	A/C switch OFF	0 V
					A/C switch ON (A/C compressor is operating)	Battery voltage

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

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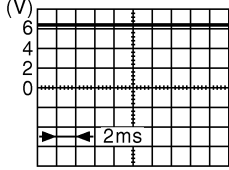
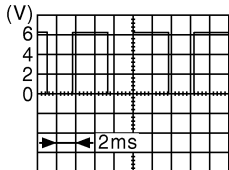
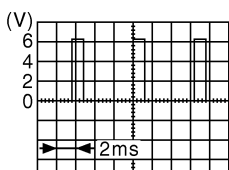
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
49 (W)*1 (SB)*3	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)	0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)	Battery voltage
51 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
				Ignition switch ON	Battery voltage
52 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
				Ignition switch ON	Battery voltage
53 (W)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)	0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)	Battery voltage
54 (R)	Ground	Throttle control motor re- lay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)	0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)	Battery voltage
55 (BR)	Ground	ECM power supply	Output	Ignition switch OFF	Battery voltage
56 (BG)*1 (V)*3	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
				Ignition switch ON	Battery voltage
57 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
				Ignition switch ON	Battery voltage
58 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
				Ignition switch ON	Battery voltage
69 (W)	Ground	ECM relay control	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)	Battery voltage
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)	0 – 1.5 V
70 (BG)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON → OFF	0 – 1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON	0 – 1.0 V
74 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
				Ignition switch ON	Battery voltage
75 (Y)	Ground	Oil pressure switch	Input	Ignition switch ON	0 V
				Engine stopped Engine running	Battery voltage

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
76 (P) ^{*1} (V) ^{*3}	Ground	Power generation command signal	Output	Ignition switch ON	 JPMIA0001GB 6.3 V
				40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"	 JPMIA0002GB 3.8 V
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"	 JPMIA0003GB 1.4 V
77 (B) ^{*1} (L) ^{*3}	Ground	Fuel pump relay control	Output	- Approximately 1 second after turning the ignition switch ON - Engine running	0 – 1.0 V
				Approximately 1 second or more after turning the ignition switch ON	Battery voltage
80 (W)	Ground	Starter motor	Output	At engine cranking	Battery voltage
83 (R)	Ground	Headlamp LO (RH)	Output	Ignition switch OFF	0 V
				Lighting switch 2ND	Battery voltage
84 (P)	Ground	Headlamp LO (LH)	Output	Ignition switch OFF	0 V
				Lighting switch 2ND	Battery voltage
86 (W)	Ground	Front fog lamp	Output	- Front fog lamp switch ON - Daytime running light activated (Only for Canada)	Battery voltage
				Front fog lamp switch OFF	0 V
88 (G)	Ground	Washer pump power supply	Output	Ignition switch ON	Battery voltage
89 (BR)	Ground	Headlamp HI (RH)	Output	- Lighting switch HI - Lighting switch PASS	Battery voltage
				Lighting switch OFF	0 V
90 (Y)	Ground	Headlamp HI (LH)	Output	- Lighting switch HI - Lighting switch PASS	Battery voltage
				Lighting switch OFF	0 V

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
91 (P)	Ground	Parking lamp	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 – 5 V
104 (LG)	Ground	Hood switch	Input	Close the hood		Battery voltage
				Open the hood		0 V

*1: VK engine models

*2: Only for the models with ICC system

*3: VQ engine models

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

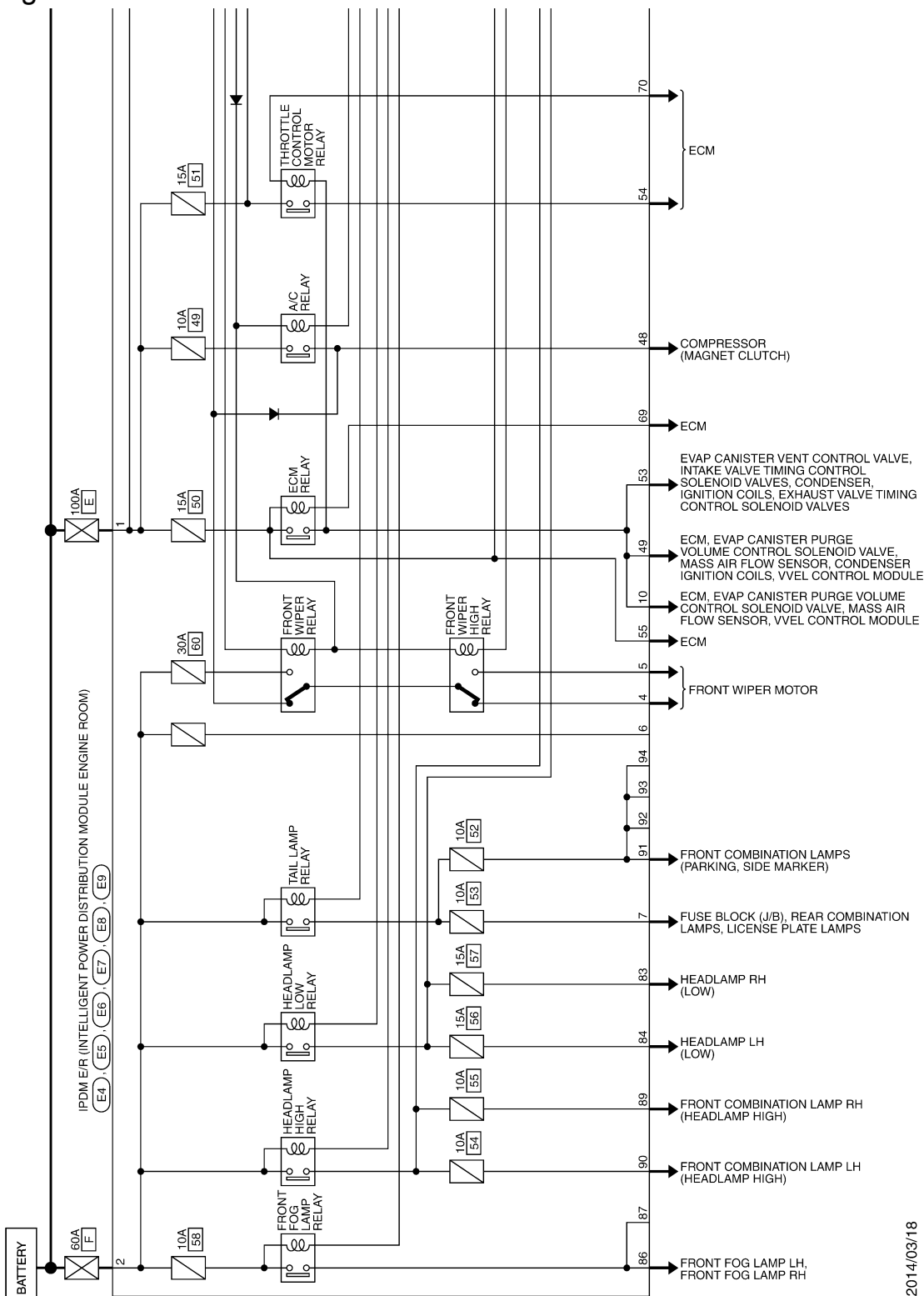
< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Wiring Diagram - IPDM E/R -

INFOID:0000000011009273

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



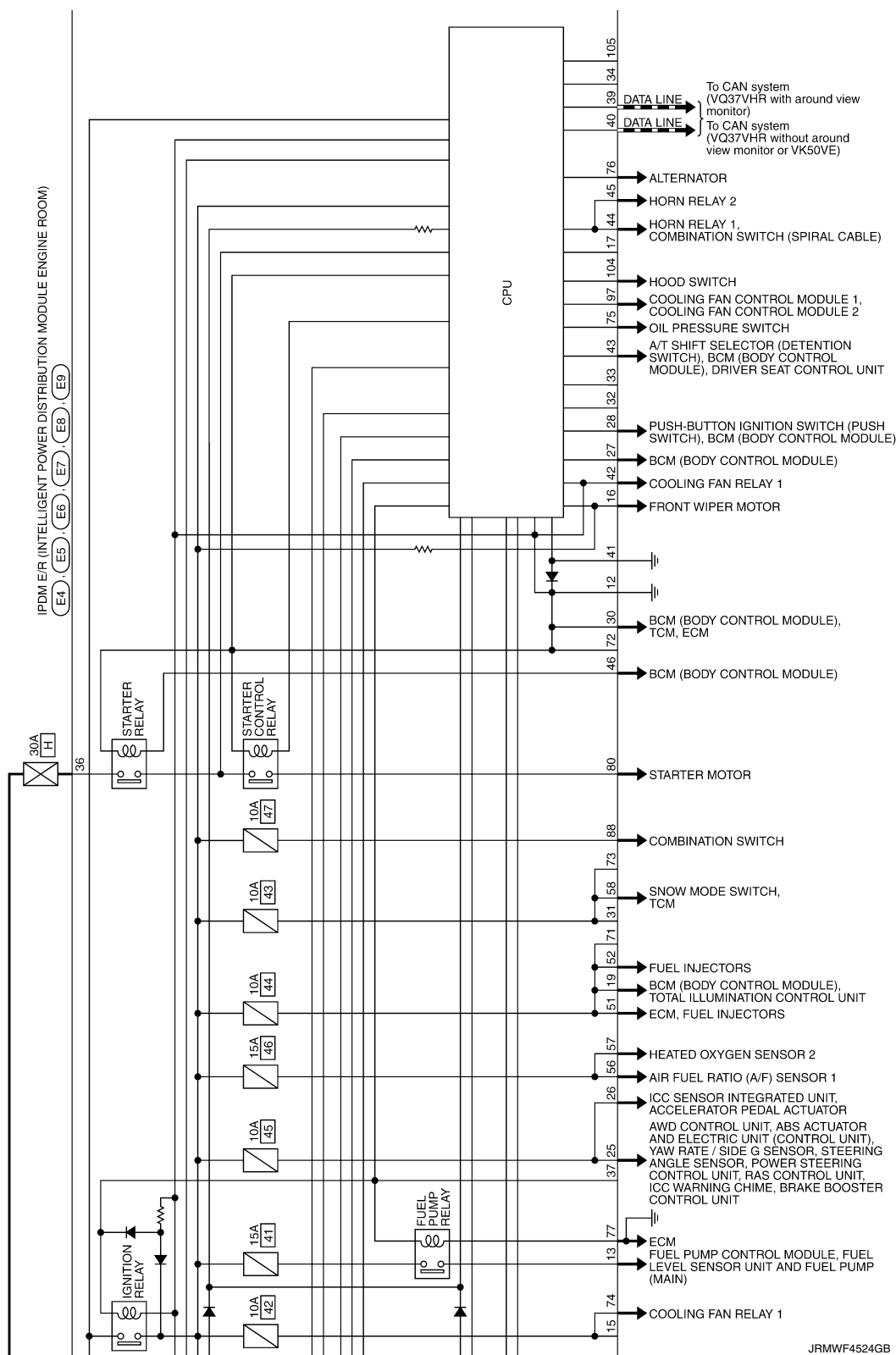
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JRMWF4523GB

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]



JRMWF4524GB

A

B

C

D

E

F

G

H

I

J

K

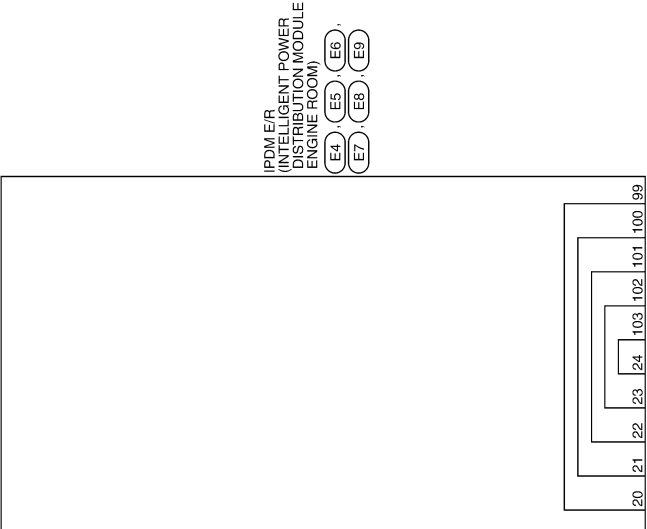
EXL

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JRMWF4525GB

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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

