SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

XENON TYPE

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007565395

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.**

Service Procedure Precautions for Models with a Pop-up Roll Bar

INFOID:0000000007565396

WARNING:

Always observe the following items for preventing accidental activation.

- **Risk of passenger injury or death may increase if the pop-up roll bar does not deploy during a roll over collision. In order to reduce the chance of an incident where the pop-up roll bar is inoperative, all maintenance must be performed by a NISSAN or INFINITI dealer.**
- **Before removing and installing the pop-up roll bar component parts and harness, always turn the ignition switch OFF, disconnect the battery negative terminal, and wait for 3 minutes or more. (The purpose of this operation is to discharge electricity that is accumulated in the auxiliary power supply circuit in the air bag diagnosis sensor unit.)**
- **When repairing, removing, and installing a pop-up roll bar, always refer to SRS AIR BAG and SRS AIR BAG CONTROL warnings in the Service Manual.**

Precaution for Battery Service

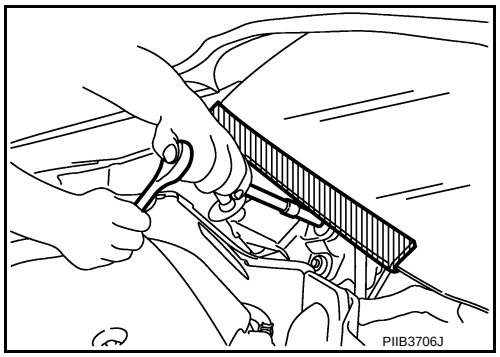
INFOID:0000000007565397

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

Precaution for Procedure without Cowl Top Cover

INFOID:0000000007565398

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:0000000007565399

WARNING:

Comply with the following warnings to prevent any serious accident.

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

CAUTION:

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

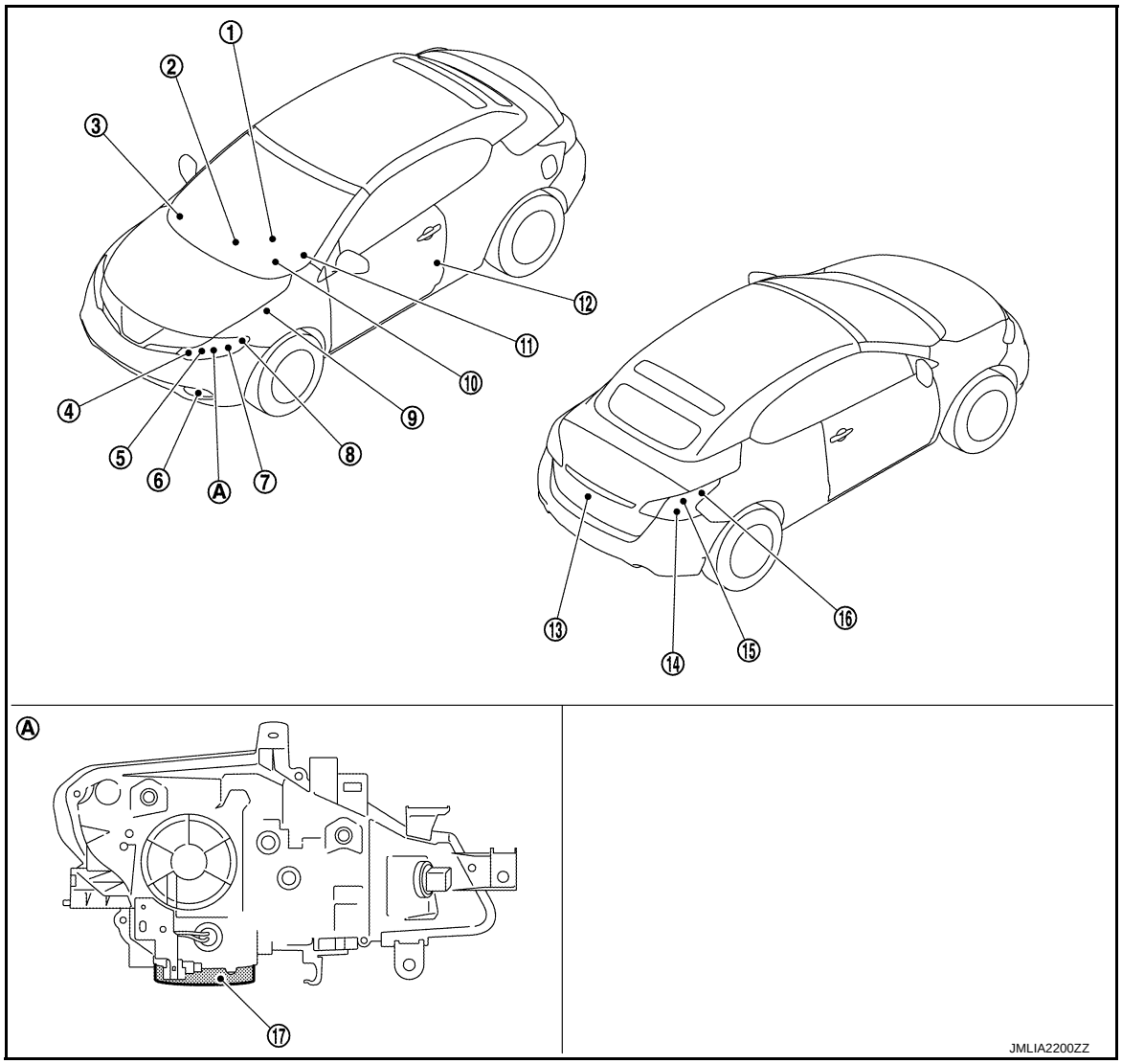
- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and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

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000007565400



1. Combination meter
2. Hazard switch
3. Optical sensor
4. Front turn signal lamp
5. Parking lamp
6. Front fog lamp
7. Headlamp
8. Front side marker lamp
9. IPDM E/R
   Refer to PCS-4, "Component Parts Location"
10. BCM
    Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"
11. Combination switch
12. Front door switch (driver side)
13. License plate lamp
14. Tail lamp
15. Rear turn signal lamp
16. Rear side marker lamp
17. HID control unit

A. Front combination lamp (back)

Component Description

INFOID:0000000007565401

Part		Description
BCM		• Detects each switch condition by the combination switch reading function • Judges that the exterior lamps are turned ON according to the vehicle condition • Requests the headlamp relay (HI/LO), tail lamp relay and front fog lamp relay ON to IPDM E/R (via CAN communication) • Requests the high beam indicator lamp and tail lamp indicator lamp ON to the combination meter (via CAN communication) • Judges the outside brightness from the optical sensor signal. • Judges the ON/OFF timing according to the vehicle condition. • Judges the ON/OFF status of the exterior lamp according to the outside brightness and the vehicle condition.
IPDM E/R		Controls the integrated relay, and supplies voltage to the load according to the request from BCM (via CAN communication).
Combination meter		• Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM (via CAN communication). • Turns the high beam indicator lamp and tail lamp indicator lamp ON according to the request from BCM (via CAN communication).
Front combination lamp	Xenon bulb	Refer to EXL-7, "Xenon Headlamp".
	HID control unit	Refer to EXL-8, "HID Control Unit".
	High beam solenoid	Refer to EXL-8, "High Beam Solenoid".
Optical sensor		Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
Combination switch (Lighting & turn signal switch)		Refer to BCS-6, "COMBINATION SWITCH READING SYSTEM : System Description".
Door switch		Refer to DLK-11, "DOOR LOCK SYSTEM : Component Description".
Hazard switch		Inputs the hazard switch signal to BCM.

Xenon Headlamp

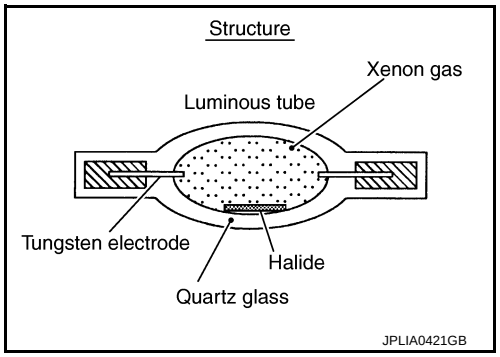
INFOID:0000000007565402

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.**

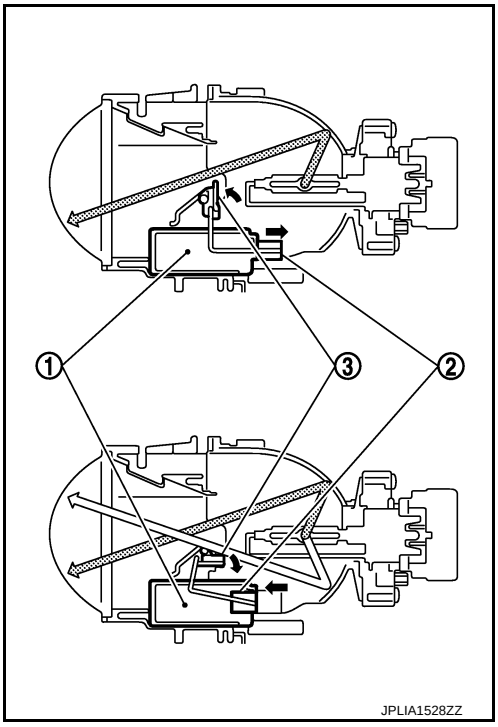
CAUTION:
- **Never perform HID control unit circuit diagnosis with a circuit tester or an equivalent.**
- **Temporarily install the headlamp on the vehicle. Connect the battery to the connector (vehicle side) when checking ON/OFF status.**
- **Disconnect the battery negative terminal before disconnecting 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.**
- **When water infiltrated by the damage of the headlamp housing in the lamp inside, and then water is stuck in the HID control unit connector part, HID control unit detect a power supply short circuit and stop the headlamp function. therefore inspect outside of headlamp for cracks, serious damage or install the resin cap and the bulb socket securely.**

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.

High Beam Solenoid

INFOID:0000000007565403

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 (3) is switched to the high beam position through the actuator rod (2).
- When the headlamp high relay is turned OFF, the current stops. The mobile valve shade returns to the low beam position automatically.



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HID Control Unit

INFOID:0000000007565404

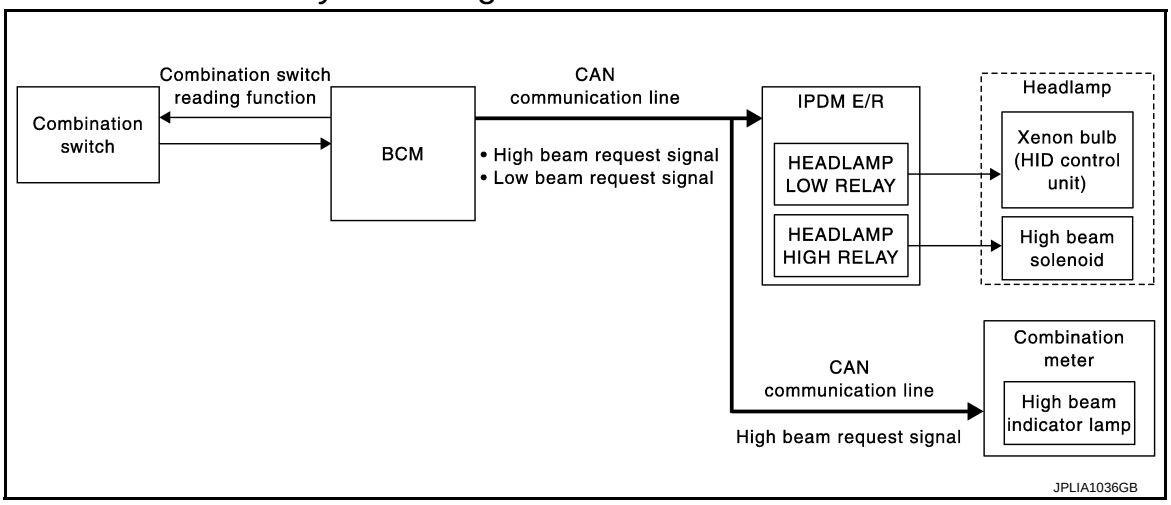
Headlamp (LO) circuit is connected to HID control unit integrated in the headlamp. Headlamp (LO) circuit turns xenon headlamp ON.
For the details of HID control unit and the xenon headlamp, refer to EXL-7, "Xenon Headlamp".

SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Diagram

INFOID:0000000007565405



HEADLAMP SYSTEM : System Description

INFOID:0000000007565406

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 via 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 via CAN communication according to the high beam switching condition.

High beam switching condition

- Lighting switch HI with the lighting switch 2ND or AUTO (auto light function ON judgment)
- 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 : Fail-safe

INFOID:0000000007565407

CAN COMMUNICATION CONTROL

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

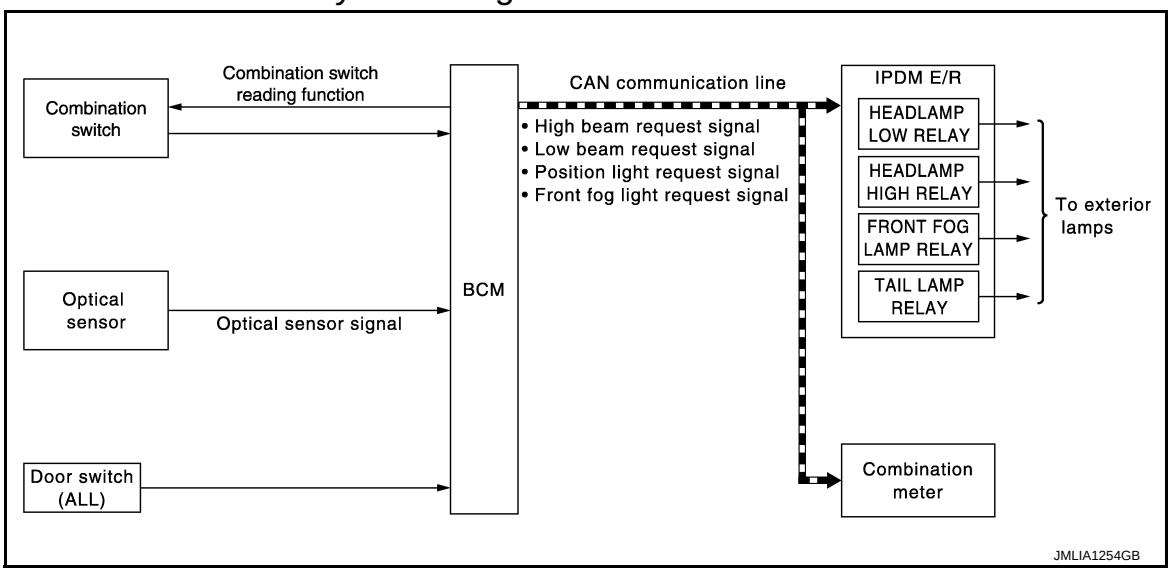
If No CAN Communication Is Available With BCM

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

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Diagram

INFOID:0000000007565408



AUTO LIGHT SYSTEM : System Description

INFOID:0000000007565409

OUTLINE

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

Control by BCM
- Combination switch reading function
- Headlamp control function
- Auto light function
- Delay timer function

Control by IPDM E/R
- Relay control function
• Auto light system has the auto light function and the delay timer function.
- Auto light function turns the exterior lamps* and each illumination ON/OFF automatically according to the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns the exterior lamps OFF depending on the vehicle condition with the auto light function after a certain period of time.

*: Headlamp (LO/HI), parking lamp, tail lamp, side marker 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 via 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-16, "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).
- 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-16, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)".

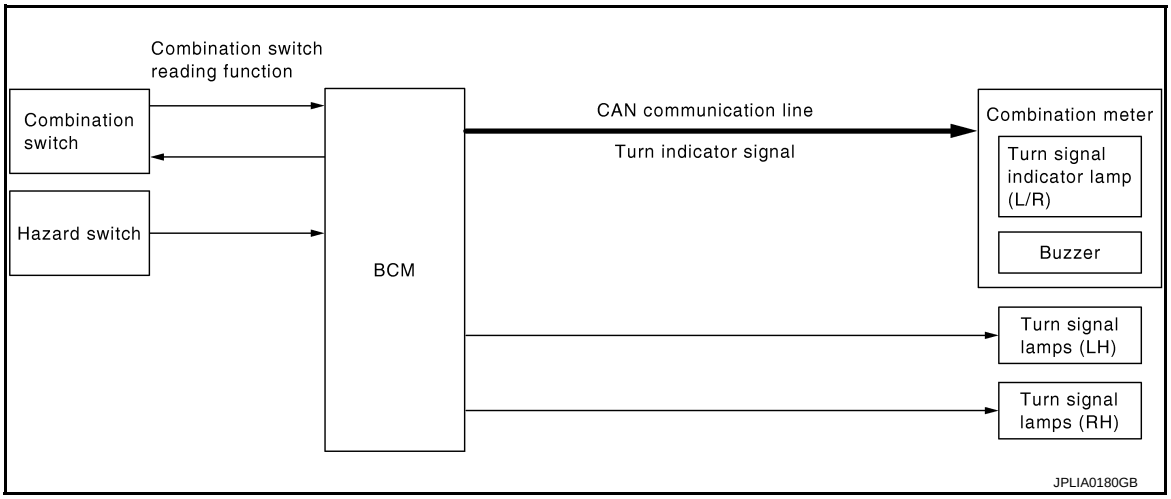
NOTE:

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

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram

INFOID:0000000007565410



TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000007565411

OUTLINE

Turn signal lamp 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 indicator signal to the combination meter via CAN communication while the turn signal lamp and the hazard warning lamp are operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn indicator signal.

HIGH FLASHER OPERATION

- BCM detects the turn signal lamp circuit status 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.

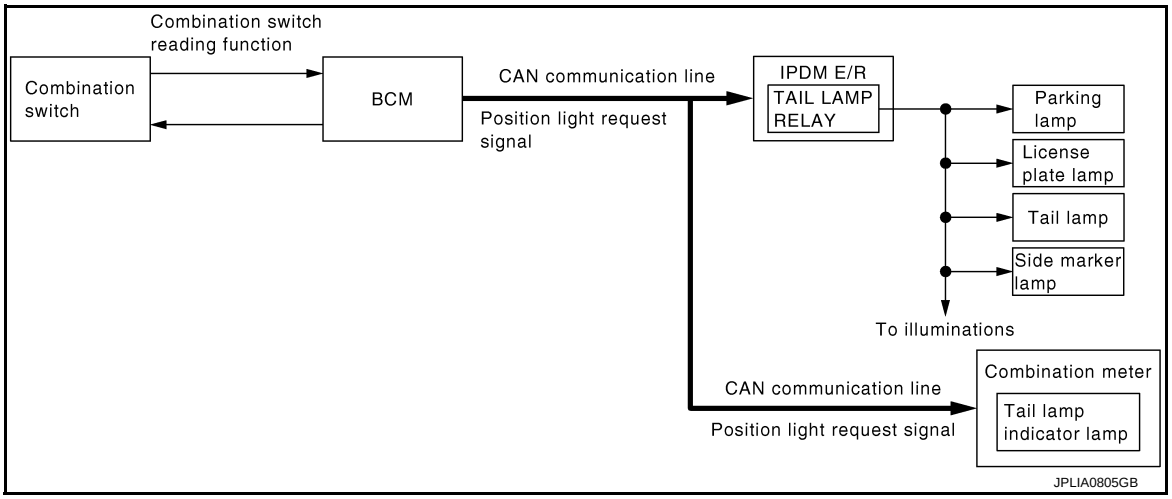
NOTE:

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

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

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

INFOID:0000000007565412



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

INFOID:0000000007565413

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 and the combination meter via 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, SIDE MARKER AND TAIL LAMP SYSTEM : Fail-safe

INFOID:0000000007565414

CAN COMMUNICATION CONTROL

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

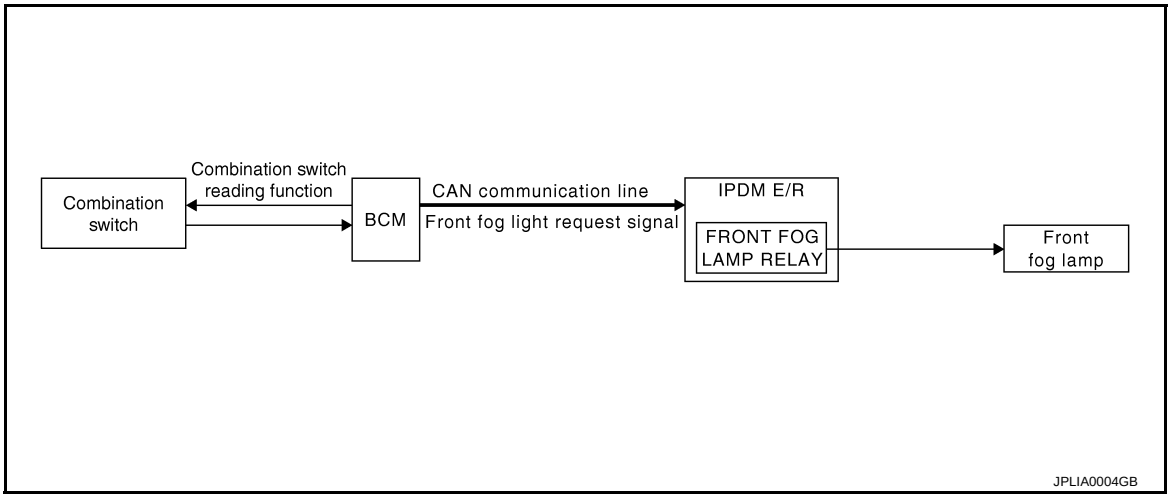
If No CAN Communication Is Available With BCM

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

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Diagram

INFOID:0000000007565415



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000007565416

OUTLINE

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

FRONT FOG LAMP OPERATION

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

Front fog lamp ON condition

- Front fog lamp switch ON, and any of the following condition is satisfied.(except for the high beam ON)
- Lighting switch 2ND.
- Lighting switch AUTO, and the auto light function ON judgment

IPDM E/R turns the integrated front fog lamp relay ON, and turns the front fog lamp ON according to the front fog light request signal.

FRONT FOG LAMP SYSTEM : Fail-safe

INFOID:0000000007565417

CAN COMMUNICATION CONTROL

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

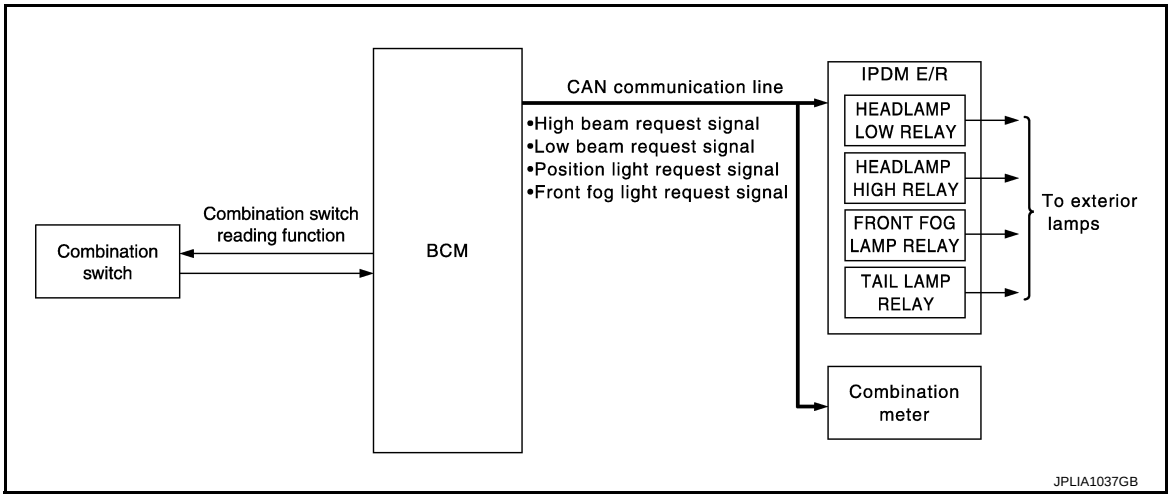
If No CAN Communication Is Available With BCM

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

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM : System Diagram

INFOID:0000000007565418



EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000007565419

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, side marker lamp, tail lamp, license plate lamp and front fog lamp.

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 ON (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.

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

INFOID:0000000007818533

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	×		
NVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid opener system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

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.

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:0000000007565421

WORK SUPPORT

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

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 via CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter via CAN communication
KEY SW-SLOT [On/Off]	Key switch status input from key slot
TURN SIGNAL R [On/Off]	Each switch status that BCM detects 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]	
RR FOG SW [On/Off]	**NOTE:** The item is indicated, but not monitored.

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]	**NOTE:** The item is indicated, but not monitored.
DOOR SW-RL [On/Off]	**NOTE:** The item is indicated, but not monitored.
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 via 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 via CAN communication to turn the headlamp (HI).
	Low	Transmits the low beam request signal via 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 via 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:0000000007565422

WORK SUPPORT

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

*: Factory setting

DATA MONITOR

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from the door request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from the door 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 status that BCM detects from the combination switch reading function
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch
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	RH	Outputs the voltage to blink the right side turn signal lamps.
	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000007818534

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 lamp
- License plate lamp
- Side maker lamp
- Tail lamp
- Front fog lamp
- Headlamp (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan

Operation Procedure

NOTE:

Never perform auto active test in the following conditions.

- CONSULT is connected
- Passenger door is open

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)
   NOTE:
   When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn the ignition switch OFF.
3. Turn the ignition switch ON, and within 20 seconds, press the front door switch (driver side) 10 times. Then turn the ignition switch OFF.
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
5. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

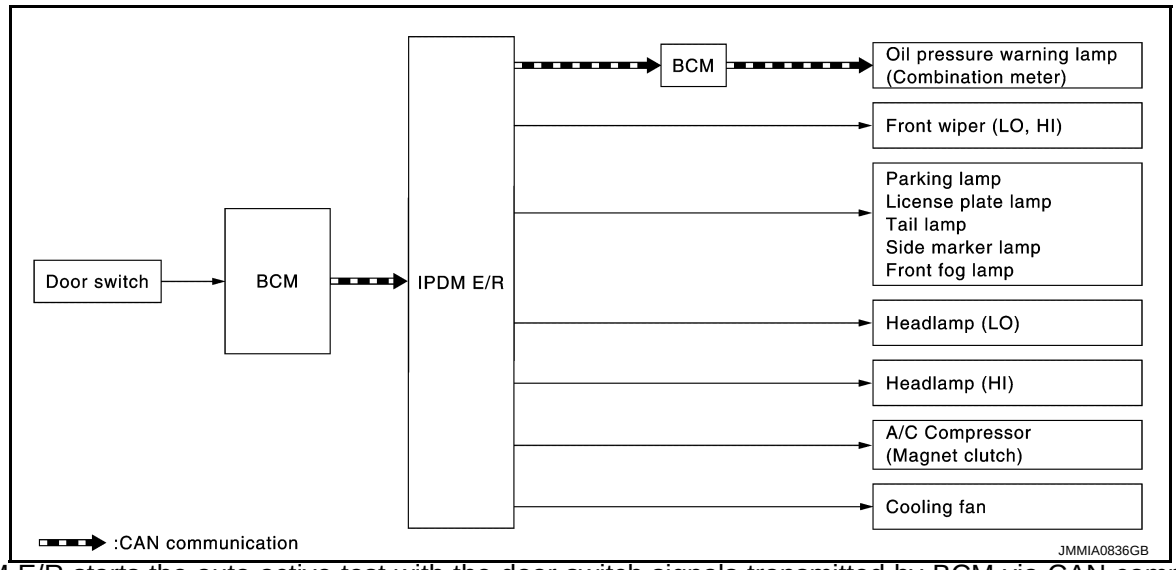
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-55, "Component Function Check".

Inspection in Auto Active Test Mode

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

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

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of the following components do not operate • Parking lamp • License plate lamp • Side maker lamp • Tail lamp • Front fog lamp • Headlamp (HI, LO) • Front motor 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	• A/C amp. signal input circuit • CAN communication signal between A/C amp. and ECM • CAN communication signal between ECM and IPDM E/R
		NO	• Magnet clutch • Harness or connector between IPDM E/R and magnet clutch • IPDM E/R
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 combination meter • Combination meter

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

CONSULT Function (IPDM E/R)

INFOID:0000000007818535

APPLICATION ITEM

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

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

SELF DIAGNOSTIC RESULT

Refer to PCS-23, "DTC Index".

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIGNALS	Description
MOTOR FAN REQ [1/2/3/4]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
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.

Monitor Item [Unit]	MAIN SIGNALS	Description
INTER/NP SW [Off/On]		Displays the status of the shift position judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the CVT 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/On]		**NOTE:** The item is indicated, but not monitored.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		**NOTE:** The item is indicated, but not monitored.
HL WASHER REQ [Off/On]		**NOTE:** The item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.
CRNRNG LMP REQ [Off/On]		**NOTE:** The item is indicated, but not monitored.

ACTIVE TEST

Test item

Test item	Operation	Description
CORNERING LAMP	Off	**NOTE:** The item is indicated, but cannot be tested.
	LH	
	RH	
HORN	On	Operates horn relay for 20 ms.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	Operates the cooling fan relay-1.
	3	Operates the cooling fan relay-2.
	4	Operates the cooling fan relay-2 and cooling fan relay-3.
HEAD LAMP WASHER	On	**NOTE:** The item is indicated, but cannot be tested.