Connector No.	E4
IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)	
Connector Name	Signal Name [Specification]
Connector Type	L02FB/MC



Connector No.	E6
IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)	
Connector Name	Signal Name [Specification]
Connector Type	TH08FM-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
58	Y	-
69	W	-
70	BG	-
74	G	-
75	Y	-
76	P	- [With VK engine]
76	V	- [With VQ engine]
77	B	- [With VK engine]
77	L	- [With VQ engine]
80	W	-

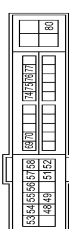
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	L	-

Connector No.	E5
IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)	
Connector Name	Signal Name [Specification]
Connector Type	TH20FM-CS/2-M4-1V



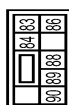
Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
42	Y	-
43	SB	-
44	W	-
45	G	-
46	BR	-

Connector No.	E7
IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)	
Connector Name	Signal Name [Specification]
Connector Type	TH20FM-CS/2-M4



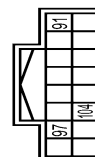
Terminal No.	Color Of Wire	Signal Name [Specification]
48	L	-
49	SB	- [With VQ engine]
49	W	- [With VK engine]
51	G	-
52	W	-
53	R	-
54	R	-
55	BR	-
55	BG	- [With VK engine]
56	V	- [With VQ engine]
57	LG	-

Connector No.	E8
IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)	
Connector Name	Signal Name [Specification]
Connector Type	NS08FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
83	R	-
84	P	-
86	W	-
88	G	-
89	BR	-
90	Y	-

Connector No.	E9
IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)	
Connector Name	Signal Name [Specification]
Connector Type	TH16FM-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
91	P	-
97	V	-
104	LG	-

Fail-safe

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

JRMWF4526GB

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Control part	Fail-safe operation
Cooling fan	- Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON - Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF
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	- Turns ON the headlamp low relay when the ignition switch is turned ON - Turns OFF the headlamp low relay when the ignition switch is turned OFF - Headlamp high relay OFF
- Parking lamps - License plate lamps - Side marker lamps - Illuminations - Tail lamps	- Turns ON the tail lamp relay when the ignition switch is turned ON - Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	- 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. - 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.
Front fog lamps	Front fog lamp relay OFF
Horn	Horn 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		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
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	The front wiper stop position signal does not change for 10 seconds.

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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:0000000011009275

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 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
 - 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-15
B2098: IGN RELAY ON CIRC	×	PCS-16
B2099: IGN RELAY OFF CIRC	—	PCS-18
B210B: STR CONT RLY ON CIRC	—	SEC-83
B210C: STR CONT RLY OFF CIRC	—	SEC-84
B210D: STARTER RLY ON CIRC	—	SEC-86
B210E: STARTER RLY OFF CIRC	—	SEC-88
B210F: INTRLCK/PNP SW ON	—	SEC-90
B2110: INTRLCK/PNP SW OFF	—	SEC-92

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

AFS CONTROL UNIT

Reference Value

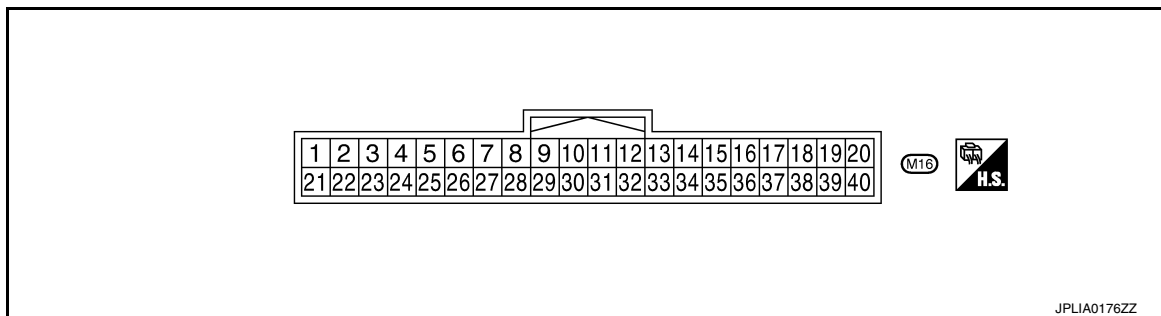
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VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition		Value/Status
STR ANGLE SIG	Steering	Straight-forward	Approx. 0°
		Steering	Approx. -900° - +900°
VHCL SPD	Driving at 40 km/h (25 MPH)		40 km/h
SLCT LVR POSI	Selector lever operation		P - 1
HEAD LAMP	Light switch	2ND	On
		Other than 2ND	Off
AFS SW	NOTE: The item is indicated, but not monitored.		
HI SEN OTP RR	Vehicle rear height	Unloaded vehicle condition	Approx. 2.5 V
		Low (Leveling operation downward edge)	Approx. 1.6 V (With 20-inch wheel)
			Approx. 1.8 V (With 21-inch wheel)
LEV ACTR VLTG	Headlamp leveling	Unloaded vehicle condition	Approx. 70.0%
		Low (Leveling operation downward edge)	Approx. 40.8% (With 20-inch wheel)
			Approx. 41.8% (With 21-inch wheel)
SWVL SEN RH	Right headlamp swivel activation	Standard position	Approx. 0°
		Activation	Positive degree (+°)
SWVL SEN LH	Left headlamp swivel activation	Standard position	Approx. 0°
		Activation	Positive degree (+°)
SWVL ANGLE RH	Right headlamp swivel activation	Standard position	Approx. 0°
		Activation	Positive degree (+°)
SWVL ANGLE LH	Left headlamp swivel activation	Standard position	Approx. 0°
		Activation	Positive degree (+°)

TERMINAL LAYOUT

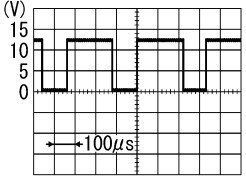
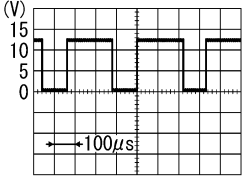


PHYSICAL VALUES

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

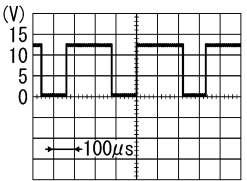
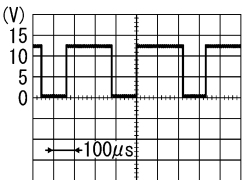
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ output			
1 (Y)	Ground	Ignition power supply	Input	Ignition switch ON		Battery voltage
2 (LG)	Ground	Right swivel position sensor ground	Input	Ignition switch ON		0 V
4 (Y)	Ground	Right swivel position sensor power supply	Output	Ignition switch ON		5 V
6 (W)	Ground	Height sensor power supply	Output	Ignition switch ON		5 V
7 (P)	Ground	CAN-L	Input/ output	—		—
8 (B)	Ground	Height sensor ground	Input	Ignition switch ON		0 V
9 (GR)	Ground	Right swivel position sensor signal	Output	Right headlamp swivel angle	0°	0.7 V
					15°	2.8 V
11 (R)	Ground	Right swivel motor 1-phase (—)	Output	Right headlamp swivel	Activation	Reference waveform  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  8 - 12 V
17 (W)	Ground	Left swivel motor 2-phase (+)	Output	Left headlamp swivel	Stopped	9.5 - 11.5 V
19 (SB)	Ground	Right levelizer signal	Output	Right headlamp leveling	Unloaded vehicle condition	8.8 V
					Leveling operation downward edge	5.1 V (With 20-inch wheel)
						5.2 V (With 21-inch wheel)
24 (V)	Ground	Left swivel position sensor power supply	Output	Ignition switch ON		5 V
25 (B)	Ground	Ground	—	Ignition switch ON		0 V
27 (BR)	Ground	Left swivel position sensor ground	Input	Ignition switch ON		0 V

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ output			
28 (SB)	Ground	Height sensor signal	Output	Vehicle rear height	Unloaded vehicle condition	2.5 V
					Low (Leveling operation downward edge)	1.6 V (With 20-inch wheel)
						1.8 V (With 21-inch wheel)
29 (BG)	Ground	Left swivel position sensor signal	Output	Left headlamp swivel angle	0°	0.7 V
					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  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  8 - 12 V
38 (B)	Ground	Left swivel motor 1-phase (-)	Output	Left headlamp swivel	Stopped	9.5 - 11.5 V
40 (BG)	Ground	Left levelizer signal	Output	Right headlamp leveling	Unloaded vehicle condition	8.8 V
					Leveling operation downward edge	5.1 V (With 20-inch wheel)
						5.2 V (With 21-inch wheel)

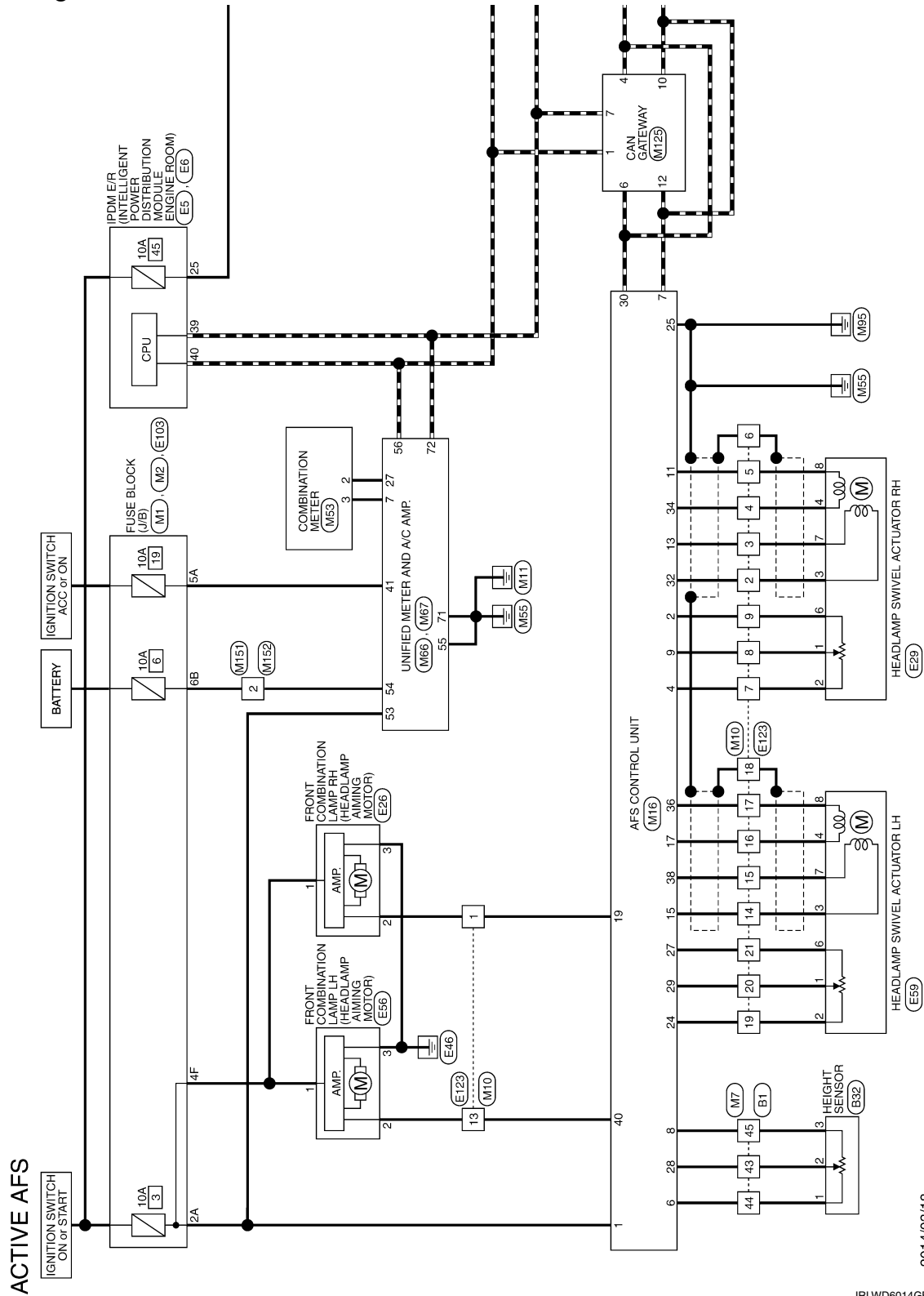
AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