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

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000007565425

ECU	Reference
BCM	BCS-31, "Reference Value"
	BCS-53, "Fail-safe"
	BCS-53, "DTC Inspection Priority Chart"
	BCS-54, "DTC Index"
IPDM E/R	PCS-15, "Reference Value"
	PCS-21, "Fail-safe"
	PCS-23, "DTC Index"

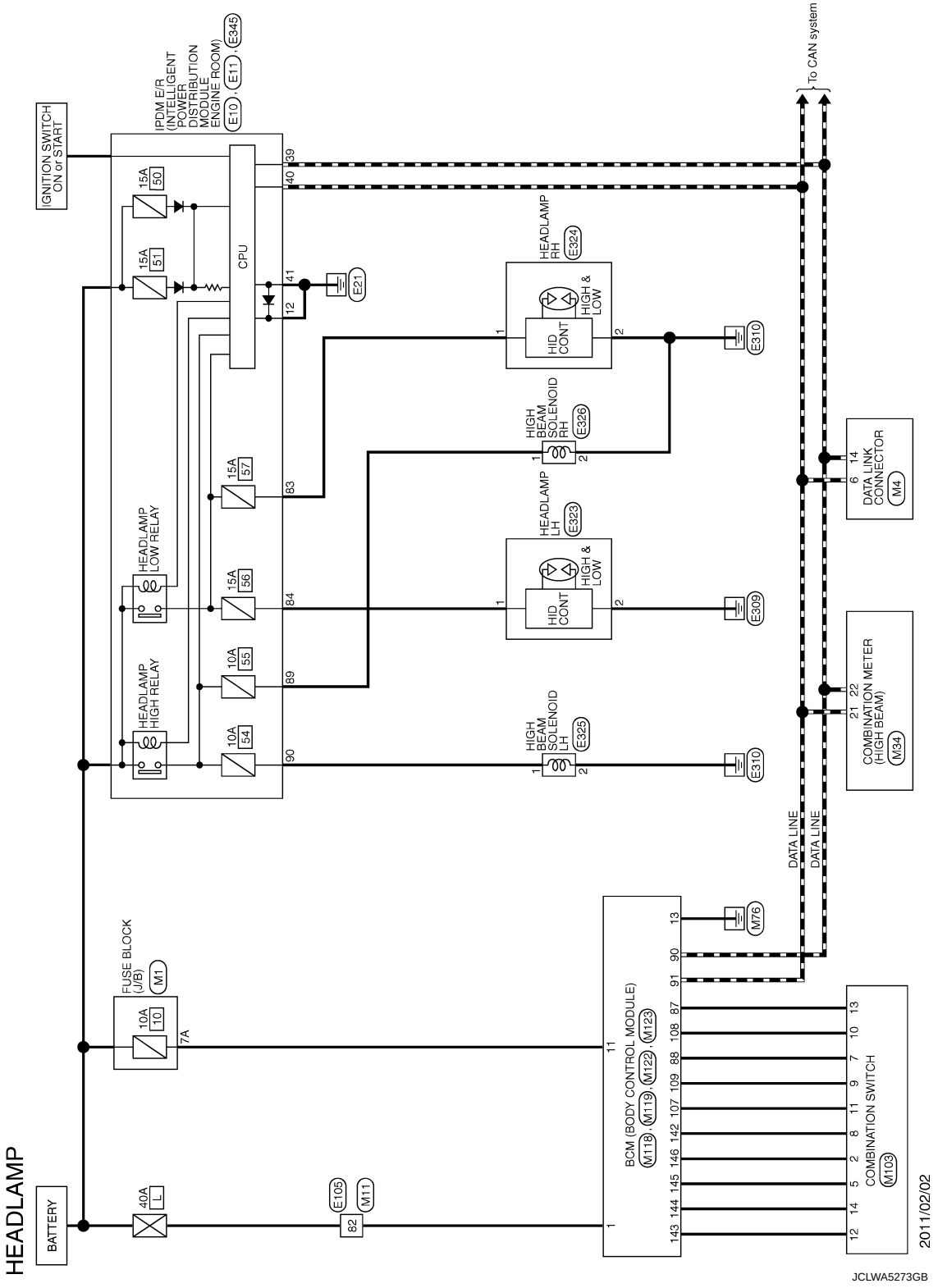
WIRING DIAGRAM

HEADLAMP SYSTEM

Wiring Diagram

INFOID:0000000007565426

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".

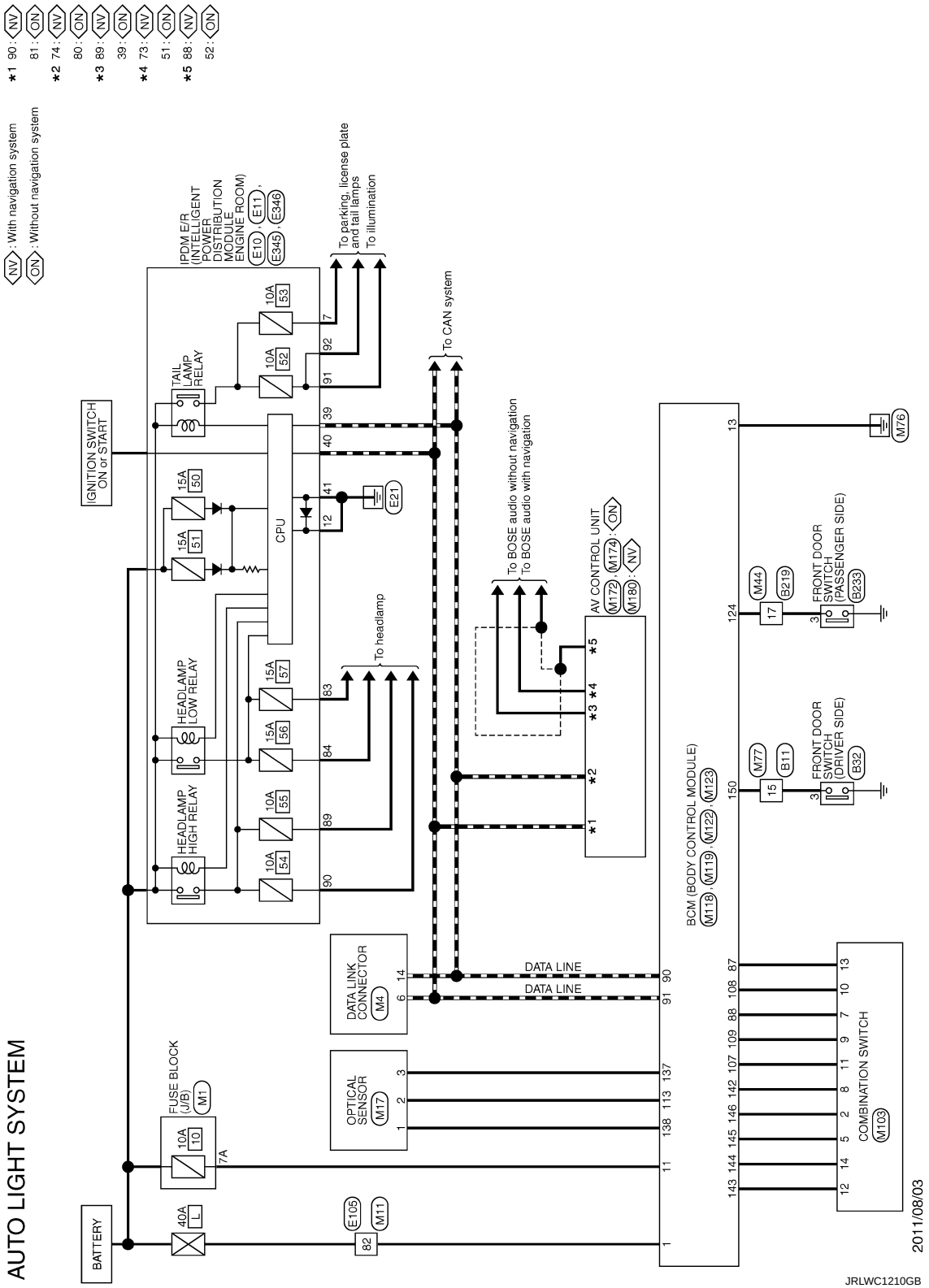


AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:0000000007565427

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".

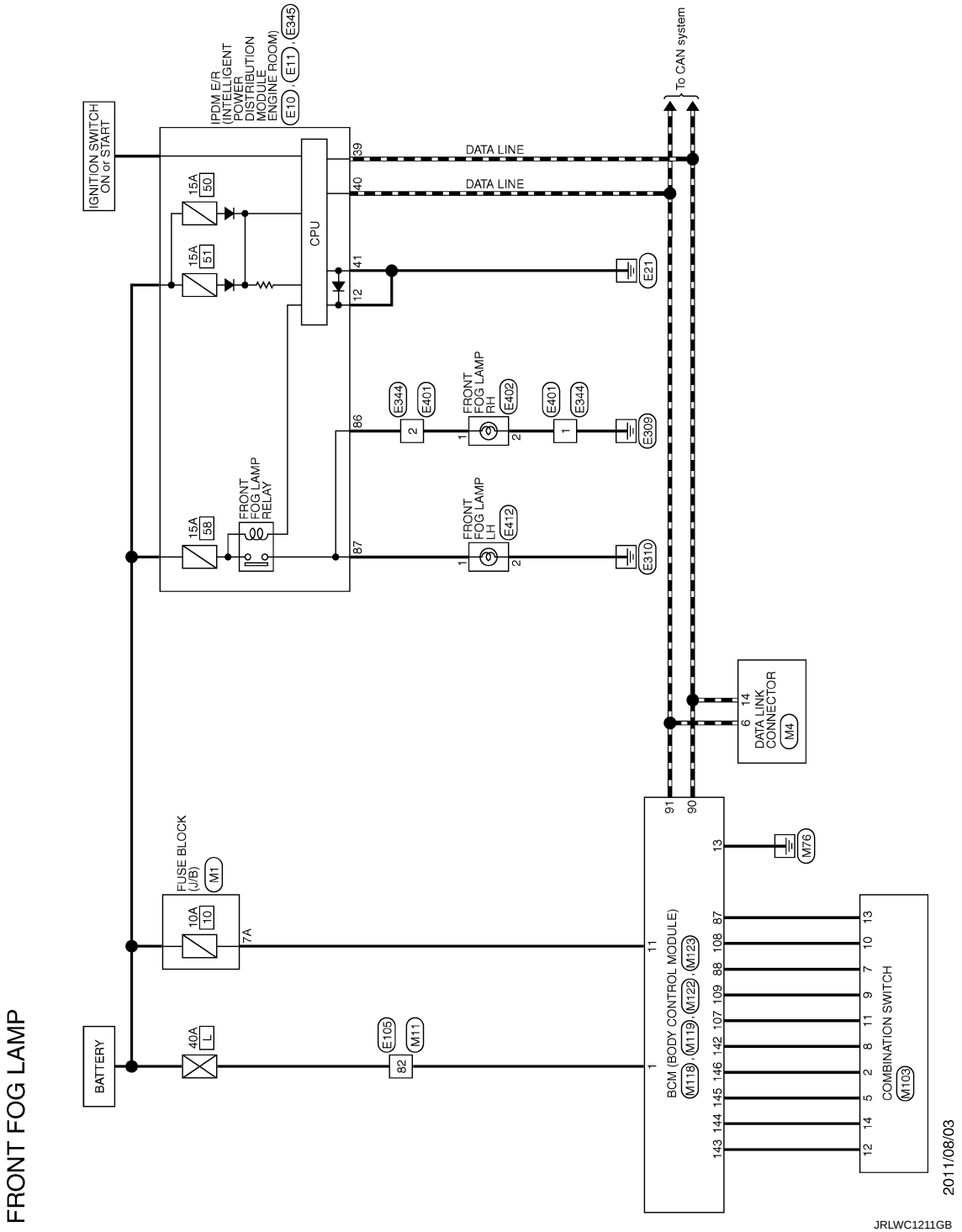


FRONT FOG LAMP SYSTEM

Wiring Diagram

INFOID:0000000007565428

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".

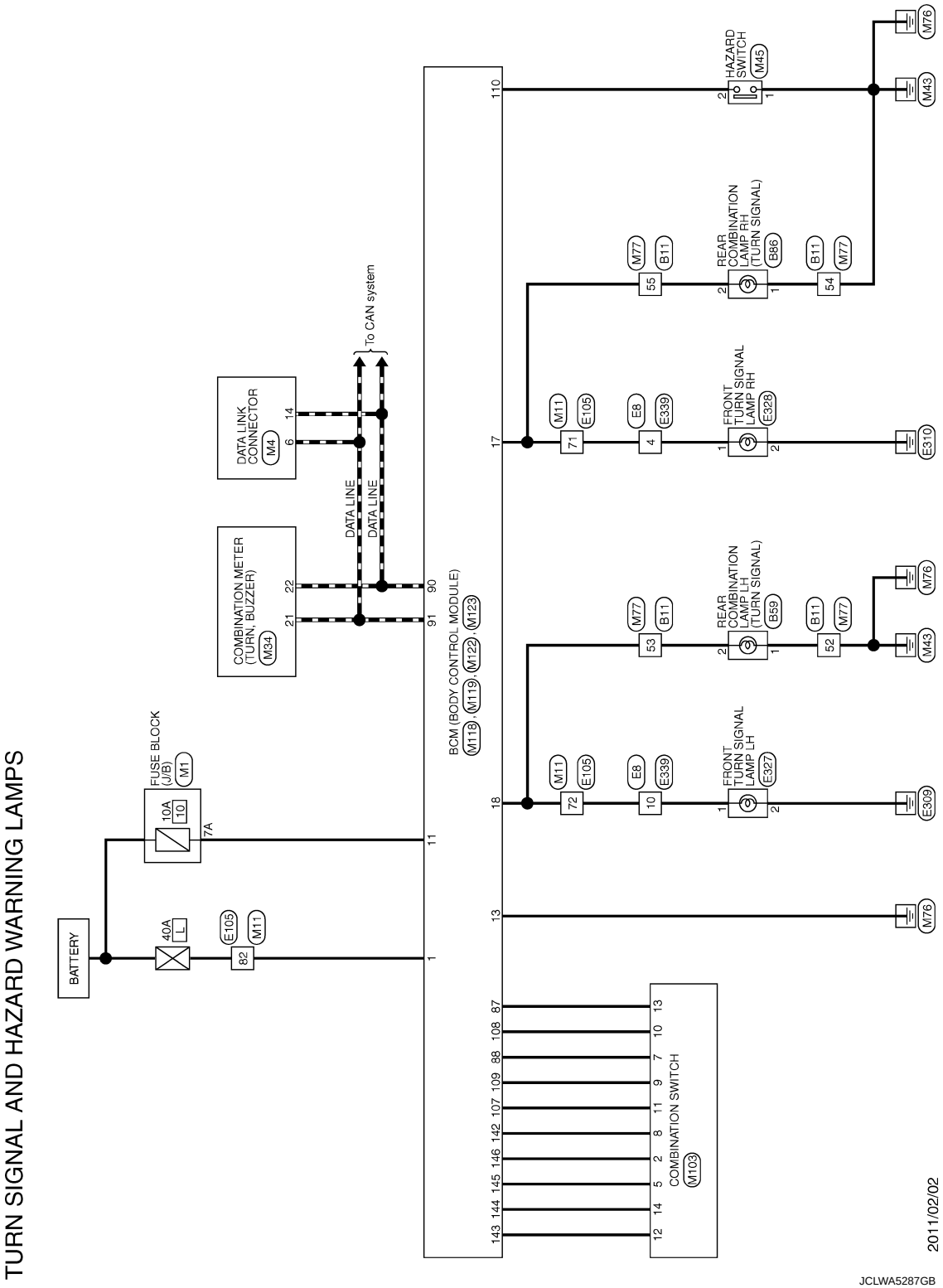


TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

INFOID:0000000007565429

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".

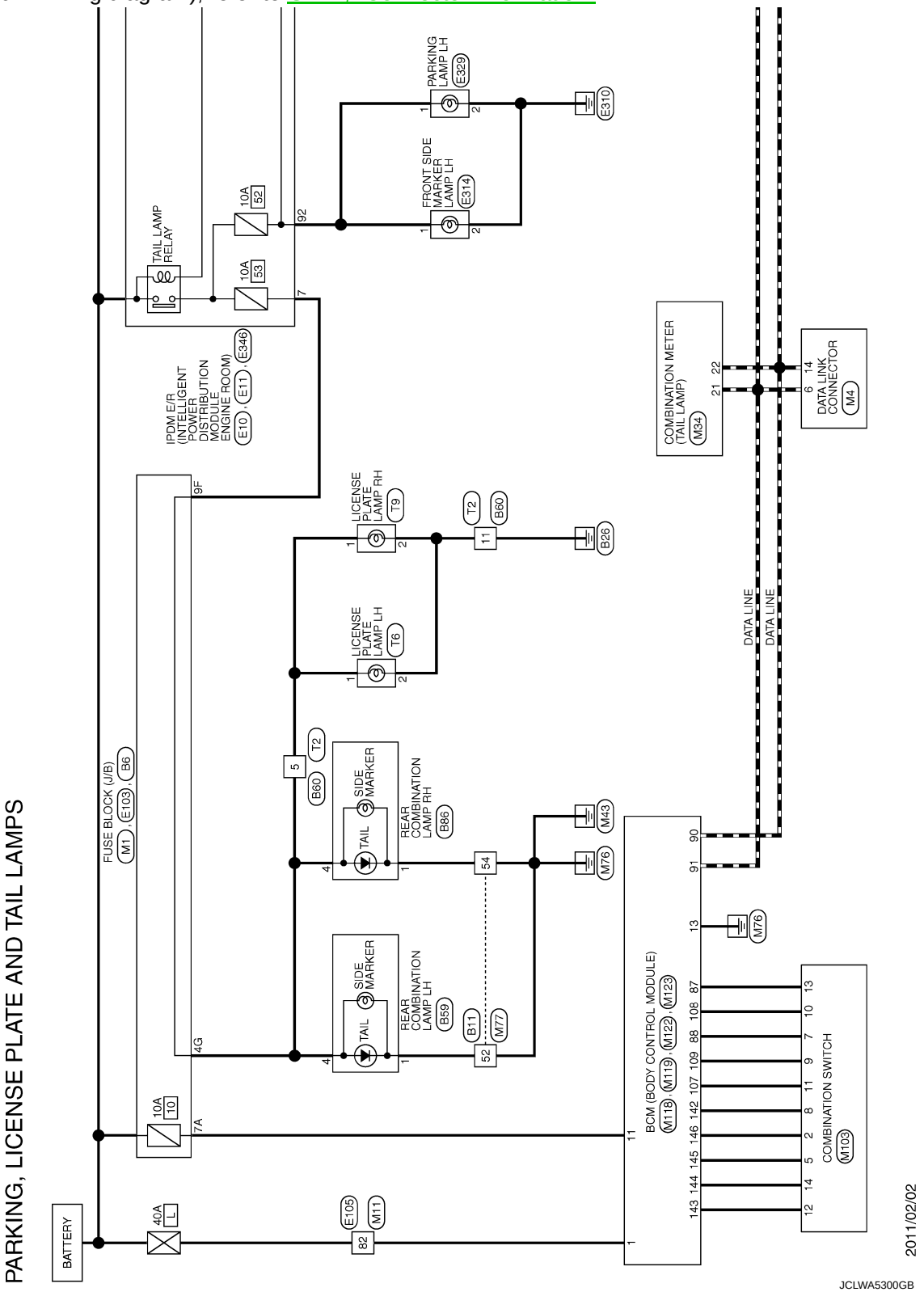


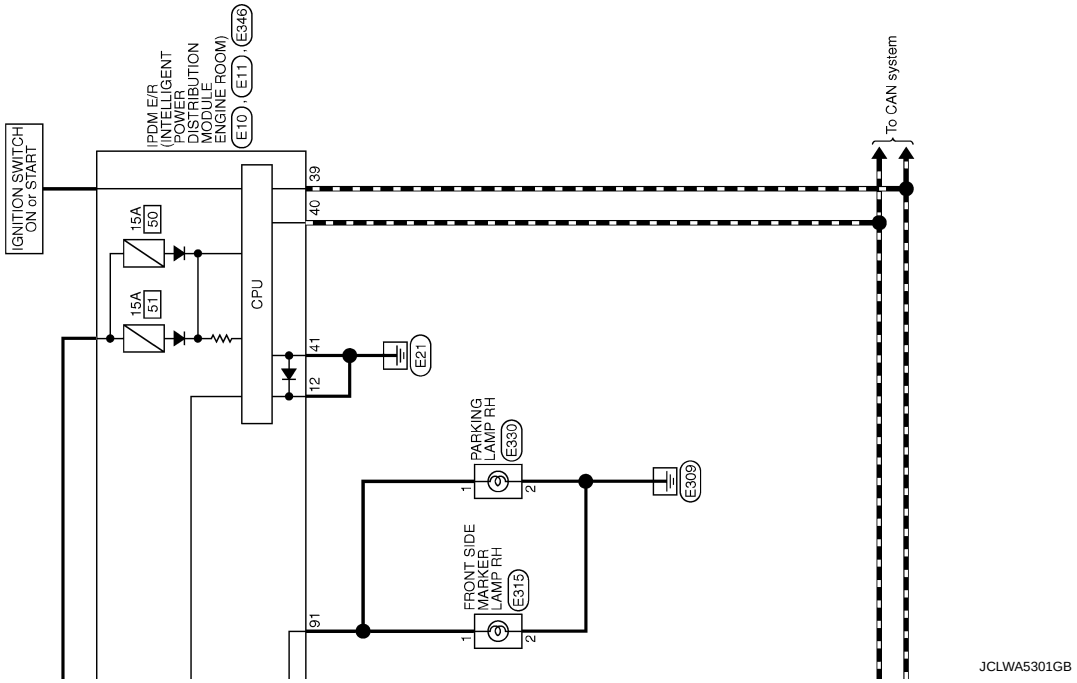
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram

INFOID:0000000007565430

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



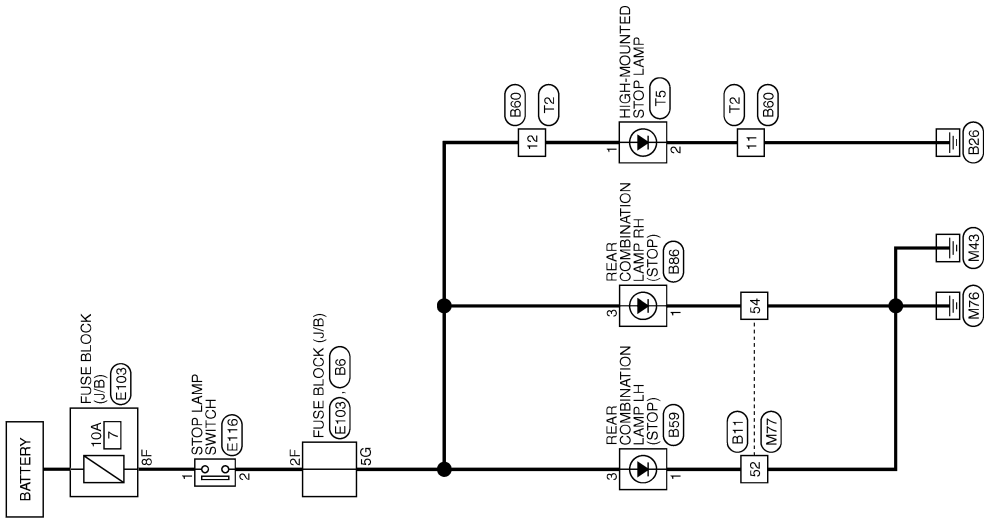

IGNITION SWITCH ON or START
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E10, E11, E346
15A 50
15A 51
CPU
39
40
41
12
91
E21
PARKING LAMP RH
E330
E309
FRONT SIDE MARKER LAMP RH
E315
To CAN system
JCLWA5301GB

STOP LAMP

Wiring Diagram

INFOID:0000000007565431

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



STOP LAMP

2011/02/02

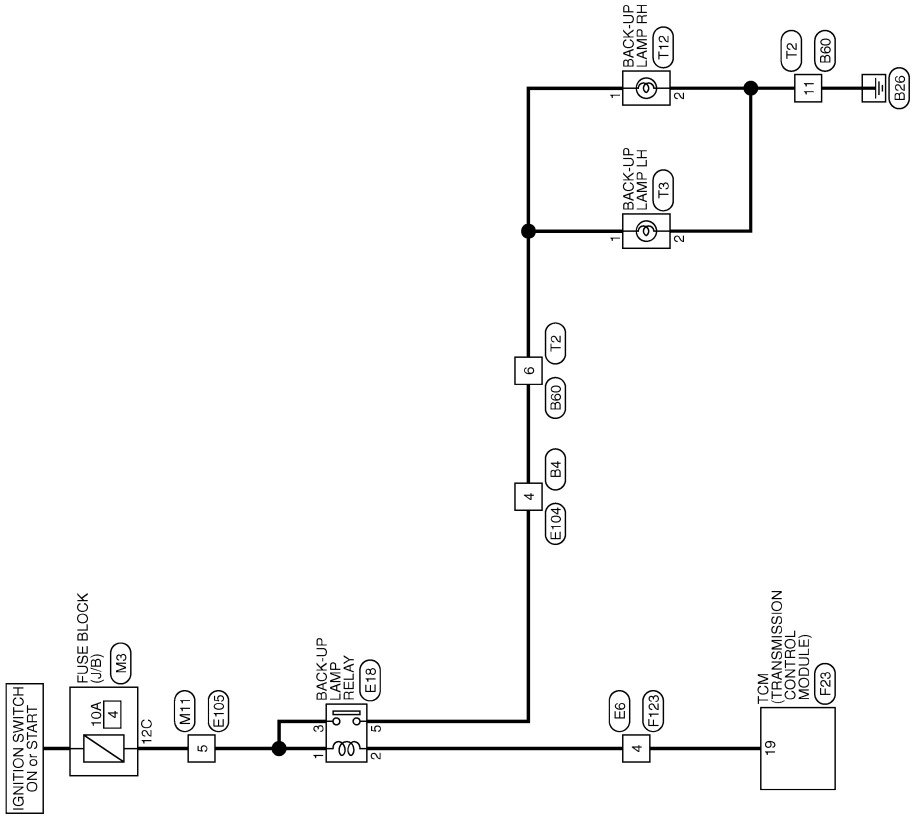
JCLWA5293GB

BACK-UP LAMP

Wiring Diagram

INFOID:0000000007565432

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



BACK-UP LAMP

2011/02/02

JCLWA5296GB

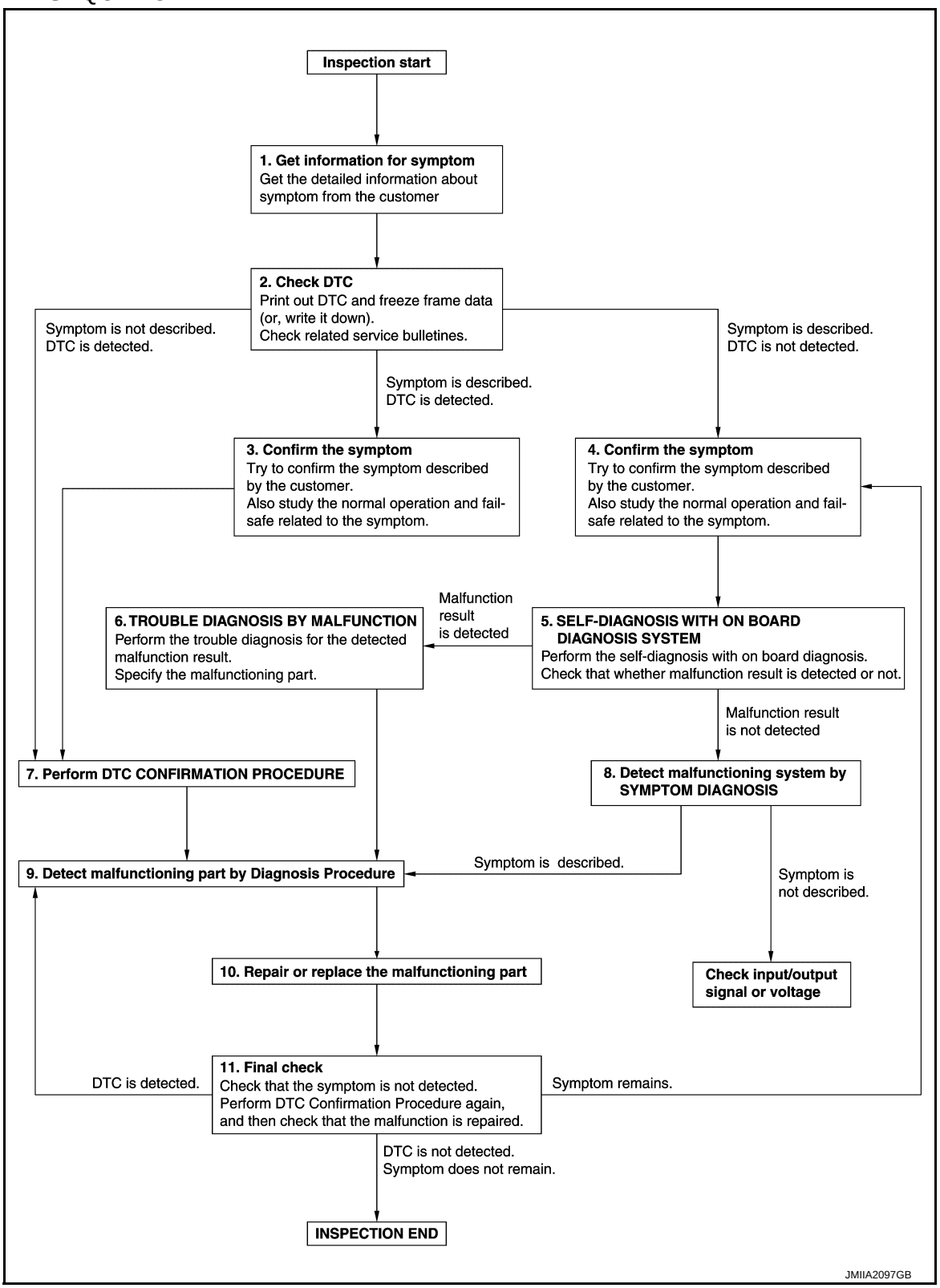
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000007796146

OVERALL SEQUENCE



DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

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

3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.
Symptom is described, DTC is not detected>>GO TO 4.
Symptom is not described, DTC is detected>>GO TO 7.

3.CONFIRM THE SYMPTOM

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

>> GO TO 7.

4.CONFIRM THE SYMPTOM

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

>> GO TO 5.

5.SELF-DIAGNOSIS WITH ON BOARD DIAGNOSIS SYSTEM

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

Is malfunction result detected?