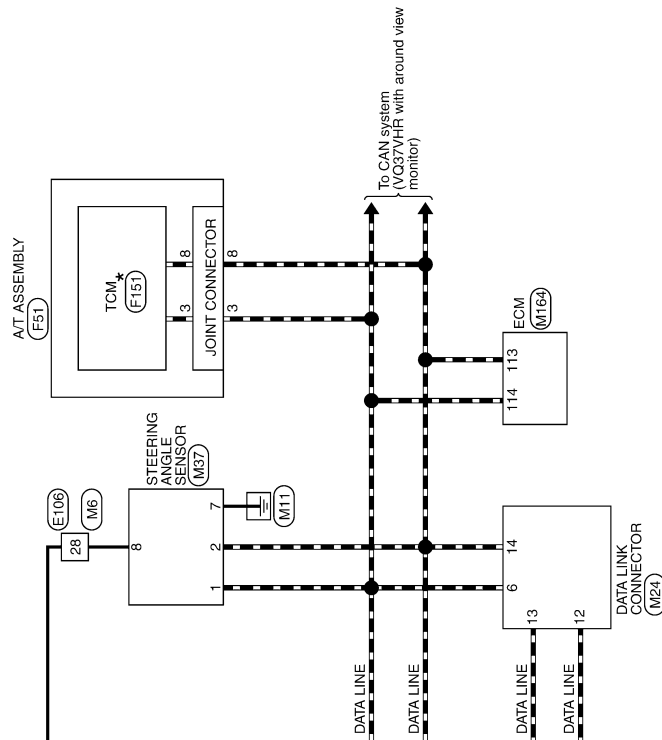
Wiring Diagram - ACTIVE AFS -

INFOID:000000010576366



2014/03/18

JRLWD6014GB



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

JRLWD6015GB

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AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

ACTIVE AFS

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color	Wire	Signal Name [Specification]
1	G	-	-
2	L	-	-
3	W	-	-
4	G	-	-
5	P	-	-
6	B	-	-
7	P	-	-
8	B	-	-
9	SB	-	-
10	SB	-	-
11	SB	-	-
12	B	-	-
13	G	-	-
14	R	-	-
15	W	-	-
16	SHIELD	-	-
17	L	-	-
18	P	-	-
19	G	-	-
20	Y	-	-
21	W	-	-
23	V	-	-
24	P	-	-
25	BR	-	-
26	GR	-	-
27	B	-	-
28	W	-	-
38	B	-	-
39	B	-	-
43	SB	-	-
44	V	-	-
45	GR	-	-
51	V	-	-
52	SB	-	-
53	SHIELD	-	-
54	BR	-	-
55	Y	-	-
56	SHIELD	-	-

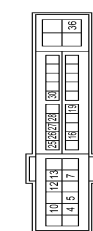
57	P	-	-
58	L	-	-
59	SHIELD	-	-
60	L	-	-
61	P	-	-
62	GR	-	-
63	G	-	-
64	B	-	-
65	W	-	-
66	V	-	-
67	LG	-	-
68	Y	-	-
69	G	-	-
70	GR	-	-
71	G	-	-
72	B	-	-
73	W	-	-
74	V	-	-
75	B	-	-
76	LG	-	-
77	L	-	-
78	GR	-	-
79	W	-	-
80	L	-	-
81	P	-	-
82	L	-	-
83	P	-	-
84	SB	-	-
85	R	-	-
86	Y	-	-
87	B	-	-
88	G	-	-
89	BR	-	-
91	R	-	-
92	B	-	-
93	BR	-	-
94	V	-	-
96	B	-	-
97	W	-	-
98	GR	-	-
99	W	-	-

Connector No.	B32
Connector Name	HEIGHT SENSOR
Connector Type	RH03FB



Terminal No.	Color	Wire	Signal Name [Specification]
1	V	-	-
2	SB	-	-
3	GR	-	-

Connector No.	E5
Connector Name	AFS INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH03FW-CS12-M4-1V



Terminal No.	Color	Wire	Signal Name [Specification]
4	V	-	-
5	L	-	-
7	R	-	-
10	SB	-	-
12	B	-	-
13	Y	-	-
16	LG	-	-
19	W	-	-
25	G	-	-
26	R	-	-
27	Y	-	-
28	B	-	-
30	GR	-	-
36	G	-	-

Connector No.	E6
Connector Name	AFS INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH08FW-AH



Terminal No.	Color	Wire	Signal Name [Specification]
39	P	-	-
40	L	-	-
41	B	-	-
42	Y	-	-
43	SB	-	-
44	W	-	-
45	G	-	-
46	BR	-	-

Connector No.	E26
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RK03FB



Terminal No.	Color	Wire	Signal Name [Specification]
1	G	-	-
2	SB	-	-
3	B	-	-

JRLW6016GB

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

ACTIVE AFS

Connector No.	E29
Connector Name	HEAD-AMP SWIVEL ACTUATOR RH
Connector Type	RS08FGY-PR



Connector No.	E59
Connector Name	HEAD-AMP SWIVEL ACTUATOR LH
Connector Type	RS08FGY-PR



Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH00FM-CS16-TM4



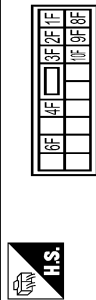
Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	Y	-
3	G	-
4	W	-
6	LG	-
7	B	-
8	R	-

Connector No.	E56
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RK03FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	-
2	V	-
3	R	-
4	G	-
6	BR	-
7	W	-
8	B	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	B	-

Terminal No.	Color Of Wire	Signal Name [Specification]
10F	L	-
1F	SB	-
2F	W	-
3F	Y	-
4F	G	-
6F	BG	-
8F	L	-
9F	R	-

37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
58	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
69	L	-
70	SHIELD	-
71	G	-
72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
20	Y	- [Without ICC]
21	BR	- [With ICC]
22	R	- [Without ICC]
22	V	- [Without ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	L	- [Without ICC]
25	Y	- [With ICC]
26	SHIELD	-
28	G	-
29	LG	-
30	BR	-
32	W	-
33	Y	-
34	BG	-

AFS CONTROL UNIT

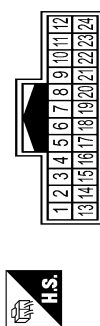
< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

ACTIVE AFS

97	W	-
98	SHIELD	-
100	Y	-

Connector No.	E123
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	G	-
3	B	-
4	W	-
5	R	-
6	SHIELD	-
7	Y	-
8	GR	-
9	LG	-
10	BR	-
11	W	-
13	BG	-
14	R	-
15	W	-
16	G	-
17	B	-
18	SHIELD	-
19	V	-
20	BG	-
21	BR	-
22	R	-
23	SHIELD	-

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG-DGY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	IGNITION POWER SUPPLY
2	R	BATTERY POWER SUPPLY (REAR) (BACK-UP)
3	L	CAN-H
4	V	K-LINE
5	B	GROUND
6	Y	IGNITION POWER SUPPLY
7	R	BACK-UP LAMP RELAY
8	P	CAN-L
9	GR	STARTER RELAY (With VQ engine)
9	LG	STARTER RELAY (With VK engine)
10	B	GROUND

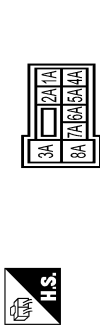
Connector No.	F151
Connector Name	TCM
Connector Type	SP10FG



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	IGNITION POWER SUPPLY
2	B	BATTERY POWER SUPPLY (REAR) (BACK-UP)
3	R	CAN-H
4	O	K-LINE
5	G	GROUND
6	GR	IGNITION POWER SUPPLY
7	L	BACK-UP LAMP RELAY
8	BR	CAN-L
9	Y	STARTER RELAY

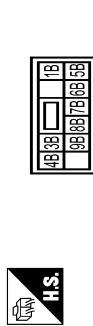
10	W/B	GROUND
----	-----	--------

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-MZ



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	BG	-
2A	G	-
3A	L	-
4A	R	-
5A	V	-
6A	Y	-
7A	R	-
8A	L	-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1B	LG	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	L	-
8B	R	-
9B	BR	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat]
3	SB	- [With Auto aircon seat]
4	LG	-
5	GR	-
6	W	-
7	G	-
8	W	-
9	P	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC]
20	W	- [With ICC]
21	BR	- [Without ICC]
21	R	- [With ICC]
22	L	- [Without ICC]
22	R	- [With ICC]
23	G	-
24	L	- [Without ICC]
24	P	- [With ICC]
25	W	- [Without ICC]
25	Y	- [With ICC]
26	SHIELD	-
28	GR	-
29	V	-
30	BG	-
32	W	-

JRLWD6018GB

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

ACTIVE AFS

33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-
54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-
65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	V	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-
91	R	-
92	R	-
93	GR	-

95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	- [With Auto aircon seat]
1	Y	- [Without Auto aircon seat]
2	B	-
3	W	-
6	P	-
7	V	-
8	BG	-
10	W	-
11	BG	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	R	-
21	LG	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	W	-

45	B	-
51	V	-
52	LG	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-
57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	BR	-
62	R	-
63	Y	-
64	L	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	V	-
71	W	-
72	B	-
73	W	-
74	LG	-
75	P	-
76	LG	-
77	SB	-
78	GR	-
79	R	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	W	-
86	Y	-
87	B	-
88	G	-
89	BG	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	R	-
99	BG	-

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	G	-
3	B	-
4	W	-
5	R	-
6	SHIELD	-
7	Y	-
8	GR	-
9	LG	-
10	B	-
11	W	-
13	BG	-
14	G	-
15	B	-
16	W	-
17	R	-
18	SHIELD	-
19	V	-
20	BG	-
21	BR	-
22	R	-
23	SHIELD	-

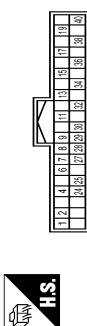
AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

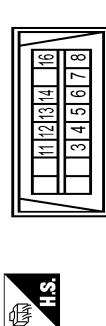
[XENON TYPE]

ACTIVE AFS

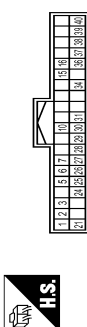
Connector No.	M16
Connector Name	AFS CONTROL UNIT
Connector Type	TH40FW-NH



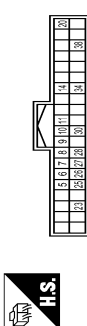
Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



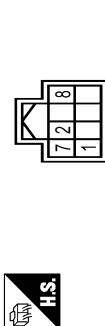
Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y	IGN	
2	LG	PSG-R	
4	Y	PSV-R	
6	W	HSV-R	
7	P	CAN-L	
8	B	HSG-R	
9	GR	PSR	
11	R	SMR-1 (-)	
13	B	SMR-2 (-)	
15	G	SMR-1 (+)	
17	W	SMR-2 (+)	
19	SB	AMDS-R	
24	V	PSV-L	
25	B	GROUND	
27	BR	PSG-L	
28	SB	HSR	
29	BG	PS-L	
30	L	CAN-H	
32	G	SMR-2 (+)	
34	W	SMR-1 (-)	
36	R	SMR-2 (-)	
38	B	SMR-1 (+)	
40	BG	AMDS-L	

Terminal No.	Color	Wire	Signal Name [Specification]
3	LG	-	
4	B	-	
5	B	-	
6	L	-	
7	GR	-	
8	G	-	
11	SB	-	
12	P	-	
14	P	-	
16	BG	-	