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

6.TROUBLE DIAGNOSIS BY MALFUNCTION

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

>> GO TO 9.

7.PERFORM DTC CONFIRMATION PROCEDURE

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

NOTE:

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

Is DTC detected?

YES >> GO TO 9.
NO >> Check according to GI-40, "Intermittent Incident".

8. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 9.
NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

9. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 10.
NO >> Check according to GI-40, "Intermittent Incident".

10. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 11.

11. FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.
When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 9.
YES-2 >> Symptom remains: GO TO 4.
NO >> Before returning the vehicle to the customer, always erase DTC.

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

INFOID:0000000007565434

1.CHECK HEADLAMP (HI) OPERATION

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.

Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-37, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565435

1.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

CONSULT ACTIVE TEST
1. Turn ignition switch OFF.
2. Disconnect high beam solenoid connector.
3. Turn ignition switch ON.
4. Select “EXTERNAL LAMPS” of IPDM E/R active test item.
5. With operating test items, check voltage between IPDM E/R harness connector and ground.

(+)			(–)	Test item		Voltage (Approx.)
IPDM E/R						
Connector		Terminal				
RH	E345	89	Ground	EXTERNAL LAMPS	Hi	Battery voltage
					Off	0 V
LH		90			Hi	Battery voltage
					Off	0 V

Is the inspection result normal?

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

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

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

IPDM E/R			High beam solenoid		Continuity
Connector		Terminal	Connector	Terminal	
RH	E345	89	E326	1	Existed
LH		90	E325		

Is the inspection result normal?

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

3.CHECK HEADLAMP (HI) FUSE

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R.
NO >> GO TO 4.

4.CHECK HEADLAMP (HI) SHORT CIRCUIT

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

IPDM E/R			Ground	Continuity
Connector		Terminal		
RH	E345	89		Not existed
LH		90		

Is the inspection result normal?

YES >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)
NO >> Repair or replace harness. And then replace the fuse.

5.CHECK HEADLAMP (HI) GROUND OPEN CIRCUIT

Check continuity between high beam solenoid harness connector and ground.

High beam solenoid			Ground	Continuity
Connector		Terminal		
RH	E326	2		Existed
LH	E325			

Is the inspection result normal?

YES >> Replace front combination lamp.
NO >> Repair or replace harness.

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000007565436

1.CHECK HEADLAMP (LO) OPERATION

CONSULT ACTIVE TEST
1. Select “EXTERNAL LAMPS” of IPDM E/R active test item.
2. With operating the test items, check that the headlamp (LO) is turned ON.

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

Is the headlamp (LO) turned ON?

YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-39, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565437

1.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

CONSULT ACTIVE TEST
1. Turn ignition switch OFF.
2. Disconnect headlamp connector.
3. Turn ignition switch ON.
4. Select “EXTERNAL LAMPS” of IPDM E/R active test item.
5. With operating test items, check voltage between IPDM E/R harness connector and ground.

(+)			(–)	Test item		Voltage (Approx.)
IPDM E/R						
Connector		Terminal				
RH	E345	83	Ground	EXTERNAL LAMPS	Lo	Battery voltage
					Off	0 V
LH		84			Lo	Battery voltage
					Off	0 V

Is the inspection result normal?

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

2.CHECK HEADLAMP (LO) OPEN CIRCUIT

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

IPDM E/R			Headlamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E345	83	E324	1	Existed
LH		84	E323		

Is the inspection result normal?

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

3.CHECK HEADLAMP (LO) FUSE

1. Turn 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)		#56	

Is the inspection result normal?

YES >> Replace IPDM E/R.
NO >> GO TO 4.

4. CHECK HEADLAMP (LO) SHORT CIRCUIT

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

IPDM E/R			Ground	Continuity
Connector		Terminal		
RH	E345	83		Not existed
LH		84		

Is the inspection result normal?

YES >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)
NO >> Repair or replace harness. And then replace the fuse.

5. CHECK HEADLAMP (LO) GROUND OPEN CIRCUIT

Check continuity between headlamp harness connector and ground.

Headlamp			Ground	Continuity
Connector		Terminal		
RH	E324	2		Existed
LH	E323			

Is the inspection result normal?

YES >> Perform the xenon headlamp diagnosis. Refer to EXL-41, "Diagnosis Procedure".
NO >> Repair or replace harness.

XENON HEADLAMP

Diagnosis Procedure

INFOID:0000000007565438

1.CHECK XENON BULB

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

Is the headlamp turned ON?

YES >> Replace HID control unit.
NO >> Xenon headlamp is normal. Check the headlamp control system.

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000007565439

1.CHECK PARKING LAMP OPERATION

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-42, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565440

1.CHECK PARKING LAMP FUSE

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

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

Is the inspection result normal?

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

2.CHECK PARKING LAMP SHORT CIRCUIT

1. Disconnect IPDM E/R connector and parking lamp connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R			Ground	Continuity
Connector		Terminal		
RH	E346	91		Not existed
LH		92		

Is the inspection result normal?

YES >> Replace the fuse. (Replace IPDM E/R if fusing is found again.)
NO >> Repair or replace harness. And then replace the fuse.

3.CHECK PARKING LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace the bulb.

4.CHECK PARKING LAMP OUTPUT VOLTAGE

CONSULT ACTIVE TEST
1. Disconnect parking lamp connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” of IPDM E/R active test item.
4. With operating test items, check voltage between IPDM E/R harness connector and ground.

(+)			(–)	Test item		Voltage (Approx.)
IPDM E/R						
Connector		Terminal				
RH	E346	91	Ground	EXTERNAL LAMPS	TAIL	Battery voltage
					Off	0 V
LH		92			TAIL	Battery voltage
					Off	0 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace IPDM E/R.

5.CHECK PARKING LAMP OPEN CIRCUIT

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

IPDM E/R			Parking lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E346	91	E330	1	Existed
LH		92	E329		

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness.

6.CHECK PARKING LAMP GROUND OPEN CIRCUIT

Check continuity between parking lamp harness connector and ground.

Parking lamp			Ground	Continuity
Connector		Terminal		
RH	E330	2		Existed
LH	E329			

Is the inspection result normal?

YES-1 >> (When tail lamp does not turn ON) Replace rear combination lamp.
YES-2 >> (When rear side marker lamp does not turn ON) Check corresponding bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace harness.

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000007565441

NOTE:
Check parking lamp circuit if parking lamp and front side marker lamp are not turned ON. Refer to EXL-42, "Component Function Check".

1.CHECK FRONT SIDE MARKER LAMP OPERATION

CONSULT ACTIVE TEST
1. Select “EXTERNAL LAMPS” of IPDM E/R active test item.
2. With operating the test items, check that the front side marker lamp is turned ON.

TAIL : Front side marker lamp ON
Off : Front side marker lamp OFF

Is the front side marker lamp turned ON?

YES >> Front side marker lamp circuit is normal.
NO >> Refer to EXL-44, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565442

1.CHECK FRONT SIDE MARKER LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the bulb.

2.CHECK FRONT SIDE MARKER LAMP OPEN CIRCUIT

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

IPDM E/R			Front side marker lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E346	91	E315	1	Existed
LH		92	E314		

Is the inspection result normal?

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

3.CHECK FRONT SIDE MARKER LAMP GROUND OPEN CIRCUIT

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

Front side marker lamp			Ground	Continuity
Connector		Terminal		
RH	E315	2		Existed
LH	E314			

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace harness.

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000007565443

1.CHECK TAIL LAMP OPERATION

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-45, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565444

1.CHECK TAIL LAMP FUSE

1. Turn 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 inspection result normal?

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

2.CHECK TAIL LAMP SHORT CIRCUIT

1. Disconnect IPDM E/R connector, rear combination lamp connector and license plate lamp connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E10	7		Not existed

Is the inspection result normal?

YES >> Replace the fuse. (Replace IPDM E/R if fusing is found again.)
NO >> Repair or replace harness. And then replace the fuse.

3.CHECK TAIL LAMP OUTPUT VOLTAGE

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

(+)		(–)	Test item		Voltage (Approx.)
IPDM E/R					
Connector	Terminal				
E10	7	Ground	EXTERNAL LAMPS	TAIL	Battery voltage
				Off	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace IPDM E/R.

4.CHECK TAIL LAMP OPEN CIRCUIT

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

IPDM E/R			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E10	7	B86	4	Existed
LH			B59		

Is the inspection result normal?

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

5.CHECK TAIL LAMP GROUND OPEN CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
RH	B86	1		Existed
LH	B59			

Is the inspection result normal?

YES >> Replace rear combination lamp.
NO >> Repair or replace harness.

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000007565445

NOTE:
Check tail lamp circuit if tail lamp and license plate lamp are not turned ON. Refer to EXL-45, "Component Function Check".

1.CHECK LICENSE PLATE LAMP OPERATION

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-47, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565446

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

IPDM E/R			License plate lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E10	7	T9	1	Existed
LH			T6		

Is the inspection result normal?

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

3.CHECK LICENSE PLATE LAMP GROUND OPEN CIRCUIT

Check continuity between license plate lamp harness connector and ground.

License plate lamp			Ground	Continuity
Connector		Terminal		
RH	T9	2		Existed
LH	T6			

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000007565447

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 is turned ON.

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

Is the turn signal lamp turned ON?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-48, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565448

1.CHECK TURN SIGNAL LAMP BULB

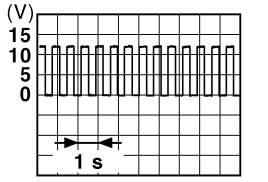
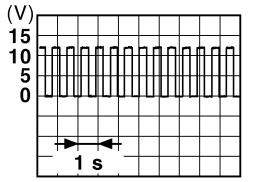
Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect front turn signal lamp connector or rear combination lamp connector.
3. Turn ignition switch ON.
4. With operating turn signal switch, check voltage between BCM harness connector and ground.

(+)			(–)	Condition		Voltage (Approx.)
BCM						
Connector		Terminal				
RH	M119	17	Ground	Turn signal switch	RH	 PKID0926E
					OFF	0 V
LH		18			LH	 PKID0926E
					OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3. CHECK TURN SIGNAL LAMP OPEN CIRCUIT

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

Front turn signal lamp

BCM			Front turn signal lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	M119	17	E328	1	Existed
LH		18	E327		

Rear turn signal lamp

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	M119	17	B86	2	Existed
LH		18	B59		

Is the inspection result normal?

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

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between BCM harness connector and ground.

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

Is the inspection result normal?

YES >> Check each bulb socket for internal short circuit, and if check result is normal, replace BCM. Refer to BCS-76, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

Check continuity between front turn signal lamp or rear combination lamp and ground.

Front turn signal lamp

Front turn signal lamp			Ground	Continuity
Connector		Terminal		
RH	E328	2		Existed
LH	E327			

Rear turn signal lamp

Rear combination lamp			Ground	Continuity
Connector		Terminal		
RH	B86	1		Existed
LH	B59			

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary
NO >> Repair or replace harness.

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000007565449

1.CHECK FRONT FOG LAMP OPERATION

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-50, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565450

1.CHECK FRONT FOG LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace bulb.

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT ACTIVE TEST
1. Turn ignition switch OFF.
2. Disconnect front fog lamp connector.
3. Turn ignition switch ON.
4. Select “EXTERNAL LAMPS” of IPDM E/R active test item.
5. With operating the test items, check the voltage between IPDM E/R harness connector and ground.

(+)			(–)	Test item		Voltage (Approx.)
IPDM E/R						
Connector		Terminal				
RH	E345	86	Ground	EXTERNAL LAMPS	Fog	Battery voltage
					Off	0 V
LH		87			Fog	Battery voltage
					Off	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace IPDM E/R.

3.CHECK FRONT FOG LAMP OPEN CIRCUIT

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

IPDM E/R			Front fog lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E345	86	E402	1	Existed
LH		87	E412		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT OPEN CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp			Ground	Continuity
Connector		Terminal		
RH	E402	2		Existed
LH	E412			

Is the inspection result normal?

YES >> Refer to GI-40, "Intermittent Incident".
NO >> Repair or replace harness.

OPTICAL SENSOR

Component Function Check

INFOID:0000000007565451

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

CONSULT DATA MONITOR
1. Turn ignition switch ON.
2. Select “OPTICAL SENSOR” of BCM (HEADLAMP) data monitor item.
3. Turn 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-52, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565452

1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(+)		(–)	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M17	1	Ground	5 V

Is the inspection result normal?

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

2.CHECK OPTICAL SENSOR GROUND INPUT

Check voltage between optical sensor harness connector and ground.

terminal			Voltage (Approx.)
(+)		(–)	
Optical sensor		Ground	
Connector	Terminal		
M17	3		0 V

Is the inspection result normal?

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

3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

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

(+)		(–)	Condition	Voltage (Approx.)
Optical sensor				
Connector	Terminal			

M17	2	Ground	Optical sensor	When illuminating	3.1 V or more *
				When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace optical sensor.

4. CHECK OPTICAL SENSOR OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M17	1	M123	138	Existed

Does continuity exist?

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

5. CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M17	1		Not existed

Does continuity exist?

YES >> Repair or replace harness.
NO >> Replace BCM. Refer to BCS-76, "Removal and Installation".

6. CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M17	3	M123	137	Existed

Does continuity exist?

YES >> Replace BCM. Refer to BCS-76, "Removal and Installation".
NO >> Repair or replace harness.

7. CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M17	2	M123	113	Existed

Does continuity exist?

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

8. CHECK OPTICAL SENSOR SHORT CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M17	2		Not existed

Does continuity exist?

YES >> Repair or replace harness.
NO >> Replace BCM. Refer to BCS-76, "Removal and Installation".

HAZARD SWITCH

Component Function Check

INFOID:0000000007565453

1.CHECK HAZARD SWITCH SIGNAL BY CONSULT

CONSULT DATA MONITOR
1. Turn 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	ON	On
		OFF	Off

Is the item status normal?

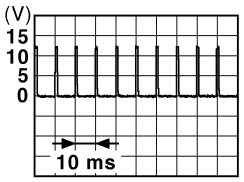
YES >> Hazard switch circuit is normal.
NO >> Refer to EXL-55, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007565454

1.CHECK HAZARD SWITCH SIGNAL INPUT

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

(+)		(–)	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M45	2	Ground	12 V  JPMIA0012GB

Is the inspection result normal?

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

2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

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

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M45	2	M122	110	Existed

Is the inspection result normal?

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

3.CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M45	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-76, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M45	1		Existed

Is the inspection result normal?

YES >> Replace hazard switch.
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000007565455

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 high beam solenoid • Harness between high beam solenoid and ground • Front combination lamp (High beam solenoid) • IPDM E/R	Headlamp (HI) circuit Refer to EXL-37, "Component Function Check".
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-61, "Diagnosis Procedure".	
High beam indicator lamp is not turned ON. (The headlamp switches to the high beam.)		Combination meter	• Combination meter 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 combination switch and BCM • BCM	Combination switch Refer to BCS-74, "Symptom Table".
		High beam request signal • BCM • IPDM E/R	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 headlamp • Harness between headlamp and ground • Front combination lamp (xenon headlamp) • IPDM E/R	Headlamp (LO) circuit Refer to EXL-39, "Component Function Check".
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-62, "Diagnosis Procedure".	
Headlamp is not turned ON/OFF with the lighting switch AUTO.		• Combination switch • Harness between combination switch and BCM • BCM	Combination switch Refer to BCS-74, "Symptom Table".
		• Optical sensor • Harness between optical sensor and BCM • BCM	Optical sensor Refer to EXL-52, "Component Function Check".

Symptom		Possible cause	Inspection item
Front fog lamp is not turned ON.	One side	• Front fog lamp bulb • Harness between IPDM E/R and front fog lamp • Harness between front fog lamp and ground • IPDM E/R	Front fog lamp circuit Refer to EXL-50, "Component Function Check".
	Both side	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-64, "Diagnosis Procedure".	
Parking lamp is not turned ON.		• Parking lamp bulb • Harness between IPDM E/R and parking lamp • Harness between parking lamp and ground	Parking lamp circuit Refer to EXL-42, "Component Function Check".
Front side marker lamp is not turned ON.		• Front side marker lamp bulb • Harness between IPDM E/R and front side marker lamp • Harness between front side marker lamp and ground	Front side marker lamp circuit Refer to EXL-44, "Component Function Check".
Parking lamp and front side marker lamp are not turned ON.		• Fuse • Harness between IPDM E/R and parking lamp • IPDM E/R	Parking lamp circuit Refer to EXL-42, "Component Function Check".
Tail lamp / Rear side marker lamp is not turned ON.		• Rear side marker lamp bulb • Rear combination lamp • Harness between IPDM E/R and rear combination lamp • Harness between rear combination lamp and ground	Tail lamp circuit Refer to EXL-45, "Component Function Check".
License plate lamp is not turned ON.		• License plate lamp bulb • Harness between IPDM E/R and license plate lamp • Harness between license plate lamp and ground	License plate lamp circuit Refer to EXL-47, "Component Function Check".
Tail lamp and license plate lamp are not turned ON.		• Fuse • Harness between IPDM E/R and rear combination lamp • IPDM E/R	License plate lamp circuit Refer to EXL-47, "Component Function Check".
Parking lamp, tail lamp, side marker lamp and license plate lamp are not turned ON.		**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-63, "Diagnosis Procedure".	
Turn signal lamp does not blink.	Indicator lamp is normal. (Applicable side performs high flasher activation.)	• Turn signal lamp bulb • Harness between BCM and each turn signal lamp • Harness between each turn signal lamp and ground	Turn signal lamp circuit Refer to EXL-48, "Component Function Check".
	Indicator lamp is included	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch Refer to BCS-74, "Symptom Table".

Symptom		Possible cause	Inspection item
Turn signal indicator lamp does not blink. (Turn signal indicator lamp is normal.)	One side	Combination meter	—
	Both sides (Always)	• Turn indicator signal • Combination meter • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply and ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-47, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate. • Hazard warning lamp continues activating. (Turn signal is normal.)		• Hazard switch • Harness between hazard switch and BCM • Harness between hazard switch and ground • BCM	Hazard switch Refer to EXL-55, "Component Function Check".

NORMAL OPERATING CONDITION

Description

INFOID:0000000007565456

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 the control difference. This is normal.

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:0000000007565457

The headlamp (both sides) does not switch to the high beam when setting to the lighting switch HI or PASS.

Diagnosis Procedure

INFOID:0000000007565458

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-74, "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. Refer to BCS-76, "Removal and Installation"

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-37, "Component Function Check".

Is the headlamp (HI) circuit normal?

YES >> Refer to GI-40, "Intermittent Incident".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000007565459

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

Diagnosis Procedure

INFOID:0000000007565460

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-74, "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. Refer to BCS-76, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-39, "Component Function Check".

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R.
NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000007565461

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

Diagnosis Procedure

INFOID:0000000007565462

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-74, "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 >> Replace IPDM E/R.
NO >> Replace BCM. Refer to BCS-76, "Removal and Installation".

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000007565463

The front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000007565464

1.CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	#58	15 A

Is the inspection result normal?

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

2.CHECK FRONT FOG LAMP SHORT CIRCUIT

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

IPDM E/R			Ground	Continuity
Connector		Terminal		
RH	E345	86		Not existed
LH		87		

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if the fuse is fusing again.)
NO >> Repair or replace harness. And then replace the fuse.

3.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-74, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning part.

4.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 (With lighting switch 1ST)	ON	On
		OFF	Off

Is the item status normal?

YES >> GO TO 5.
NO >> Replace BCM. Refer to BCS-76, "Removal and Installation".

5.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-50, "Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-40, "Intermittent Incident".
NO >> Repair or replace the malfunctioning part.

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description

INFOID:0000000007565465

PREPARATION BEFORE ADJUSTING

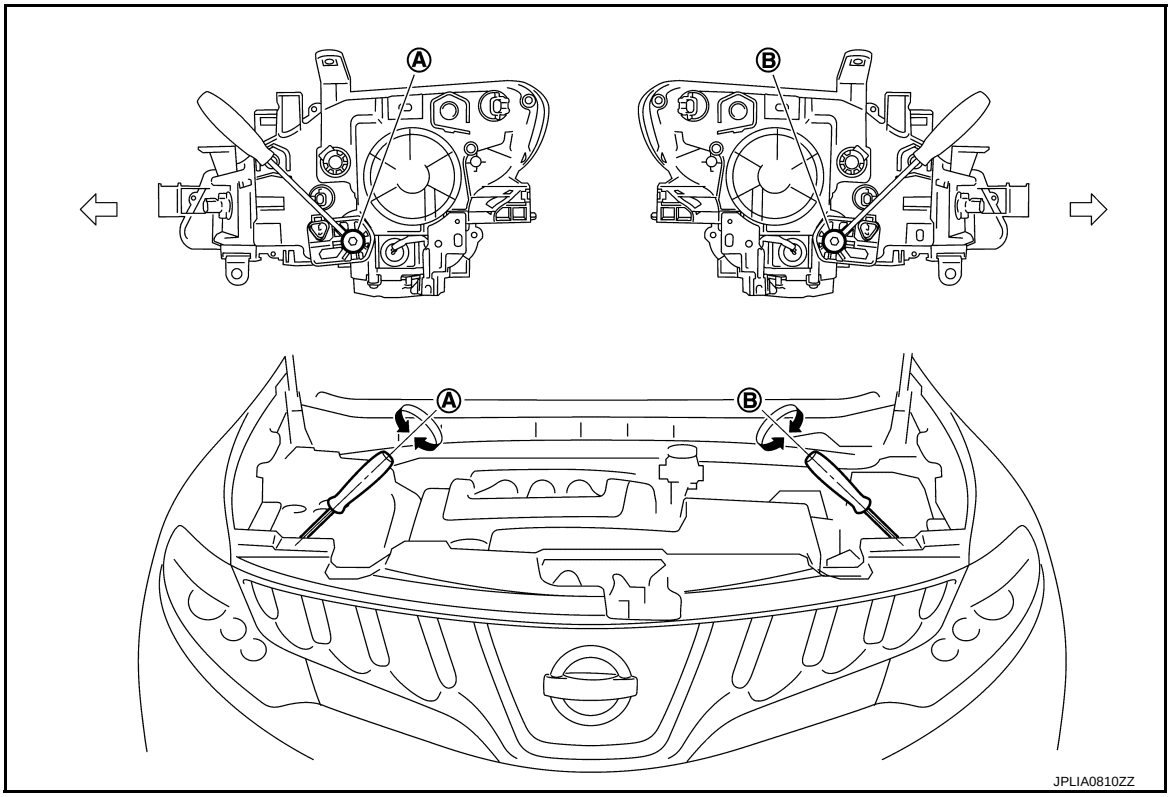
NOTE:

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

AIMING ADJUSTMENT SCREW



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

⇦: Vehicle center

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

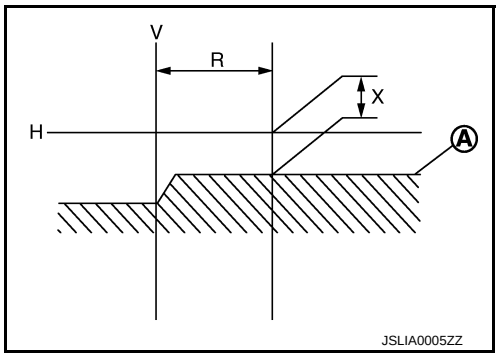
Aiming Adjustment Procedure

INFOID:0000000007565466

1. Place the screen.
   NOTE:
   • Stop the vehicle facing the wall.
   • Place the board on a plain road vertically.
2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the headlamp bulb center and the screen.
3. Start the engine. Turn the headlamp (LO) ON.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
   CAUTION:
   Never cover the lens surface with a tape etc. The lens is made of resin.
4. Measure the distance (X) between the horizontal center line of headlamp (H) and the cutoff line (A) within the light axis measurement range (R) from the vertical center line ahead of headlamp (V).

Light axis measurement range (R) : 350 ± 175 mm (13.78 ± 6.89 in)

Low beam distribution on the screen

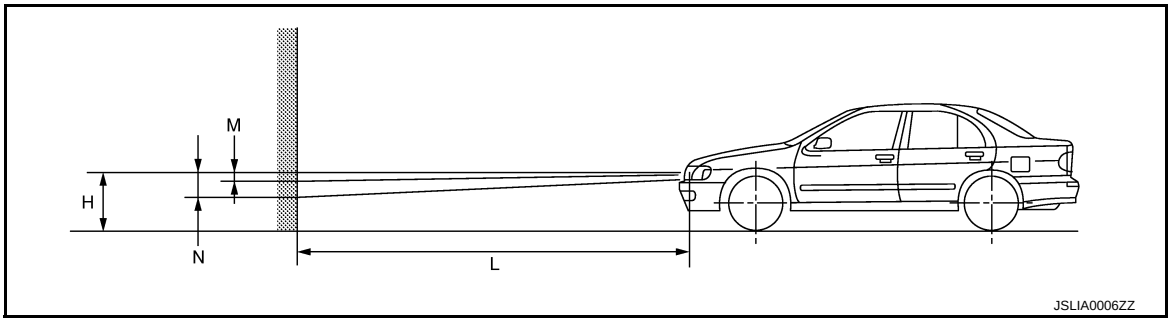


5. Adjust the cutoff line height (X) with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

unit: mm (in)

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

Side view



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

FRONT FOG LAMP AIMING ADJUSTMENT

Description

INFOID:0000000007565467

PREPARATION BEFORE ADJUSTING

NOTE:

- For details, refer to the regulations in your own country.

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.

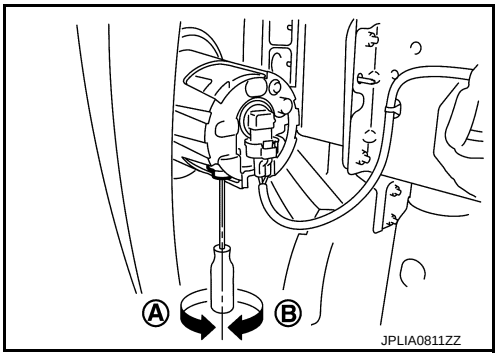
AIMING ADJUSTMENT SCREW

- 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.

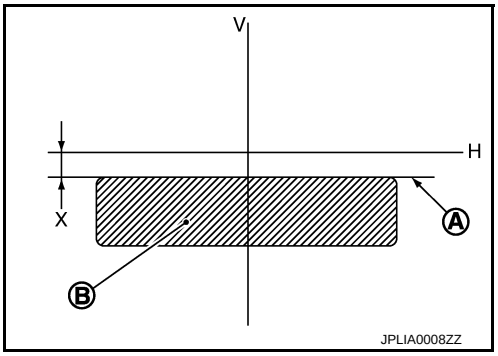


Aiming Adjustment Procedure

INFOID:0000000007565468

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. Illuminate the front fog lamp.
   CAUTION:
   Never cover the lens surface with a tape etc. The lens is made of resin.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 200 mm (7.87 in).

Front fog lamp light distribution on the screen



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

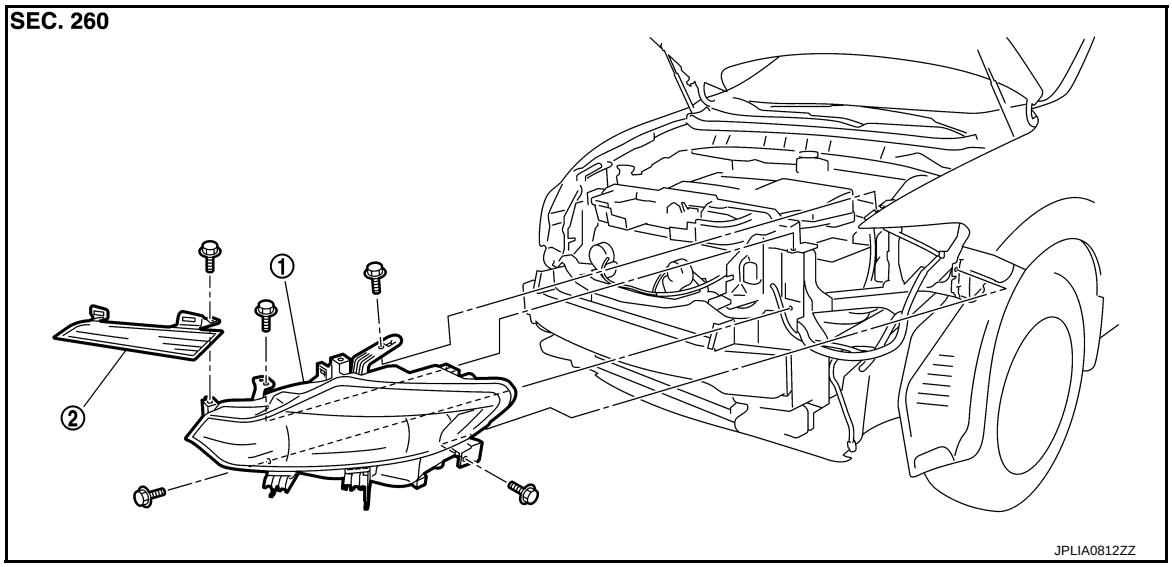
REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

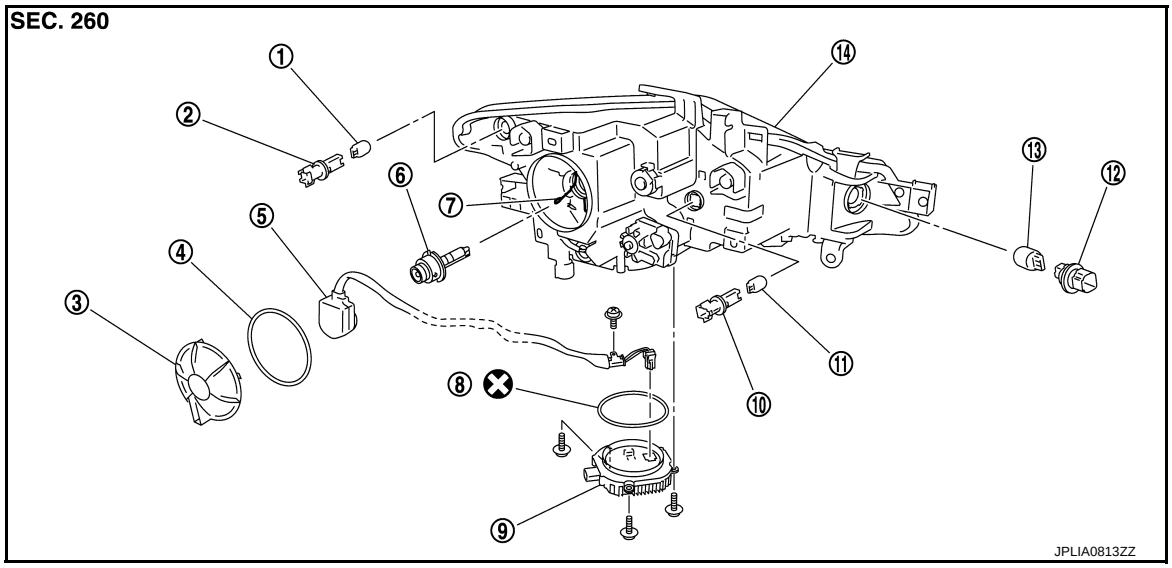
INFOID:0000000007565469

REMOVAL



1. Front combination lamp
2. Headlamp extension panel

DISASSEMBLY



1. Front side marker lamp bulb
2. Front side marker lamp bulb socket
3. Resin cap
4. Seal packing
5. Xenon bulb socket (Starter)
6. Xenon bulb
7. Retaining spring
8. Seal packing
9. HID control unit (Inverter)
10. Parking lamp bulb socket
11. Parking lamp bulb
12. Front turn signal lamp bulb socket
13. Front turn signal lamp bulb
14. Headlamp housing assembly

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

Removal and Installation

INFOID:0000000007565470

REMOVAL

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

1. Remove the front grille. Refer to EXT-18, "Exploded View".
2. Remove the headlamp extension panel.
3. Remove the front bumper fascia. Refer to EXT-12, "Exploded View".
4. Remove the headlamp mounting bolts.
5. Remove the harness clips from headlamp housing assembly.
6. Pull out the headlamp assembly forward the vehicle.
7. 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-65, "Description".