Connector No.	M37
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH40FW-NH

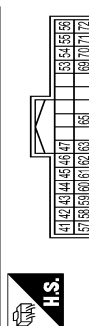


Terminal No.	Color	Wire	Signal Name [Specification]
1	BG	BATTERY POWER SUPPLY	
2	LG	COMMUNICATION SIGNAL (METER->AMP)	
3	GR	COMMUNICATION SIGNAL (AMP->METER)	
5	B	GROUND	
6	W	AIR FURNITURE SIGNAL	
7	P	AIR BAG SIGNAL	
10	G	SECURITY INDICATOR SIGNAL	
15	B	METER CONTROL SWITCH GROUND	
16	B	IGNITION SIGNAL	
21	R	COMMUNICATION SIGNAL (LCD->AMP)	
24	BR	COMMUNICATION SIGNAL (AMP->LCD)	
25	Y	VEHICLE SPEED SIGNAL (8-PULSE)	
26	R	PARKING BRAKE SWITCH SIGNAL	
27	V	VEHICLE SPEED SIGNAL (8-PULSE)	
28	W	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	
29	SB	PASSENGER SEAT BELT WARNING SIGNAL	
30	G	WASHER LEVEL SWITCH SIGNAL	
31	L	ILLUMINATION CONTROL SIGNAL	
34	B	SELECT SWITCH SIGNAL	
36	LG	ENTER SWITCH SIGNAL	
37	SB	TRIP A/B RESET SWITCH SIGNAL	
38	L	ILLUMINATION CONTROL SWITCH SIGNAL (-)	
39	P	ILLUMINATION CONTROL SWITCH SIGNAL (+)	
40	BG		



Terminal No.	Color	Wire	Signal Name [Specification]
1	L	CAN-H	
2	P	CAN-L	
7	B	GROUND	
8	GR	IGN	

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
41	V	ACC POWER SUPPLY	
42	Y	FUEL LEVEL SENSOR SIGNAL	
43	R	INTAKE SENSOR SIGNAL	

JRLWD6020GB

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

ACTIVE AFS

Connector No.	Terminal No.	Signal Name [Specification]
M151	44	LG IN-VEHICLE SENSOR SIGNAL
	45	P AMBIENT SENSOR SIGNAL
	46	BG SUNLOAD SENSOR SIGNAL
	47	V GAS SENSOR SIGNAL
	53	G IGNITION POWER SUPPLY
	54	BG BATTERY POWER SUPPLY
	55	B GROUND
	56	L CANH
	57	W BRAKE FLUID LEVEL SWITCH SIGNAL
	58	B FUEL LEVEL SENSOR SIGNAL
	59	GR INTAKE SENSOR GROUND
	60	L IN-VEHICLE SENSOR GROUND
	61	BR AMBIENT SENSOR GROUND
	62	SB SUNLOAD SENSOR GROUND
	63	R IGNITION SIGNAL
	65	BG ECU SIGNAL
M152	69	L A/C LAMP SIGNAL
	70	R EACH DOOR MOTOR POWER SUPPLY
	71	B GROUND
	72	P CANL



HS

Connector No.	Terminal No.	Signal Name [Specification]
M151	1	WIRE TO WIRE
	2	WIRE TO WIRE



HS

Terminal No.	Color	Wire	Signal Name [Specification]
1	W	-	-
2	Y	-	-
3	R	-	-

Connector No.	Terminal No.	Signal Name [Specification]
M152	1	WIRE TO WIRE
	2	WIRE TO WIRE

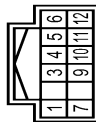


HS

Connector No.	Terminal No.	Signal Name [Specification]
M125	1	CAN GATEWAY
	2	CAN GATEWAY



HS

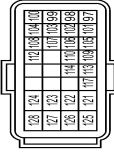


Terminal No.	Color	Wire	Signal Name [Specification]
1	L	-	CANH
3	GR	-	BATTERY
4	L	-	CANH
5	B	-	GROUND
6	L	-	CANH
7	P	-	CANL
9	LG	-	IGNITION
10	P	-	CANL
11	B	-	GROUND
12	P	-	CANL

Connector No.	Terminal No.	Signal Name [Specification]
M164	1	ECM
	2	ECM



HS



Terminal No.	Color	Wire	Signal Name [Specification]
97	R	-	ACCELERATOR PEDAL POSITION SENSOR 1
98	P	-	ACCELERATOR PEDAL POSITION SENSOR 2 (WITH NAVI)
99	Y	-	ACCELERATOR PEDAL POSITION SENSOR 3 (WITH NAVI)
100	G	-	SENSOR POWER SUPPLY (WITH NAVI)
101	L	-	SENSOR POWER SUPPLY (Without NAVI)
102	W	-	SENSOR GROUND
103	SB	-	ASC/DC STEERING SWITCH
104	LG	-	EVAP CONTROL SYSTEM PRESSURE SENSOR
105	G	-	SENSOR POWER SUPPLY (Without NAVI)
106	L	-	SENSOR POWER SUPPLY (With NAVI)
107	GR	-	SENSOR GROUND (Without NAVI)
108	BR	-	REFRIGERANT PRESSURE SENSOR
109	W	-	FUEL TANK TEMPERATURE SENSOR
110	BG	-	SENSOR POWER SUPPLY
111	V	-	SENSOR GROUND
112	G	-	PNP SIGNAL
113	R	-	ENGINE SPEED OUTPUT SIGNAL
114	V	-	ENGINE SPEED OUTPUT SIGNAL
115	W	-	ENGINE SPEED OUTPUT SIGNAL
116	P	-	ENGINE SPEED OUTPUT SIGNAL
117	P	-	CAN COMMUNICATION LINE
118	L	-	CAN COMMUNICATION LINE
119	GR	-	DATA LINK CONNECTOR
120	LG	-	EVAP CANISTER VENT CONTROL VALVE
121	P	-	STOP LAMP SWITCH
122	B	-	ECM GROUND
123	B	-	ECM GROUND
124	GR	-	POWER SUPPLY FOR ECM
125	BR	-	ASC/DC BRAKE SWITCH
126	B	-	ECM GROUND
127	B	-	ECM GROUND
128	B	-	ECM GROUND

JRLWD6021GB

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Fail-Safe

INFOID:000000010576367

DTC	Fail-safe	AFS OFF indicator lamp	Cancellation
CAN COMM CIRCUIT [U1000]	- Right and left swivel motors stop at the position when DTC is detected. - Right and left aiming motors stop at the position when DTC is detected.	Blinks 1 second each.	Ignition switch OFF
CONTROL UNIT (CAN) [U1010]	- Right and left swivel motors stop at the position when DTC is detected. - Right and left aiming motors stop at the position when DTC is detected.	Blinks 1 second each.	Ignition switch OFF
SWIVEL ACTUATOR [RH, LH] [B2503, B2504]	- Right and left swivel motors stop at the position when DTC is detected. - The signal, approximately 2 V decreased from the levelizer signal when DTC detected, is output.	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]	- Right and left swivel motor swivel angle returns to 0° and fixed. - Right and left aiming motors stop at the position when DTC is detected.	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 completed
ECU CIRC [B2521]	- Right and left swivel motors stop at the position when DTC is detected. - Right and left aiming motors stop at the position when DTC is detected.	Blinks 1 second each.	Ignition switch OFF

DTC Inspection Priority Chart

INFOID:000000010576368

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

AFS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

DTC Index

INFOID:0000000010576369

×: Applicable

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

A
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K
EXL
M
N
O
P

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000010576370

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 does not switch to the high beam.	One side	- Fuse - Harness between IPDM E/R and the front combination lamp - Front combination lamp (High beam solenoid) - IPDM E/R	Headlamp (HI) circuit Refer to EXL-67 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-212 .	
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		- Combination meter - Unified meter and A/C amp.	- Unified meter and A/C amp. Data monitor "HI-BEAM IND" - BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	Front combination lamp (High beam solenoid)	—
	Both sides	- Combination switch - Harness between the combination switch and BCM - BCM	Combination switch Refer to BCS-90 .
		High beam request signal	IPDM E/R Data monitor "HL HI REQ"
		IPDM E/R	—
Headlamp is not turned ON.	One side	- Fuse - Xenon bulb - Harness between IPDM E/R and the front combination lamp - Front combination lamp (xenon headlamp) - IPDM E/R	Headlamp (LO) circuit Refer to EXL-70 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-213 .	
Headlamp is not turned OFF.	When the ignition switch is turned ON		
	The ignition switch is turned OFF (After activating the battery saver.)	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-90 .
		- Optical sensor - Harness between the optical sensor and BCM - BCM	Optical sensor Refer to EXL-84 .

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

Symptom		Possible cause	Inspection item
Front fog lamp is not turned ON.	One side	- Front fog lamp bulb - Harness between IPDM E/R and the front fog lamp - IPDM E/R	Front fog lamp circuit Refer to EXL-76 .
	Both side	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-215 .	
Front fog lamp is not turned ON.			
Front fog lamp indicator lamp is not turned ON. (Front fog lamp is turned ON.)		- Combination meter - Unified meter and A/C amp.	- Unified meter and A/C amp. Data monitor "FR FOG IND" - BCM (HEAD LAMP) Active test "FR FOG LAMP"
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-78 .
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-89 .
License plate lamp is not turned ON.		- Harness between IPDM E/R and the license plate lamp - License plate lamp	License plate lamp circuit Refer to EXL-91 .
Tail lamp and license plate lamp are not turned ON.		- Fuse - Harness between IPDM E/R and the rear combination lamp - IPDM E/R	Tail lamp circuit Refer to EXL-89 .
- Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned ON. - Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned OFF. (Each illumination is turned ON/OFF.)		Symptom diagnosis "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-214 .	
Tail lamp indicator lamp is not turned ON. (Parking and tail lamps are turned ON.)		- Combination meter - Unified meter and A/C amp.	- Unified meter and A/C amp. Data monitor "LIGHT IND" - BCM (HEAD LAMP) Active test "TAIL LAMP"
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-81 .
	Indicator lamp is included	- Combination switch - Harness between the combination switch and BCM - BCM	Combination switch Refer to BCS-90 .
Turn signal indicator lamp does not blink. (The turn signal indicator lamp is normal.)	One side	Combination meter	—
	Both sides (Always)	- Turn signal indicator lamp signal - Unified meter and A/C amp. - BCM - Combination meter	- Unified meter and A/C amp. Data monitor "TURN IND" - BCM (FLASHER) Active test "FLASHER"
	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-58 .

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

Symptom	Possible cause	Inspection item
• Hazard warning lamp does not activate. • Hazard warning lamp continues activating. (Turn signal is normal.)	• Hazard switch • Harness between the hazard switch and BCM • BCM	Hazard switch Refer to EXL-87 .
Headlamp auto aiming does not activate. (AFS is normal.)	• Harness between AFS control unit and aiming motor • Front combination lamp (Aiming motor) • AFS control unit	Headlamp levelizer circuit Refer to EXL-74 .
AFS OFF indicator lamp is not turned ON.	• AFS OFF indicator lamp signal - Unified meter and A/C amp. - AFS control unit • Combination meter	Unified meter and A/C amp. Data monitor "AFS OFF IND"

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

NORMAL OPERATING CONDITION

Description

INFOID:0000000010576371

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 DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:0000000010576372

The headlamp (both sides) does not switch to the high beam when setting to the lighting switch HI or PASS.

Diagnosis Procedure

INFOID:0000000010576373

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-90, "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

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 (2ND)	HI or PASS	On
		Except for HI or PASS	Off

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM.

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to [EXL-67](#).

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

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000010576374

The headlamps (both sides) are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000010576375

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-90. "Symptom Table"](#).

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

 CONSULT DATA MONITOR

1. Select "HL LO REQ" of IPDM E/R data monitor item.

2. With operating the lighting switch, check the monitor status.

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

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM.

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to [EXL-70](#).

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

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EXL

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:0000000010576376

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

Diagnosis Procedure

INFOID:0000000010576377

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-90, "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

CONSULT 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-89](#).

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 >

[XENON TYPE]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000010576378

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

Diagnosis Procedure

INFOID:0000000010576379

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-90, "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

 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 (Lighting switch 2ND)	ON On
		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-76](#).

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000010576380

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:

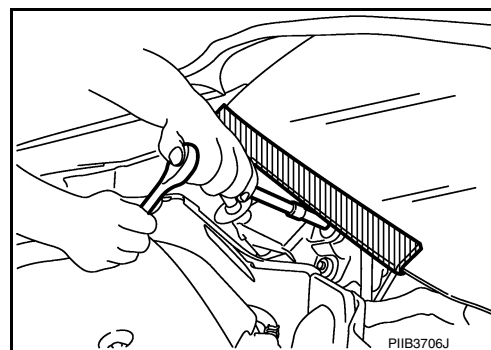
Always observe the following items for preventing accidental activation.

- 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.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000011008273

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



Precautions For Xenon Headlamp Service

INFOID:0000000010576381

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.

PRECAUTIONS

< PRECAUTION >

[XENON TYPE]

(Turning it ON outside the lamp case may cause fire or visual impairments.)

- Never touch the bulb glass immediately after turning it OFF. It is extremely hot.

CAUTION:

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

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

Precautions for Removing Battery Terminal

INFOID:000000010755187

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

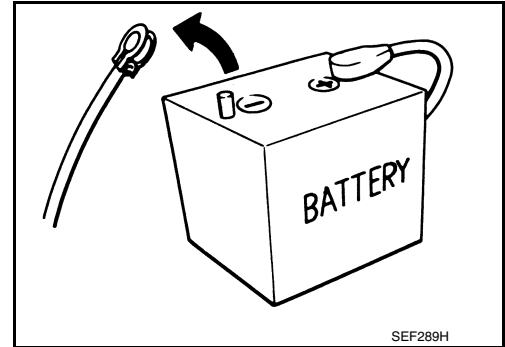
NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.



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PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description

INFOID:0000000010576382

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 luggage room.)

NOTE:

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

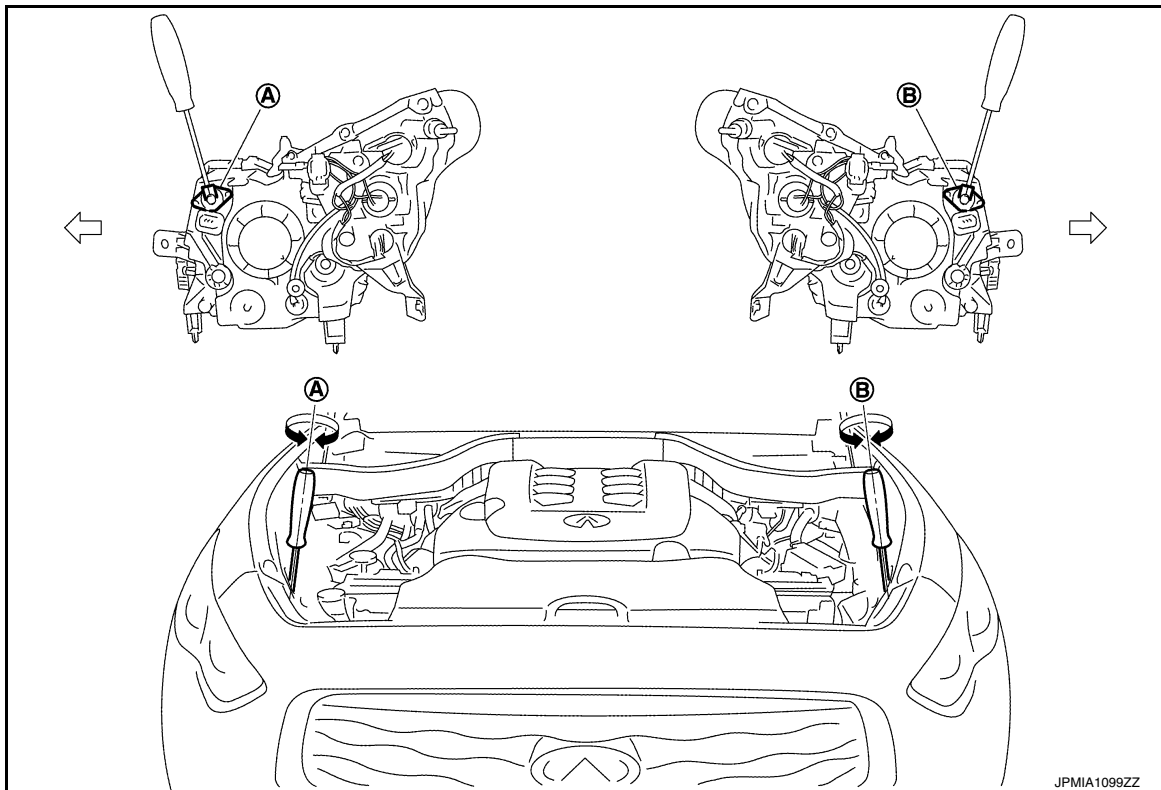
- Wipe out dirt on the headlamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

- Ride alone on the driver seat.
- Headlamp aiming switch sets to "0". (with manual headlamp aiming control system.)

AIMING ADJUSTMENT SCREW



A 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.

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

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

Aiming Adjustment Procedure

INFOID:0000000010576383

- Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.

- Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the headlamp center and the screen.

- Start the engine. Turn the headlamp (LO) ON.

NOTE:

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

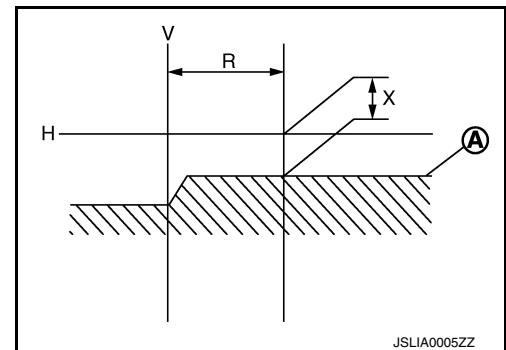
CAUTION:

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

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

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

Low beam distribution on the screen

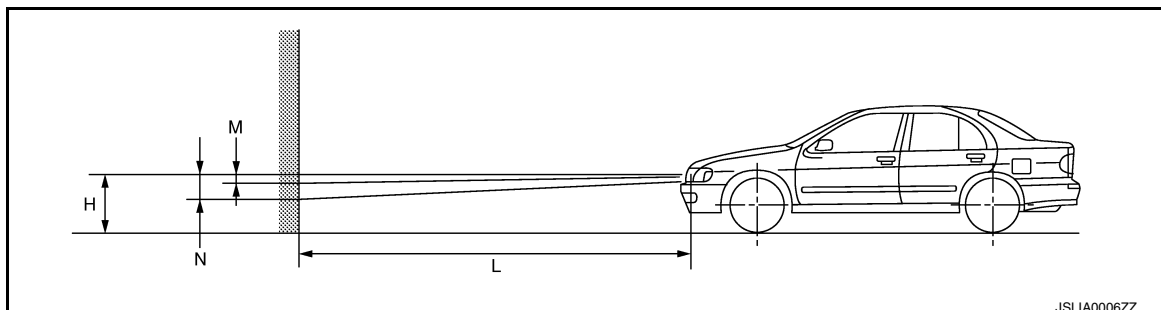


- Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

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]

FRONT FOG LAMP AIMING ADJUSTMENT

Description

INFOID:0000000010576384

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 luggage room.)

NOTE:

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

- Wipe out dirt on the headlamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

- Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment.

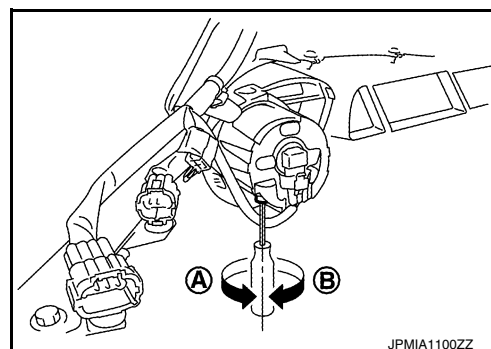
A: UP

B: DOWN

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

NOTE:

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



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Aiming Adjustment Procedure

INFOID:0000000010576385

1. Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.

2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.
3. Start the engine. Turn the front fog lamp ON.

NOTE:

Shut off the front fog lamp 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.

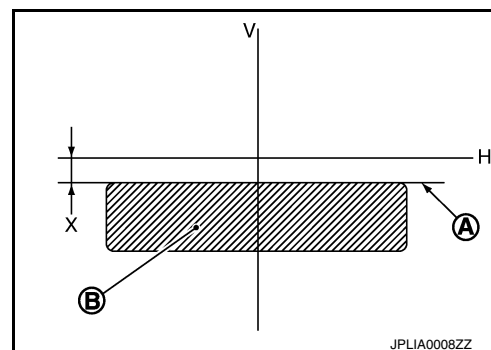
4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 200 mm (7.87 in).

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 lamp
- V : Vertical center line of front fog lamp
- X : Cutoff line height

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

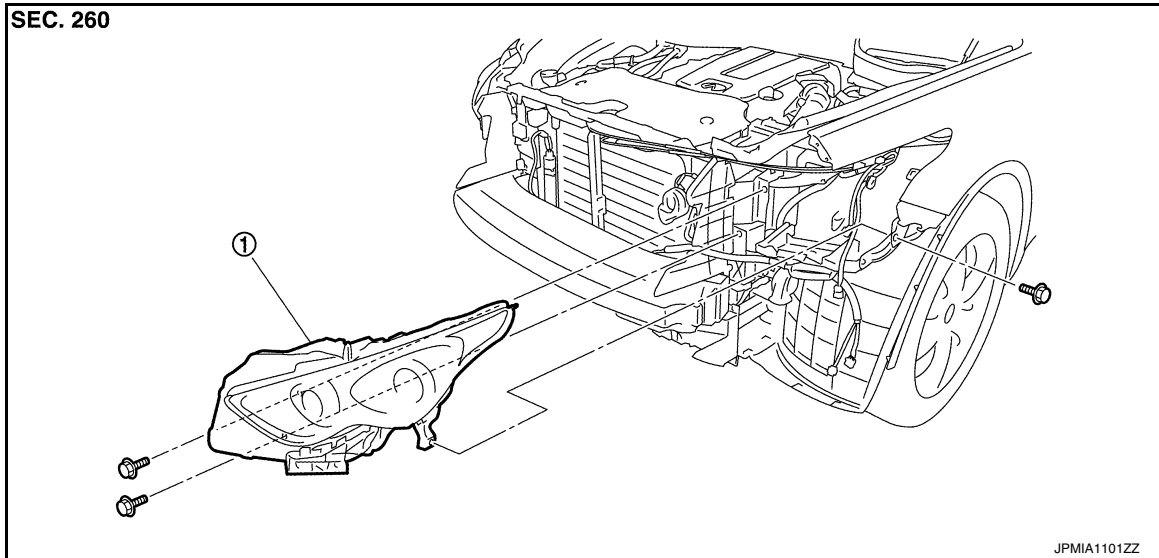
REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000010576386

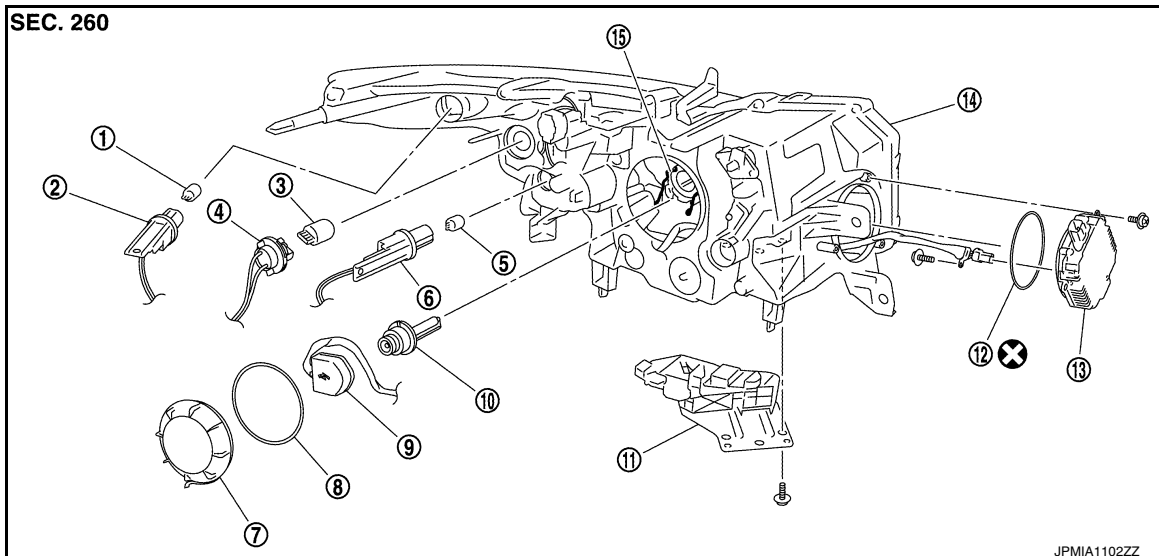
REMOVAL



1. Front combination lamp

DISASSEMBLY

Without AFS



- | | | |
|---------------------------------------|---------------------------------------|--------------------------------|
| 1. Front side marker lamp bulb | 2. Front side marker lamp bulb socket | 3. Front turn signal lamp bulb |
| 4. Front turn signal lamp bulb socket | 5. Parking lamp bulb | 6. Parking lamp bulb socket |
| 7. Resin cap | 8. Seal packing | 9. Xenon bulb socket |
| 10. Xenon bulb | 11. Bumper bracket | 12. Seal packing |
| 13. HID control unit | 14. Headlamp housing assembly | 15. Retaining spring |