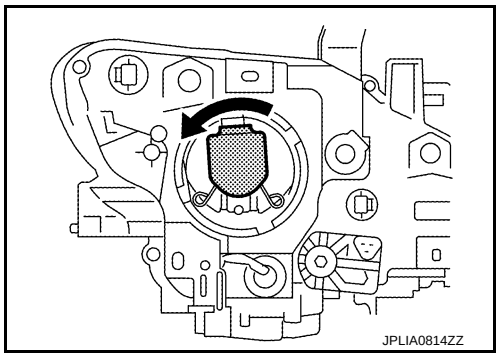
Replacement

INFOID:0000000007565471

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

HEADLAMP BULB

1. Remove the fender rubber protector in engine room.
2. Rotate the resin cap counterclockwise and unlock it.
3. Rotate the bulb socket counterclockwise and unlock it.
4. Unlock the retaining spring. And then remove the bulb from the headlamp housing assembly.
   CAUTION:
   Never break the xenon bulb ceramic tube when replacing the bulb.



PARKING LAMP BULB

1. Rotate the bulb socket counterclockwise and unlock it.
2. Remove the bulb from the bulb socket.

FRONT TURN SIGNAL LAMP BULB

1. Remove the front grille.
2. Rotate the bulb socket counterclockwise and unlock it.
3. Remove the bulb from the bulb socket.

FRONT SIDE MARKER LAMP BULB

1. Remove the fender rubber protector in engine room.
2. Rotate the bulb socket counterclockwise and unlock it.
3. Remove the bulb from the bulb socket.

Disassembly and Assembly

INFOID:0000000007565472

DISASSEMBLY

1. Rotate the resin cap counterclockwise and unlock it.
2. Rotate the xenon bulb socket counterclockwise and unlock it.
3. Unlock the retaining spring. And then remove the xenon bulb.
4. Remove the HID control unit installation screw.
5. Remove the screw. And then disconnect the connector from HID control unit.
6. Remove the xenon bulb socket from headlamp housing assembly.
7. Rotate the parking lamp bulb socket counterclockwise and unlock it.
8. Remove the bulb from parking lamp bulb socket.
9. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
10. Remove the bulb from front turn signal lamp bulb socket.
11. Rotate the front side marker lamp bulb socket counterclockwise and unlock it.
12. Remove the bulb from front side marker lamp bulb socket.

ASSEMBLY

Assemble in the reverse order of disassembly.

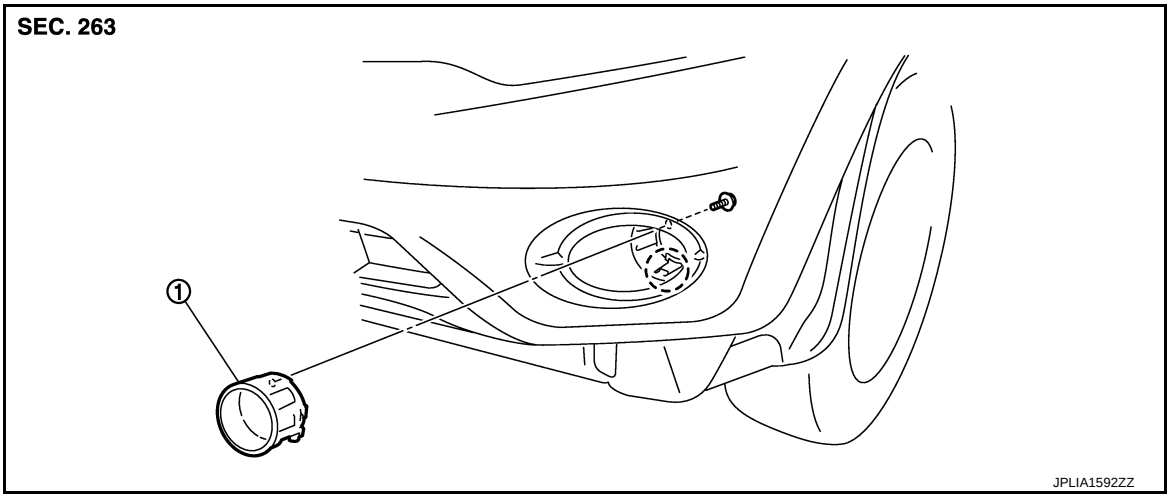
CAUTION:

- **Install HID control unit securely.**
- **After installing the bulb, install the resin cap and the bulb socket securely for watertightness.**

FRONT FOG LAMP

Exploded View

INFOID:0000000007565473



1. Front fog lamp

: Pawl

Removal and Installation

INFOID:0000000007565474

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the front fender protector. Keep a service area. Refer to EXT-26, "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

Installation is the reverse order of removal.

NOTE:
After installation, perform aiming adjustment. Refer to EXL-68, "Description"

Replacement

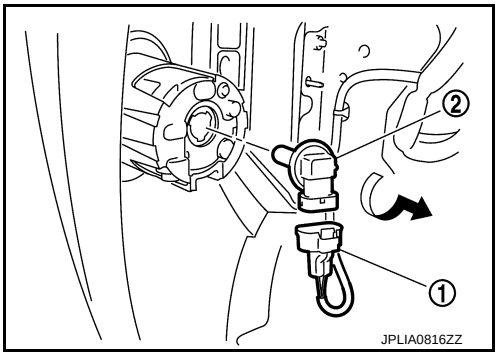
INFOID:0000000007565475

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

FRONT FOG LAMP BULB

1. Remove the front fender protector. Keep the service area. Refer to EXT-26, "FENDER PROTECTOR : Exploded View".

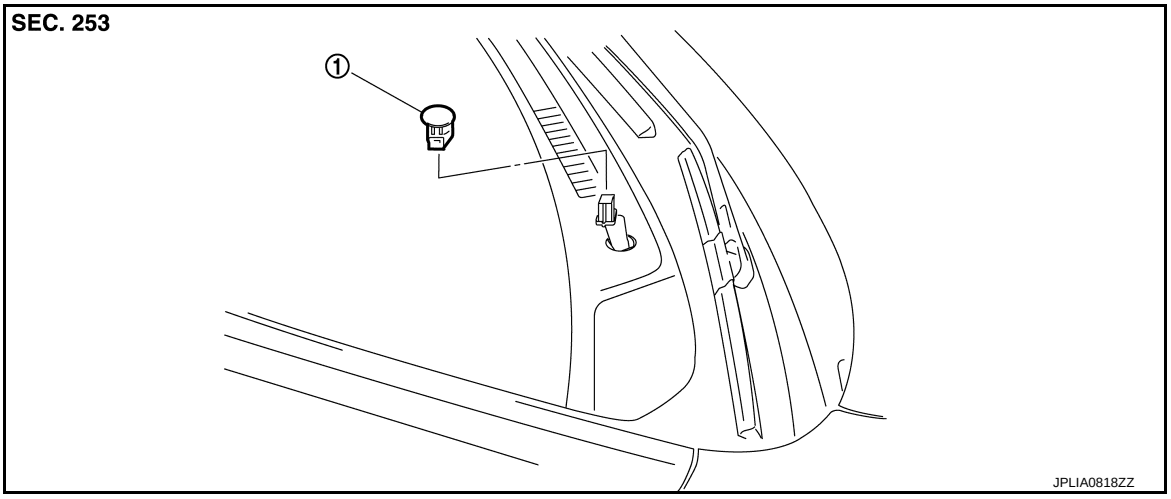
2. Remove the front fog lamp bulb connector (1).
3. Rotate the bulb (2) counterclockwise and unlock it.



OPTICAL SENSOR

Exploded View

INFOID:0000000007565476



1. Optical sensor

Removal and Installation

INFOID:0000000007565477

REMOVAL

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

INSTALLATION

Install in the reverse order of removal.

LIGHTING & TURN SIGNAL SWITCH

Exploded View

INFOID:0000000007565478

Removal and Installation

INFOID:0000000007565479

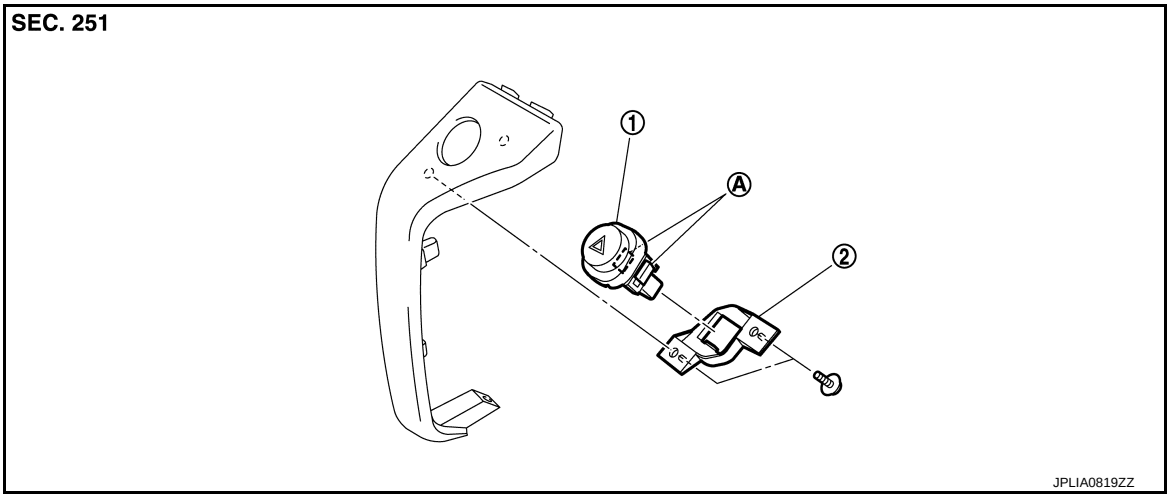
Lighting & turn signal switch is integrated in the combination switch. Refer to BCS-77, "Exploded View".

HAZARD SWITCH

Exploded View

INFOID:0000000007565480

SEC. 251



1. Hazard switch
2. Switch bracket

A. Pawls

Removal and Installation

INFOID:0000000007565481

REMOVAL

1. Remove the instrument stay cover (RH). Refer to IP-12, "Exploded View".
2. Remove the screws. And then remove the switch bracket from the instrument stay cover.
3. Remove the hazard switch.

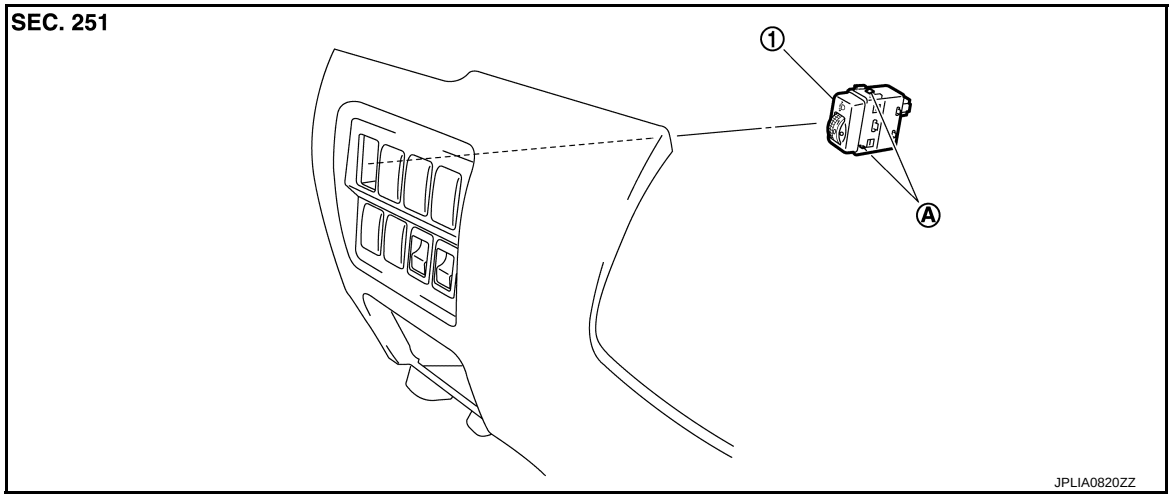
INSTALLATION

Install in the reverse order of removal.

HEADLAMP AIMING SWITCH

Exploded View

INFOID:0000000007565482



1. Headlamp aiming switch
A. Pawls

Removal and Installation

INFOID:0000000007565483

REMOVAL

1. Remove the instrument driver lower panel. Refer to IP-12, "Exploded View".
2. Disengage the pawls. And remove the headlamp aiming switch.