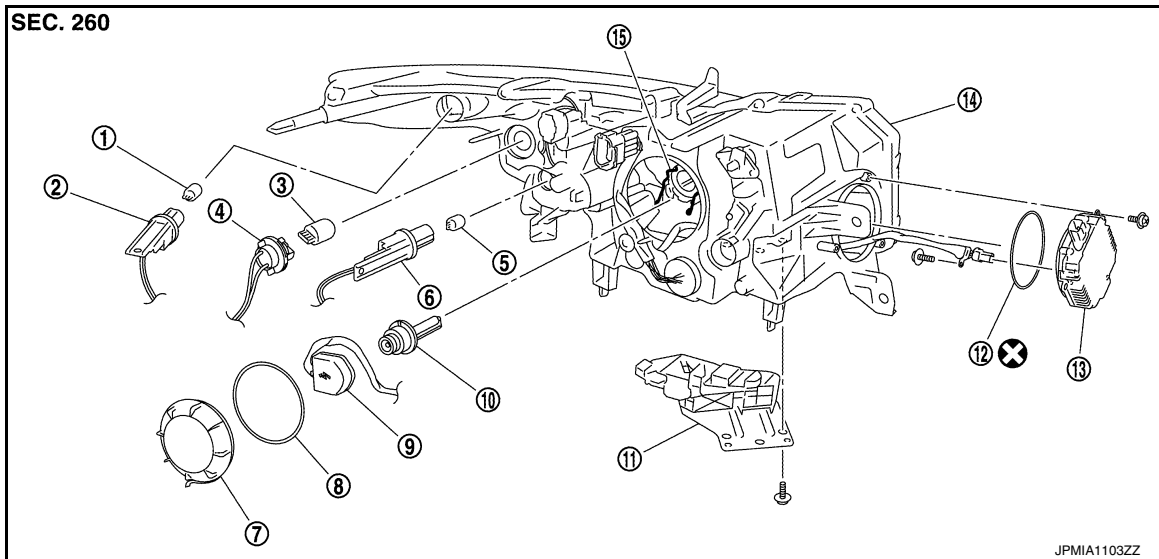
⊗ : Always replace after every disassembly.

With AFS

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]



- | | | |
|---------------------------------------|---------------------------------------|--------------------------------|
| 1. Front side marker lamp bulb | 2. Front side marker lamp bulb socket | 3. Front turn signal lamp bulb |
| 4. Front turn signal lamp bulb socket | 5. Parking lamp bulb | 6. Parking lamp bulb socket |
| 7. Resin cap | 8. Seal packing | 9. Xenon bulb socket |
| 10. Xenon bulb | 11. Bumper bracket | 12. Seal packing |
| 13. HID control unit | 14. Headlamp housing assembly | 15. Retaining spring |

⊗ : Always replace after every disassembly.

Removal and Installation

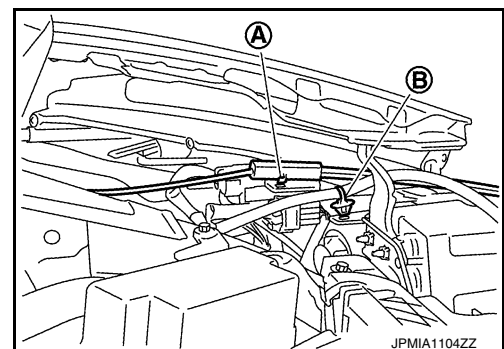
INFOID:0000000010576387

REMOVAL

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

- Remove the front bumper fascia. Refer to [EXT-12, "Exploded View"](#).
- Remove the headlamp mounting bolts.
- Remove the holding clip (A)* and the harness clip (B).
*: Left side only
- Pull out the headlamp assembly forward the vehicle.
- 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-218, "Description"](#).

Replacement

INFOID:0000000010576388

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.

FRONT COMBINATION LAMP

[XENON TYPE]

< REMOVAL AND INSTALLATION >

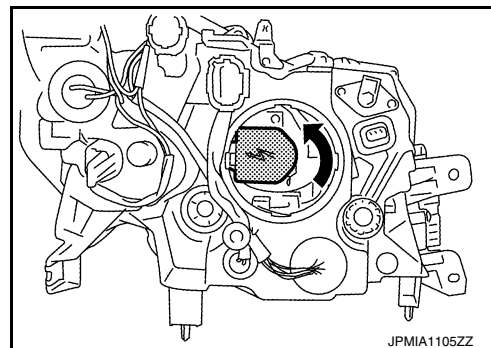
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

HEADLAMP BULB

1. Remove the engine room cover*. Refer to [EM-184, "Exploded View"](#).
* : VK Engine Models
2. Remove the fender rubber protector. Keep a service area.
3. Rotate the resin cap counterclockwise and unlock it.
4. Rotate the bulb socket counterclockwise and unlock it.
5. Remove the retaining spring lock. Remove the bulb from the headlamp.

CAUTION:

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



PARKING LAMP BULB

1. Remove the engine room cover*. Refer to [EM-184, "Exploded View"](#).
* : VK Engine Models
2. Remove the fender rubber protector. Keep a service area.
3. Rotate the bulb socket counterclockwise and unlock it.
4. Remove the bulb from the bulb socket.

FRONT TURN SIGNAL LAMP BULB

1. Remove the engine room cover*. Refer to [EM-184, "Exploded View"](#).
* : VK Engine Models
2. Remove the fender rubber protector. Keep a service area.
3. Rotate the bulb socket counterclockwise and unlock it.
4. Remove the bulb from the bulb socket.

FRONT SIDE MARKER LAMP BULB

1. Remove the engine room cover*. Refer to [EM-184, "Exploded View"](#).
* : VK Engine Models
2. Remove the fender rubber protector. Keep a service area.
3. Rotate the bulb socket counterclockwise and unlock it.
4. Remove the bulb from the bulb socket.

Disassembly and Assembly

INFOID:0000000010576389

DISASSEMBLY

1. Rotate the resin cap counterclockwise and unlock it.
2. Rotate the xenon bulb socket counterclockwise and unlock it.
3. Remove the retaining spring lock. Remove the xenon bulb.
4. Remove the bumper bracket.
5. Remove the HID control unit installation screw.
6. Remove the screw. Disconnect the connector from HID control unit.
7. Pull out the xenon bulb socket from the headlamp housing assembly.
8. Rotate the parking lamp bulb socket counterclockwise and unlock it.
9. Remove the bulb from the parking lamp bulb socket.
10. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
11. Remove the bulb from the front turn signal lamp bulb socket.

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

12. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.
13. Remove the bulb from the front side marker lamp bulb socket.

ASSEMBLY

Assemble in the reverse order of disassembly.

CAUTION:

- Install HID control unit securely.
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.

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FRONT FOG LAMP

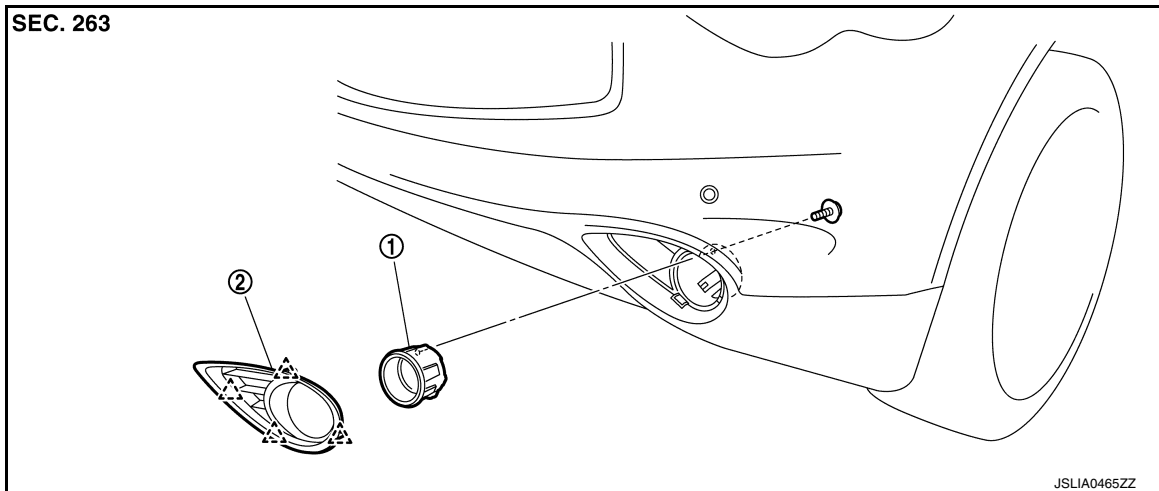
< REMOVAL AND INSTALLATION >

[XENON TYPE]

FRONT FOG LAMP

Exploded View

INFOID:0000000010576390



1. Front fog lamp
2. Front fog lamp finisher

△ : Pawl

Removal and Installation

INFOID:0000000010576391

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the front fender protector. Keep a service area. Refer to [EXT-25, "FENDER PROTECTOR : Exploded View"](#).
2. Remove the front fog lamp connector.
3. Remove the screw.
4. Disengage the pawl. And then remove the front fog lamp.

INSTALLATION

Install in the reverse order of removal.

NOTE:

After installation, perform aiming adjustment. Refer to [EXL-220, "Description"](#).

Replacement

INFOID:0000000010576392

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

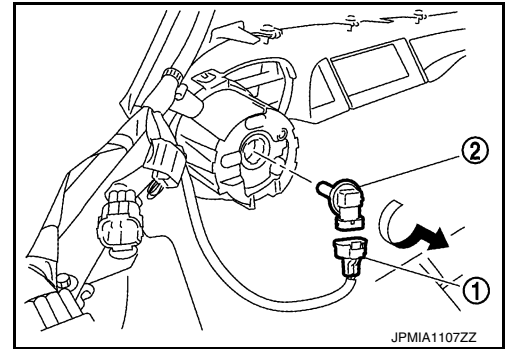
1. Remove the front fender protector. Keep a service area. Refer to [EXT-25, "FENDER PROTECTOR : Exploded View"](#).

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.

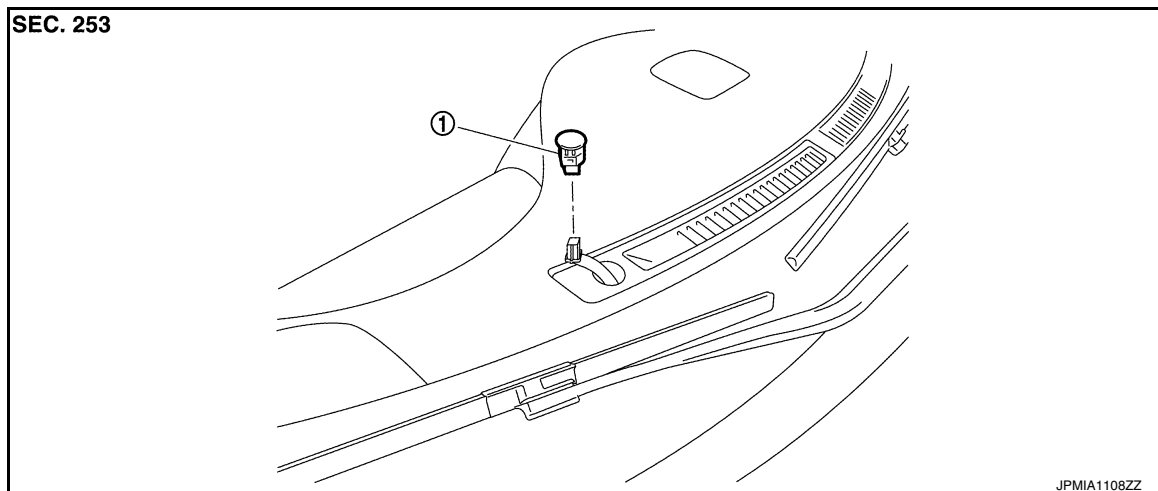


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OPTICAL SENSOR

Exploded View

INFOID:0000000010576393



1. Optical sensor

Removal and Installation

INFOID:0000000010576394

REMOVAL

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

INSTALLATION

Install in the reverse order of removal.

LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[XENON TYPE]

LIGHTING & TURN SIGNAL SWITCH

Exploded View

INFOID:0000000010576395

The lighting & turn signal switch is integrated in the combination switch. [BCS-94, "Exploded View"](#).

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HEADLAMP AIMING SWITCH

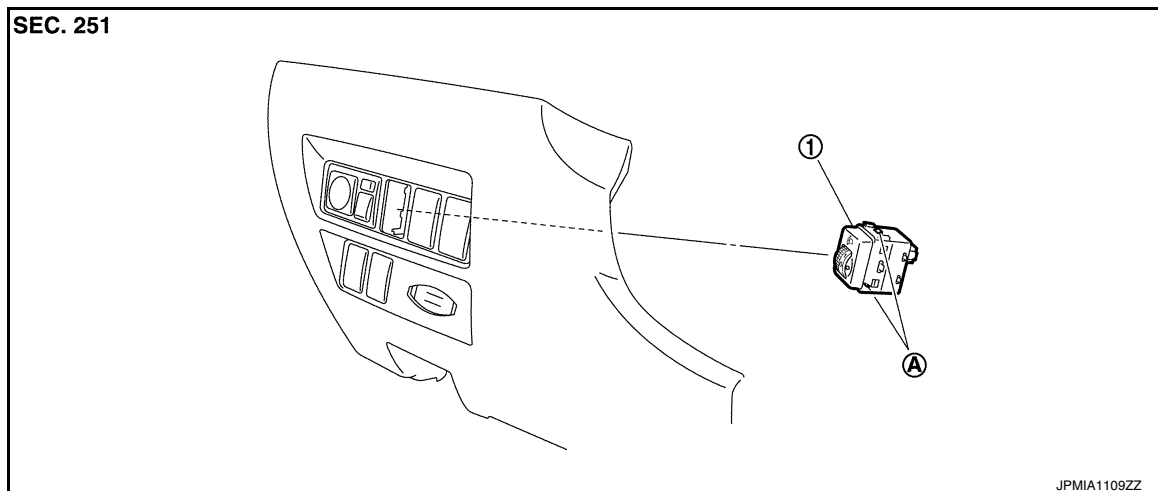
< REMOVAL AND INSTALLATION >

[XENON TYPE]

HEADLAMP AIMING SWITCH

Exploded View

INFOID:0000000010576396



- 1. Headlamp aiming switch
- A. Pawls

Removal and Installation

INFOID:0000000010576397

REMOVAL

1. Remove the instrument driver lower panel. Refer to [IP-12, "Exploded View"](#).
2. Disengage the pawls. And then remove the headlamp aiming switch.

INSTALLATION

Install in the reverse order of removal.

HAZARD SWITCH

Exploded View

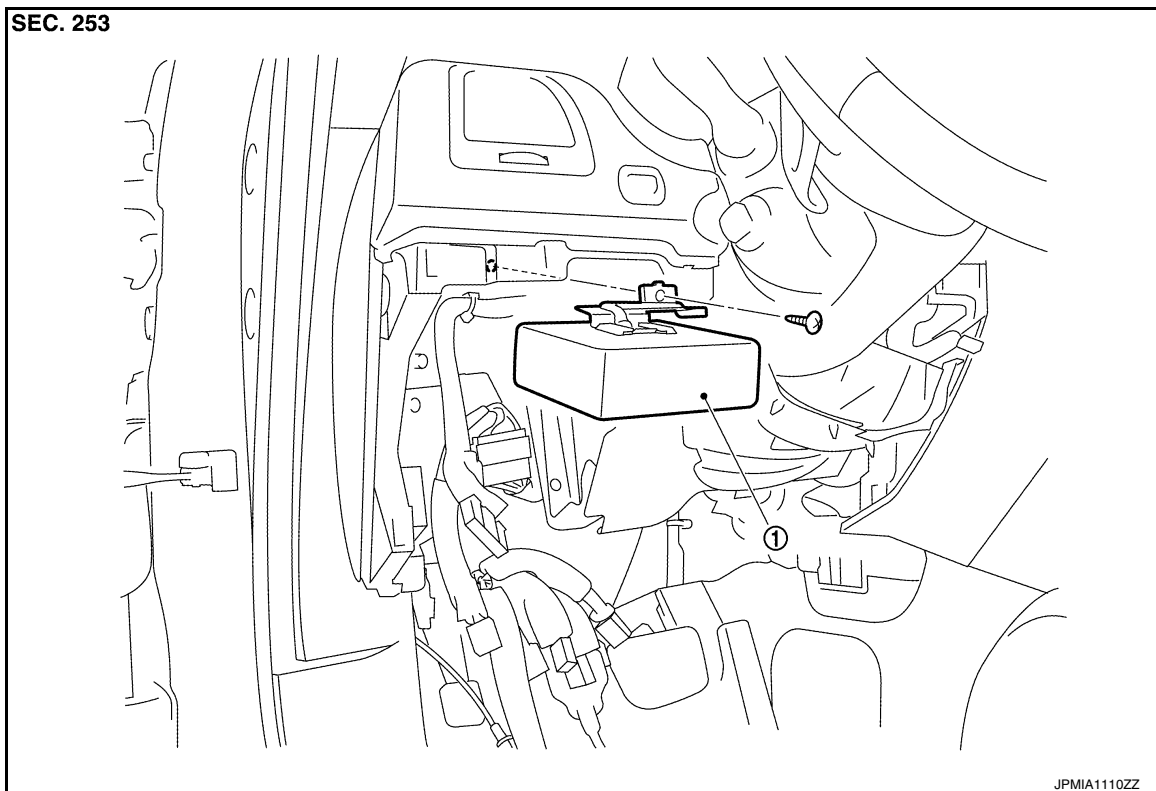
INFOID:0000000010576398

The hazard switch is integrated in the multifunction switch. Refer to [AV-142, "Exploded View"](#).

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AFS CONTROL UNIT**Exploded View**

INFOID:0000000010576399



1. AFS control unit

Removal and Installation

INFOID:0000000010576400

REMOVAL

1. Remove the instrument driver lower panel. 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.

STEERING ANGLE SENSOR

Removal and Installation

INFOID:0000000010576401

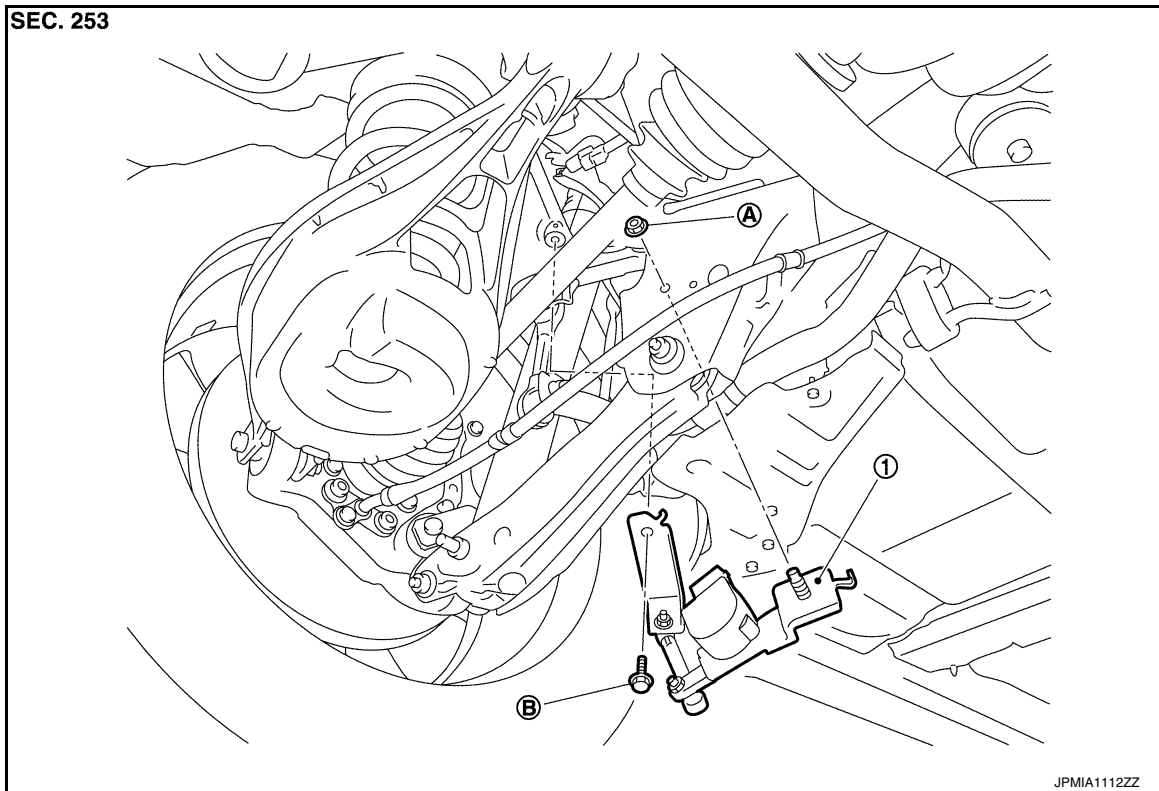
Refer to [SR-14. "Removal and Installation"](#).

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HEIGHT SENSOR

Exploded View

INFOID:0000000010576402



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

Removal and Installation

INFOID:0000000010576403

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 [EXL-8. "LEVELIZER ADJUSTMENT : Special Repair Requirement"](#).

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

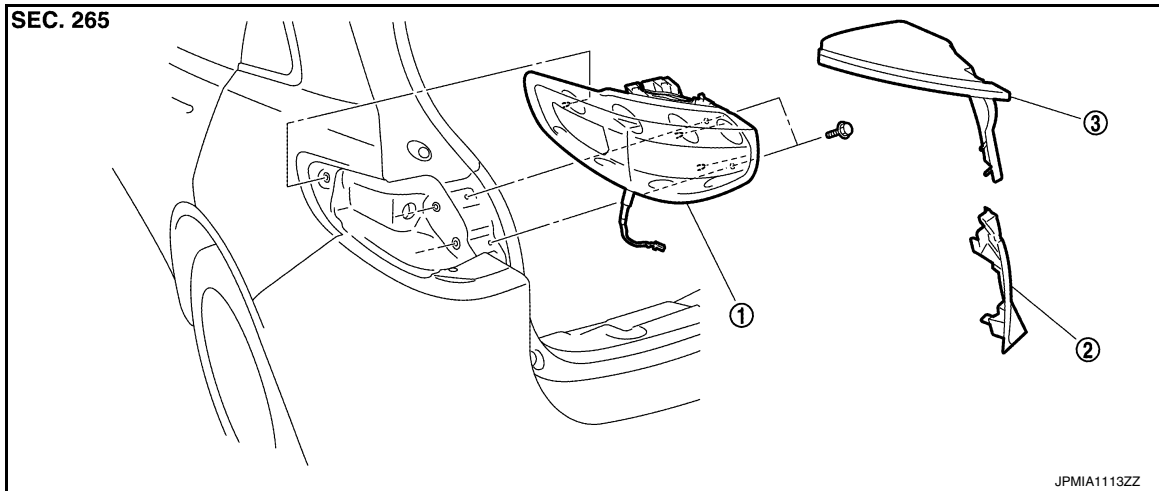
[XENON TYPE]