INSTALLATION

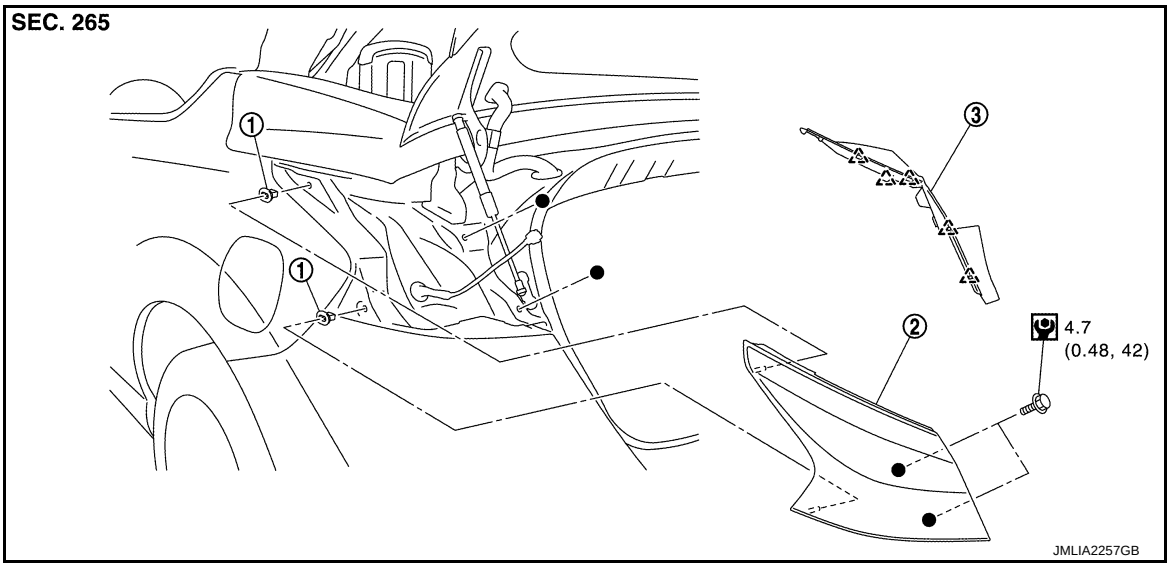
Install in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000007565484

REMOVAL

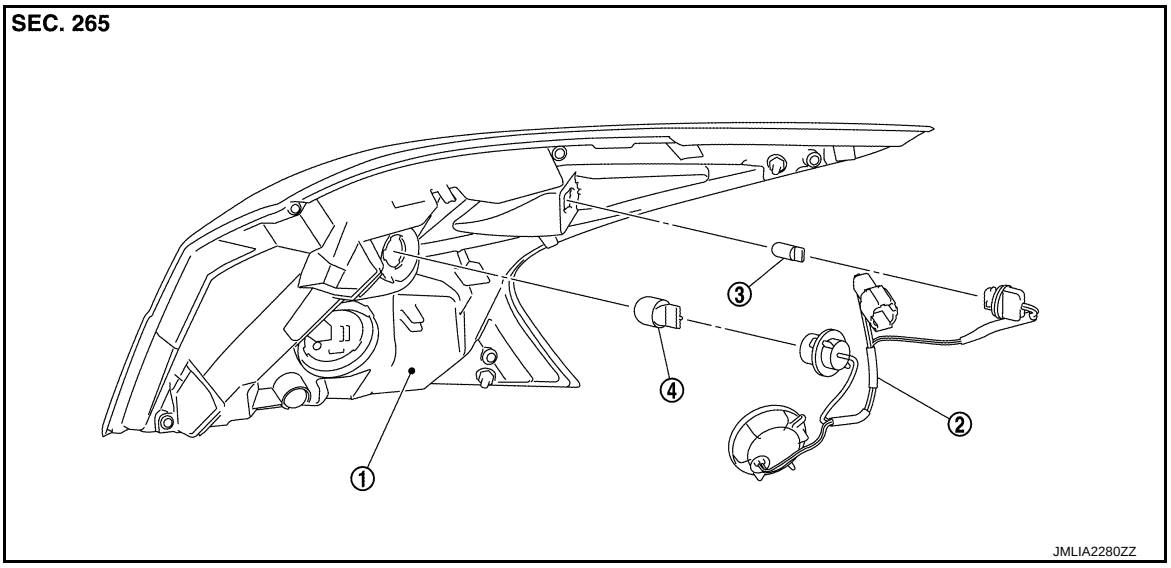


1. Grommet
2. Rear combination lamp
3. Rear combination lamp finisher

: Pawl

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

DISASSEMBLY



1. Rear combination lamp housing
2. Rear combination lamp harness
3. Rear side marker lamp bulb
4. Rear turn signal lamp bulb

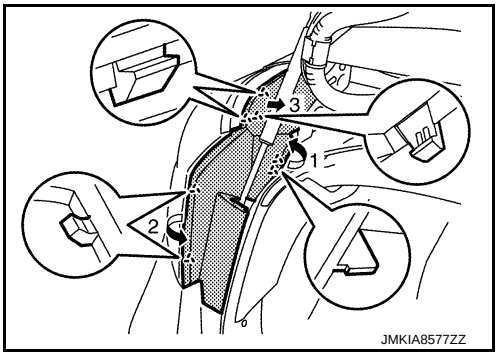
Removal and Installation

INFOID:0000000007565485

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Disengage rear combination lamp finisher fixing pawls as shown by the arrow in the figure, and then remove the rear combination lamp finisher.



2. Remove the rear combination lamp mounting bolts.
3. Pull the rear combination lamp toward outside of the vehicle, and then remove the rear combination lamp.
4. Disconnect the rear combination lamp connector.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000007565486

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. Refer to EXL-79, "Removal and Installation".

REAR SIDE MARKER LAMP BULB

1. Remove the rear combination lamp. Refer to EXL-79, "Removal and Installation".
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.

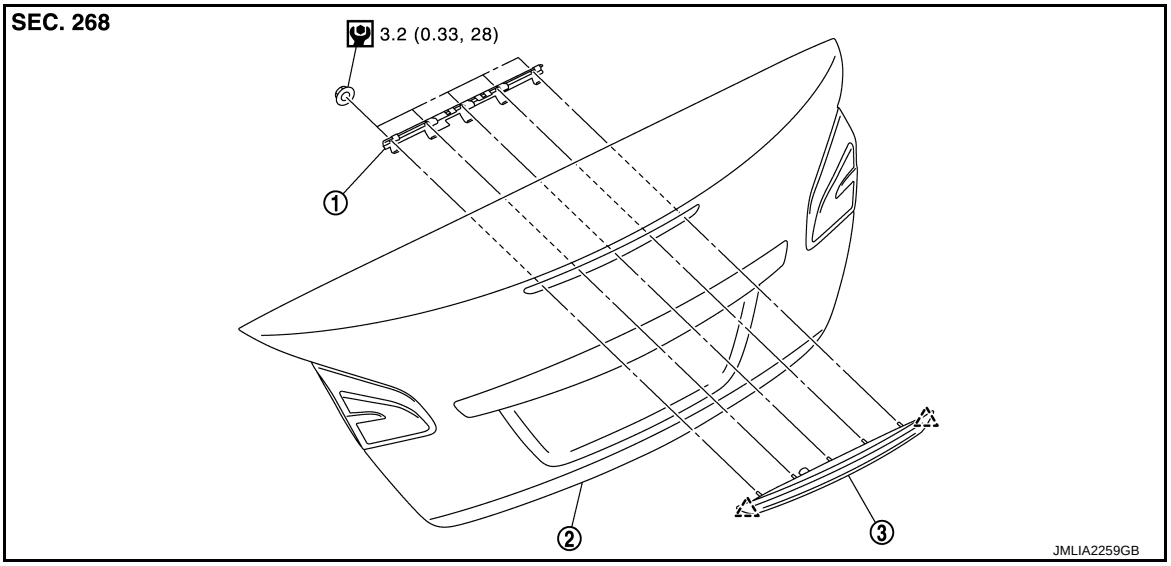
REAR TURN SIGNAL LAMP BULB

1. Remove the rear combination lamp. Refer to EXL-79, "Removal and Installation".
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

Exploded View

INFOID:0000000007565487



1. High-mounted stop lamp bracket
2. Trunk lid
3. High-mounted stop lamp

: Pawl

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

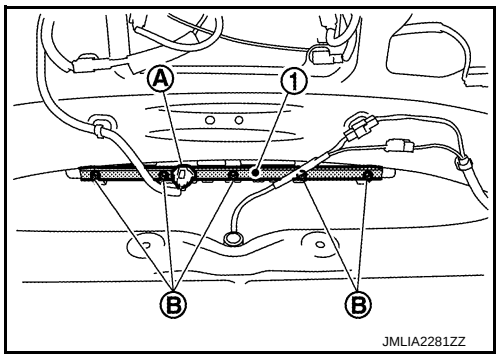
Removal and Installation

INFOID:0000000007565488

CAUTION:
Disconnect battery negative terminal or remove the fuse.

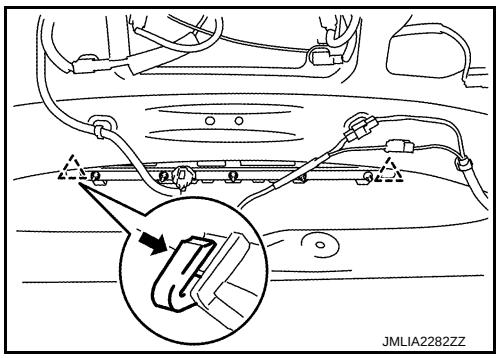
REMOVAL

1. Remove trunk lid trim. Refer to INT-37, "Removal and Installation".
2. Disconnect high-mounted stop lamp (1) harness connector (A).
3. Remove high-mounted stop lamp mounting nuts (B).



4. Remove high-mounted stop lamp bracket.
5. Disengage high-mounted stop lamp fixing pawls, and then remove high-mounted stop lamp.

: Pawl



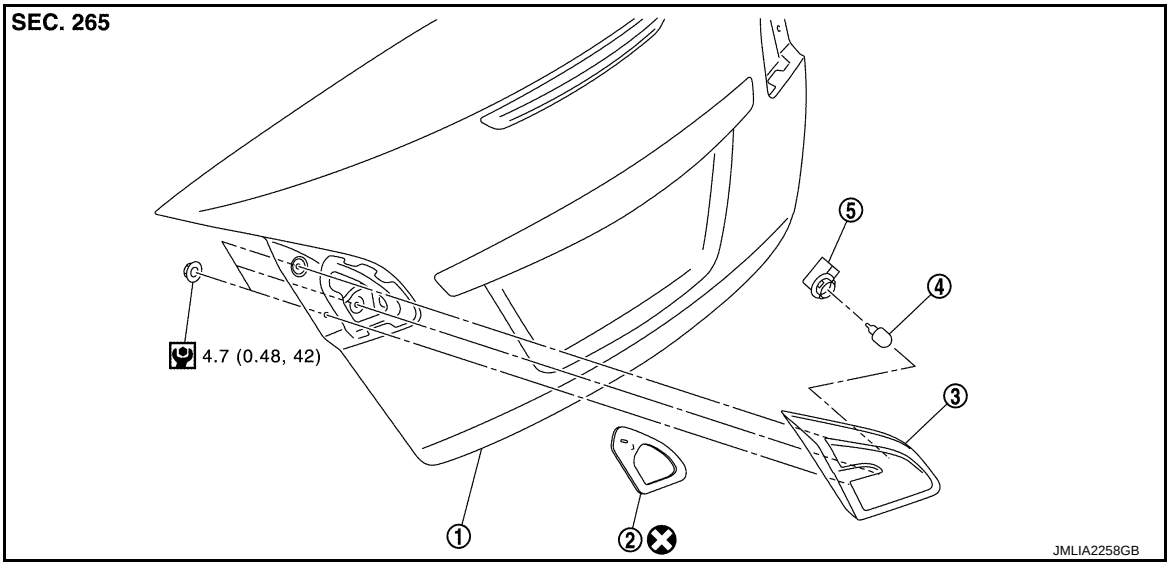
INSTALLATION

Install in the reverse order of removal.

BACK-UP LAMP

Exploded View

INFOID:0000000007565489



1. Trunk lid
2. Seal packing
3. Back-up lamp housing
4. Back-up lamp bulb
5. Back-up lamp bulb socket

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

Removal and Installation

INFOID:0000000007565490

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the trunk lid trim. Refer to INT-37, "Removal and Installation".
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:0000000007565491

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.**

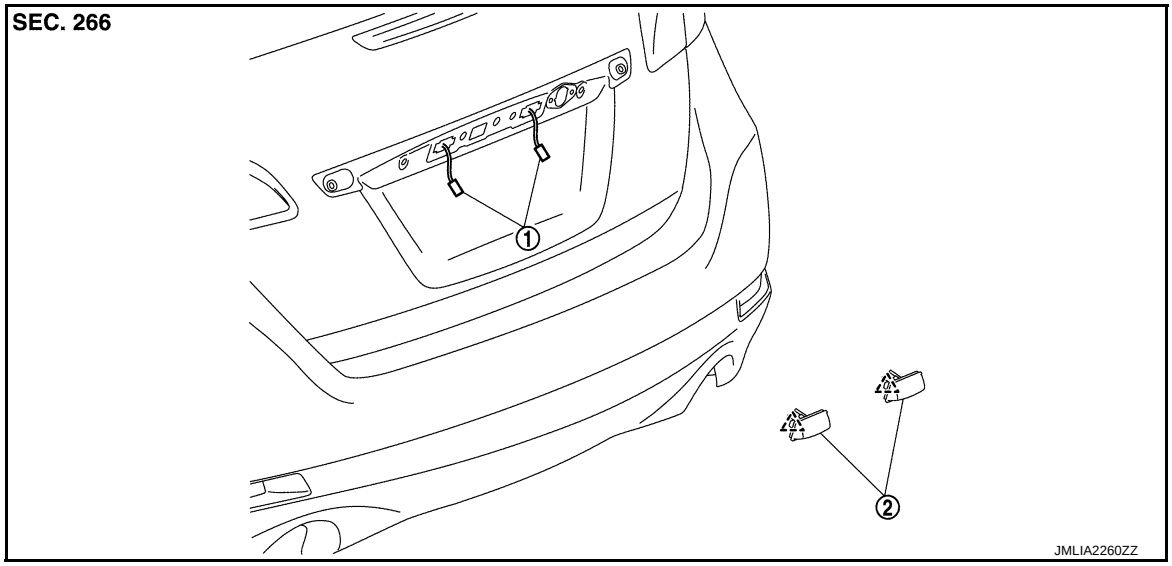
BACK-UP LAMP BULB

1. Remove the trunk lid trim. Refer to INT-37, "Removal and Installation".
2. Rotate the back-up lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the back-up lamp bulb socket.

LICENSE PLATE LAMP

Exploded View

INFOID:0000000007565492



1. License plate lamp harness
2. License plate lamp
: Pawl

Removal and Installation

INFOID:0000000007565493

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the trunk lid trim. Refer to INT-37, "Removal and Installation".
2. Remove the trunk lid finisher. Refer to EXT-44, "Removal and Installation".
3. Disconnect the license plate lamp connector.
4. Disengage the license plate lamp fixing pawl, and then remove the license plate lamp.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000007565494

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 trunk lid finisher. Refer to INT-37, "Removal and Installation".
2. Turn the license plate lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the license plate lamp bulb socket.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000007565495

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	WY5W (Amber)	5
Front fog lamp		H8	35
Rear combination lamp	Stop lamp	LED	—
	Tail lamp	LED	—
	Rear turn signal lamp	W21W	21
	Rear side marker lamp	W5W	5
Back-up lamp		W16W	16
License plate lamp		W5W	5
High-mounted stop lamp		LED	—