REAR COMBINATION LAMP

Exploded View

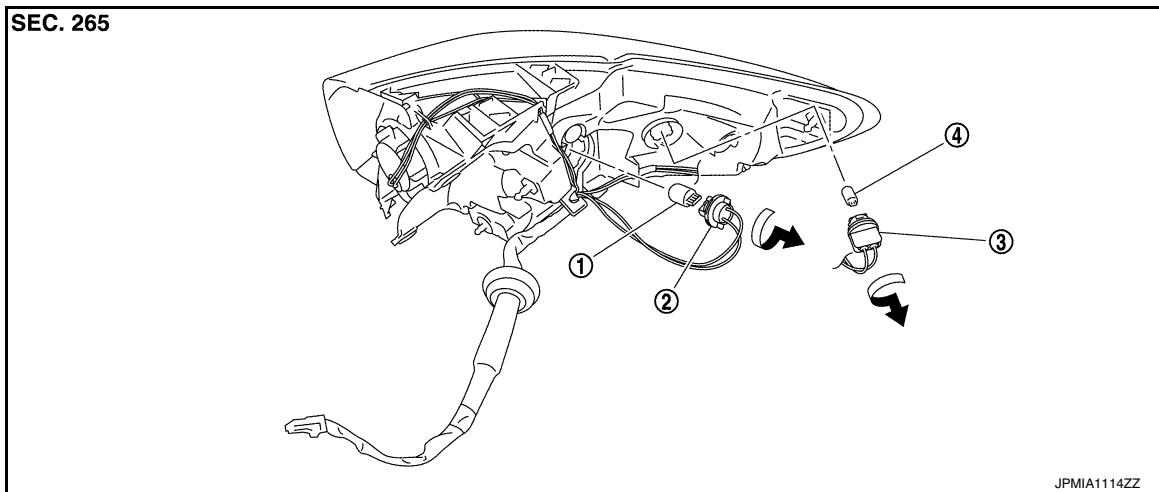
INFOID:0000000010576404

REMOVAL



1. Rear combination lamp 2. Rear combination lamp lower finisher 3. Rear combination lamp upper finisher

DISASSEMBLY



1. Rear turn signal lamp bulb 2. Rear turn signal lamp bulb socket 3. Rear side marker lamp bulb socket
4. Rear side marker lamp bulb

Removal and Installation

INFOID:0000000010576405

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the rear combination lamp lower and upper finisher.
2. Remove the rear combination lamp mounting bolts.
3. Disconnect the rear combination lamp connector.
4. Pull the rear combination lamp toward outside of the vehicle. Remove the rear combination lamp.

INSTALLATION

Install in the reverse order of removal.

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

Replacement

INFOID:0000000010576406

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.

STOP/TAIL LAMP

Replacement integral with rear combination lamp assembly. Refer to [EXL-235, "Exploded View"](#).

REAR SIDE MARKER LAMP BULB

1. Remove the rear combination lamp. Refer to [EXL-235, "Exploded View"](#).
2. Rotate the rear side marker lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the rear side marker lamp bulb socket.

REAR TURN SIGNAL LAMP BULB

1. Remove the rear combination lamp. Refer to [EXL-235, "Exploded View"](#).
2. Rotate the rear turn signal lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the rear turn signal lamp bulb socket.

HIGH-MOUNTED STOP LAMP

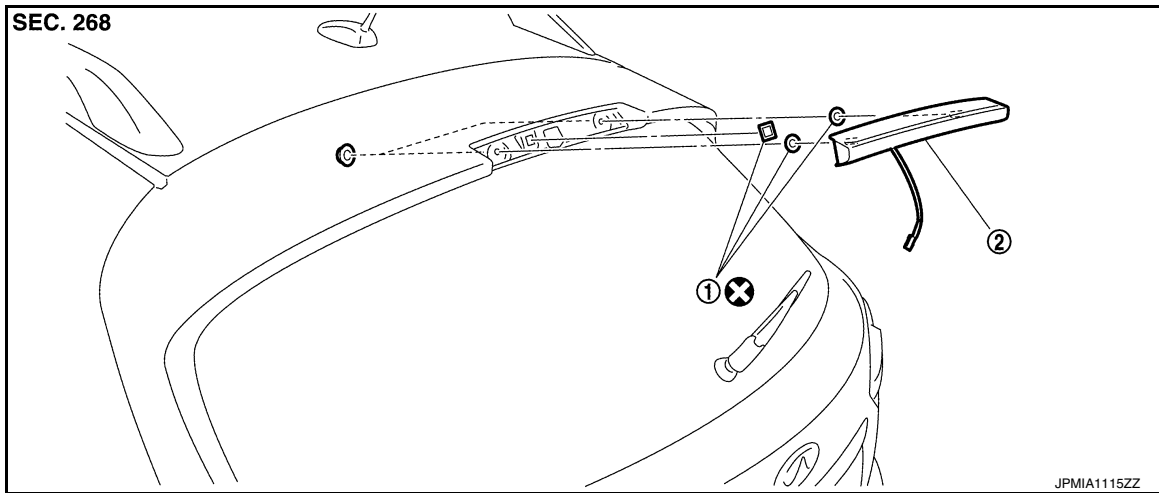
< REMOVAL AND INSTALLATION >

[XENON TYPE]

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:000000010576407



1. Seal packing
2. High-mounted stop lamp

⊗ : Always replace after every disassembly.

Removal and Installation

INFOID:000000010576408

REMOVAL

1. Remove the back door plate. Refer to [INT-34, "Exploded View"](#).
2. Remove the high-mounted stop lamp mounting nuts.
3. Disconnect the high-mounted stop lamp connector.
4. Pull the high-mounted stop lamp toward rear of the vehicle. Remove the high-mounted stop lamp.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Seal packing cannot be reused.

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BACK-UP LAMP

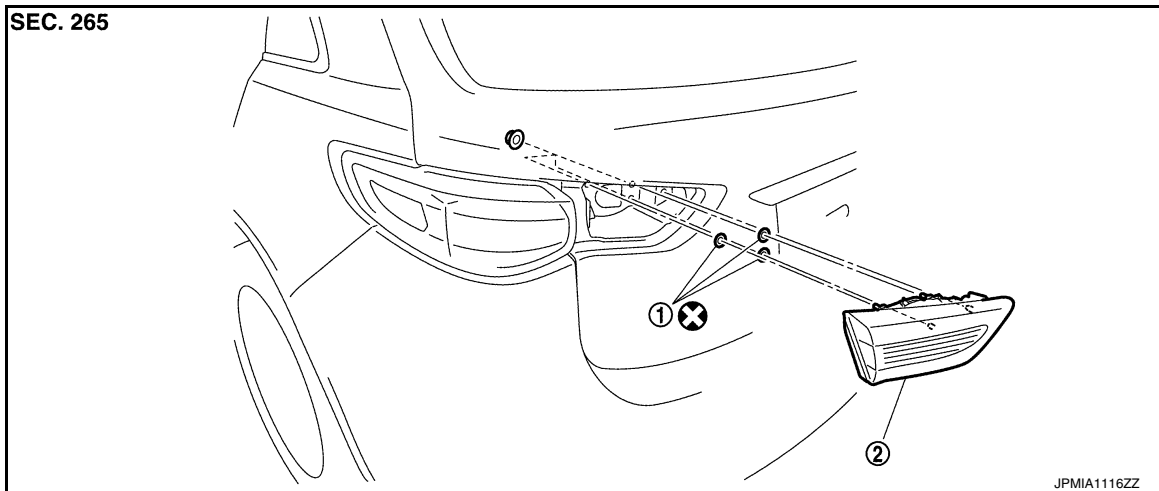
< REMOVAL AND INSTALLATION >

[XENON TYPE]

BACK-UP LAMP

Exploded View

INFOID:0000000010576409



1. Seal packing 2. Back-up lamp

⊗ : Always replace after every disassembly.

Removal and Installation

INFOID:0000000010576410

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the back door finisher inner. Refer to [INT-34, "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:

Seal packing cannot be reused.

Replacement

INFOID:0000000010576411

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

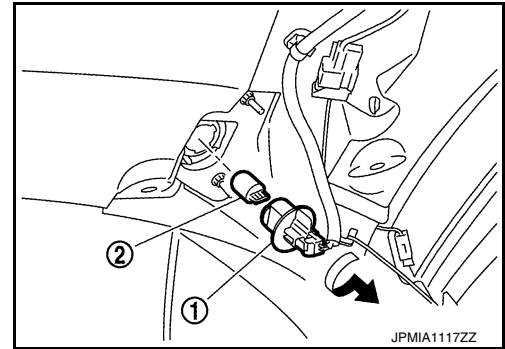
1. Remove the back door finisher inner. Refer to [INT-34, "Exploded View"](#).

BACK-UP LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

2. Rotate the bulb socket (1) counterclockwise and unlock it.
3. Remove the bulb (2) from the socket.



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LICENSE PLATE LAMP

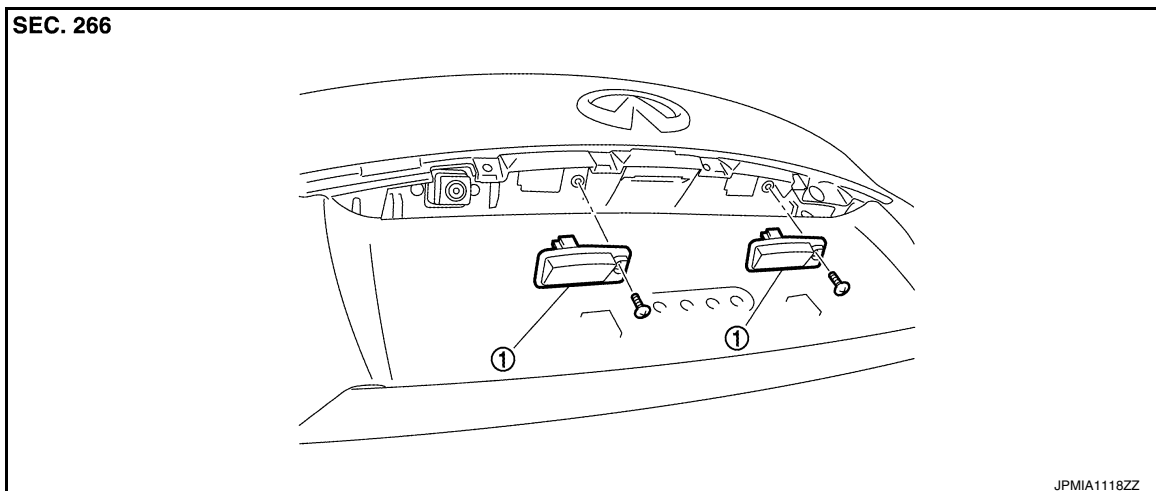
< REMOVAL AND INSTALLATION >

[XENON TYPE]

LICENSE PLATE LAMP

Exploded View

INFOID:0000000010576412



1. License plate lamp

Removal and Installation

INFOID:0000000010576413

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the door handle cover. Refer to [EXT-50, "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

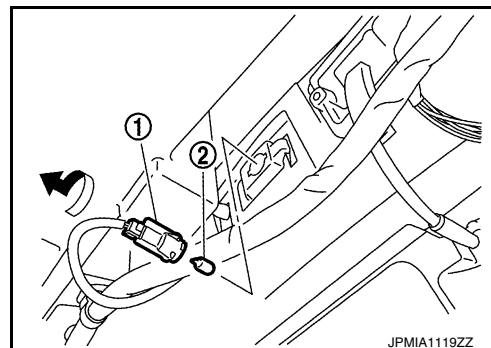
INFOID:0000000010576414

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 [INT-34, "Exploded View"](#).
2. Rotate 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]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000010576415

Item		Type	Wattage (W)
Front combination lamp	Headlamp (HI/LO)	D2S (Xenon)	35
	Front turn signal lamp	WY21W (Amber)	21
	Parking lamp	W5W	5
	Front side marker lamp	W5W	5
Front fog lamp		H8	35
Rear combination lamp	Stop lamp/Tail lamp	LED	—
	Rear turn signal lamp	W21W	21
	Rear side marker lamp	W5W	5
Back-up lamp		W21W	21
License plate lamp		W5W	5
High-mounted stop lamp		LED	—

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